HEADTEACHERS' PREPAREDNESS FOR INTEGRATION OF INFORMATION COMMUNICATION TECHNOLOGY IN ADMINISTRATION OF PUBLIC PRIMARY SCHOOLS IN CHANGAMWE DISTRICT, KENYA

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A Research Project Submitted for Examination in Partial Fulfillment of the Requirements for the award of Degree of Master of Education in Educational Administration

University of Nairobi

2015

DECLARATION

This research project is my original work and has not been presented for a degree award in any other University

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DEDICATION

This project is in memory of my late mother Mwanahalima Masoud Banda. It is dedicated to my father Abdallah Ali Hassan (Mdigo), to my beloved and caring wife Halima Ramadhani Kulapha, our daughters Mwanahalima Ali, Amina Ali and son Yusuf Ali.

ACKNOWLEDGEMENTS

My foremost gratitude is to the Almighty Allah that through His amazing grace I was able to undertake and complete this study. To Him I give honour and glory.

I would like to sincerely thank Dr. Daisy Matula and Dr. Ursulla Okoth for devoting their time for guidance and recommendations during the study and report writing. Your patience, dedication and encouragement made it possible to complete this project.

I would like to thank my beloved wife Halima Ramadhani Kulapha for her patience and moral support.

I extend my appreciation to my daughters Mwanahalima Ali, Amina Ali and son Yusuf Ali for the encouragement and understanding during the many hours I left you alone pursuing further studies. May you have the same urge to further your education to greater heights in future.

I wish to thank all my colleagues at the University of Nairobi for their collective support in group discussions and assignments which contributed greatly to the completion of the course work.

I also wish to express my sincere appreciation to Head teachers, deputy Head teachers and Heads of Departments who provided primary data, without which this study would not have been possible.

I cannot forget the good work done by the Head of Departments who participated in the defense of my proposal and subsequent research report for guiding and corrected the work diligently.

May the Gracious Almighty Allah bless your endeavors' and reward all of you abundantly.

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ABREVIATIONS AND ACRONYMS

BED Bachelor of Education

BoM Board of Management

EFA Education for All

E-L Electronic Learning

Email Electronic Mail

FPE Free Primary Education

HoD Head of Department

ICT Information Communication Technology

ILS Integrated Learning Systems

KCPE Kenya Certificate of Primary Education

KNEC Kenya National Examination Council

KEMI Kenya Education Management Institute

KICD Kenya Institute of Curriculum Development

MoE Ministry of Education

NACOSTI National Commission for Science, Technology and Innovation

R & D Research and Development

S & T Science and Technology

ST & I Science Technology and Innovation

SPSS Statistical Package for Social Sciences

TSC Teachers Service Commission

TIVET Technical, Industrial Vocational and Entrepreneurship Training

UNESCO United Nations Educational, Scientific and Cultural Organization

ABSTRACT

The purpose of this study is to determine the Head teachers' preparedness for integration of ICT in administration of public primary schools in Changamwe district, Mombasa County, Kenya. Specifically to establish the availability of ICT resources for use in administration, determine the attitudes of school administrators towards integration of ICT; determine the availability of ICT support to help in the use of ICT and to establish the ICT skills used in administration of public primary schools in Changamwe district. The study targeted all public primary schools in Changamwe district with a population of 20 Head teachers, 20 deputy head teachers and 100 heads of department. A sample of 140 respondents was selected purposively. A response rate of 85% achieved. Descriptive survey research design was adopted as it brings out quantifiable information from the sample. Three sets of questionnaires were developed and administered to Head teachers, deputy Head teachers and heads of department respectively. To determine the validity, the instrument was pretested in one school with one head teacher, one deputy head teacher and head of departments. The findings show that the school administrators had very few computers for administration work in the district. The computers were used for capturing school enrollment, storage of students' bio data, registration of KCPE candidates, data entry on pupils' marks, analysis of pupil's results, typing examinations, accessing the internet and for research on the subjects they taught. Most of the schools administrators in the district were computer literate with a few who are illiterate. Some of the schools had plans in place to upgrade ICT skills of their administrators. Only one third of the schools in the district had school management systems and only one school had a Website enabled system. Most of the schools either used manual records or selected computer programmes including: Microsoft's word, Excel and internet to perform their duties. Procurement for ICT equipment and servicing of computers in schools within the district was not advised by computer experts. Only a few of administrators had a good proficiency of computers suggesting that majority of them were only average users. Challenges faced by the Head teachers while using ICT in administration include: breakdown of computers, lack of technical support on the acquisition usage and maintenance of the computers, inadequate finances to procure computers, low computer literacy levels among the administrators and regular power blackouts in the district were the key challenges in usage of ICT. The study recommended that Ministry of Education should encourage the integration of ICT in administration in schools in the district through provision of computers to schools, ICT skills courses relevant to administration work and ICT technical support to advice head teachers on procurement, usage and maintenance of computers.

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Before the introduction of computers, information and communication technology, data processing used to be done manually, this produced late and inaccurate reports. Due to the repetitive nature of the information needed time and again, many hour of human labour are saved by use of ICT because of the storage and retrieval ability of the computer. Information and Communication can be defined as the technologies and tools that people use to source, process, share and distribute information through the use of computers and computer technology (Maki, 2008). In the last decade ICT has been a principle driver of economic development and social change worldwide. The need for economic and social development has been a justification for investments in educational reform and in educational ICT (Kozma, 2005).

Kelles (2005) upheld that ICT plays a major role in all aspects of national life, in economic life as well as in social and cultural development. Information Communication Technology is rapidly transforming the way people do business, access information and services communicate with each other and even entertain themselves. In the world over, the impact of the computer is experienced in many sectors of human development such as transport, commerce, industry, banking, information, communication, military, security, vote counting, mobile phones and satellite television transmission (Webber, 2003). The potential of ICT to enhance human capabilities and revolutionized the administration of institutions was first realized in other sectors of human society mostly in the business world and the military, other than in education (Mbiti, 2007).

The United Nations Educational Scientific and Cultural Organization (UNESCO) Ministerial Declaration (2000) provided special attention to the application of ICT for development, for which urgent and concerned actions internationally have increased aimed at ensuring that the popularity of ICT in management of educational institutions and consequently research activity is maturing.

African countries have only recently begun to show the macro-economic stability needed for educational development thus needs to use ICT is real than ever. It is against this backdrop, that one expects an increase in revenue allocations for education to keep pace with technological changes (Nduati & Bowman, 2005).

In Kenya, the 21ST Century advancement in ICT is increasingly becoming complex and multidimensional thus requiring a tremendous input terms of human, financial and physical resources to ensure that primary schools administration is efficient (Waema, 2005). With change in ICT Paradigm School working environments are bound to overwhelm the abilities of today's administration if not aided by in the performance of their school administrative duties. The importance of ICT in schools has therefore led to a contribution widely recognized in the work place and at home, demonstrating the ICT is becoming a vital enabling tool that can be no longer be ignored in the administration of schools in Kenya. It is amidst this favourable gesture that the Government of Kenya has not only embraced ICT but also encouraged the application of ICT in the administration of primary schools in Kenya (Dawes, 2010).

As a measure to address some of these concerns, the Government of Kenya came up with a national ICT education policy and strategy, which endeavors to work with stakeholders to ensure implementation of e-school initiatives and to promote expanded use of ICT as a tool for effective management, research and development at

all education levels and use of internet for educational training and research (Republic of Kenya 2005), Sessional paper no. 1 of 2005 captures stakeholders' recommendations on how education needs to be responsive for the 21st Century needs education and training.

While some countries have reported up to 41% of ICT integration into management and learning, the proportion remains substantially low in Kenya despite colossal amounts invested in ICT for the education management sector have been necessary since the rapid change in ICT demands continuous training at all levels despite the fact that most school administrators have not systematically integrated ICT into administration (MoE, 2009).

The number of people expected to embrace technology within the education sector is very big making it difficult to convince them why and how ICT will make life easier for them. ICT involves high expenditures and returns on it are not immediate. The government investment in education is huge especially with the Free Primary Education and subsidized secondary school tuition fees and therefore leaving infrastructural development to parents and other partners. This is burdensome in the visage of levels of poverty, high cost of internet provision and cost associated with ICT equipment and support, most schools environments are conservative with a formal way of doing things and therefore trying to introduce new ways of doing things is a challenge. The level of skills and literacy, technical support available, resource availability, and attitudes of administrators to embrace ICT therefore becomes a stumbling block to ICT integration in schools.

However, it should be clear that as head teachers and other policy makers continue to take increasing interest in the scope of this field, relatively little research work has

been undertaken in schools administration; Although wide interest in the field has been apparent, there is little awareness of any extent of research being carried out in this area (Becta, 2001) with all the efforts towards achieving the goal in enhancing ICT integration in learning institutions in Kenya, many schools have not yet integrated ICT in their school systems. Hypothesis as to why this could have happened include lack of management support, lack of time, limited understanding on how to integrate ICT into administration, lack of software, high investment cost, insecurity and lack of infrastructure, (Ministry of Education, 2007). Theoretically, schools are encouraged to integrate ICT in tandem with the changing environments in form of process simplification, process improvement and automation, Those that will not embrace ICT in tandem with the changing environment will find it very difficult in future simply because they will have to invest in re-engineering process which is quite expensive and require costly expertise to implement.

The role of ICT in Schools cannot be under estimated due to many advantages associated with it, it include: easy presentation of work, easy access to information, easy monitoring and evaluation, and substituting almost all the activities in administration. Given that the school administrators are concerned with issues of student registration, student discipline, class attendance, curriculum and instruction, personal management, school community relationship provision and maintenance of physical facilities and financial management, managing such high numbers of students can be quite a challenge in absence of ICT resources (Okumbe, 2001).

It is against this background that this study seeks to find out the critical variables that affect integration of ICT in administration including resources, technical support, ICT skills and knowledge level and attitude of the administrators towards ICT integration

in education with special focus on primary schools in Changamwe District, Mombasa County.

1.2 Statement of the problem

Computers are spreading rapidly in Schools not just in wealthy countries, but increasingly in developing ones as well. However, though Schools have had computers for almost two decades, ways to use them effectively have evolved slowly and patchily. Technological revolution in schools has been beset by theoretical inadequacies that have kept education and technology at the margins of the established educational system.

Research revealed that Head teachers are not prepared to make real use of ICTs at their disposal; still are doing manual working: writing letters, staff notices, advertisement of vacancy post, procurement, finance, personnel management and students data, hence weak integration and usage in administration management of Schools and learning. In addition most Schools are facing a number of challenges including: frequent power disruptions, security, storage, inadequate connectivity and network infrastructure.

Failure to take full advantage of the opportunities offered by technological advances to educate for massive expansion represent a drastic lag in skilled innovative man power narrowing the possibilities for individual activities in areas of business, research, learning, health and welfare and many other aspects of daily administrative routine (MHEST and NCST, 2010). The study will address and establish Head teachers' preparedness for integration of ICT in administration of public primary Schools in Changamwe District, Mombasa County, Kenya.

1.3 Purpose of the study

The purpose of the study was to investigate the Head teachers' preparedness to integrate ICT in administration of public primary schools in Changamwe District, Mombasa County, Kenya.

1.4 Objectives of the study

The study aimed at achieving the following objectives:

a) To establish the availability of ICT resources for use by the Head teachers' in administration of public primary schools in Changamwe District.
b) To determine the attitudes of school Head teachers' preparedness towards integration of ICT in administration of public primary schools in Changamwe District.
c) To determine the availability of ICT technical support to help in the use of ICT in the administration of public primary schools in Changamwe District.
d) To establish the ICT skills level of the Head teachers' in administration of public primary schools in Changamwe District.

1.5 Research questions

The study addressed the following specific questions:

a) Which ICT resources are available for use by the Head teachers in administration of Public Primary Schools in Changamwe District?
b) What attitude do head teachers' have towards integration of ICT in administration of public primary schools in Changamwe District?
c) Which ICT technical support is available to help in the use of ICT in administration of public primary schools in Changamwe District?

d) Which ICT skills levels of the Head teachers are required in administration of public primary schools in Changamwe District?

1.6 Significance of the study

Ministry of Education may use the findings of the study in providing leads to the interventions that would help improve the integration of skills required of head teachers and teachers before they are promoted to administrative positions. The Kenya Institute of Curriculum Development (KICD) and the Universities; the study findings may add value on the Curriculum and course content that graduate teachers should have in readiness to taking up administrative position. The findings may be useful to the head teachers, deputy head teachers and the head of the departments to enhance their daily administrative work by using ICT to easy their work more so to use limited time. Parents may find it useful as they can easily communicate with the school administration at their comfort through emails and also assessing their children academic progress.

1.7 Limitations of the study

According to Mugenda and Mugenda (2003) limitations are some aspects of the study that the researcher knows may negatively affect the results or generalizability of the results but over which he/she probably has no control.

Due to the limited number of schools within the district, all head teachers will be considered and their deputies to enhance the study. There are challenges of limited time, financial constraint and exaggerated feedback or outright misinformation. Before the questionnaires are administered, a briefing will be done to the respondents for them to understand the purpose of this research. The briefing will therefore be used to develop rapport with the respondent; thereby minimizing dishonest responses

and fear of victimization. Its findings therefore can only be generalized to other parts of the Country cautiously.

1.8 Delimitations of the study

The study was delimited to the public primary schools in Changamwe District only. The study was restricted to responses obtained from head teachers, their deputies and Head of Departments in order to establish accurate and reliable information to justify the study results.

1.9 Basic assumptions of the study

Assumption are circumstances that a researcher assumes will be there to facilitate collection of data. Mugenda and Mugenda, (2003), define an assumption as any fact that a researcher takes is true without actually verifying it.

i) The study was carried out with the assumption that ICT could be used to improve efficiency in administration management of schools by the Head teachers.

ii) The study assumed that positive attitudes towards ICT and correct ICT skills set among school administrators could enhance integration of ICT in administration of schools.

iii) The study will also assume that the respondents provided true and honest responses to the questions in the research instruments.

1.10 Definition of significant terms

The following are some significant terms to the study:-

Administration refers to the formalized system which is intended to control, supervise, plan and make decisions about various activities of the organization on the basis of established authority.

Digital divide refers to inequality of access to ICT services such as telephone, computer and internet.

Hardware refers to touchable equipment used by computer; such as: monitor, CPU, printers, scanners, copiers, fax machine, digital / video cameras, telephones, projectors and surveillance cameras.

ICT infrastructure refers to physical equipment/hardware and software that enables a network to function.

Information, Communication and Technology refers to tools and resources used to transmit, store, create, share or exchange information.

Integration refers to the act or process of combining two or more things so that they work together for easy monitoring and supervision in administration

Literacy refers to knowledge about ICT and its application.

Policy in Education refers to a government – issued document which sets out the principles, guidelines and strategy for ICT in education.

Preparedness refers to the state of being aware or willing to do. The head teachers should be ready to integrate ICT in their daily office work, through writing letters, finance, procurements, students' data and personnel management to enhance effective management in administration tasks.

School administrative function refers to the roles and responsibilities assigned to schools administrators as managers of the institutions. They are product outcomes, student – focused outcomes and leadership with social responsibility.

Software refers to computer programs for example; Ms-office suite, email and the internet.

Technical personnel refer to staff with the expertise in maintenance of ICT equipment.

Technical support refers to the essential skills learned to overcome technical problems when ICT are applied. It can be provided by internal School staff of external service provider.

1.11 Organization of the study

The study consists of five chapters. Chapter one is the introduction and deals with the background information of the study, the statement of the problem, the objectives and purposes of the study, justification of the basic assumptions, limitation and delimitation of the study and definition of significant terms.

Chapter two presents the literature review including, computer usage in management and administration, administrative tasks, integration of ICT in School administrators, ICT technical support, ICT skill level among the school administrators, theoretical and conceptual framework.

Chapter three comprise of the research design, target population, sample size, sampling techniques, research instruments, validity and reliability, data collection methods and data analysis procedures. Chapter four covers data analysis and interpretation while chapter five comprise of the research summary, conclusion and recommendation as well as areas of further studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter reviews literature related to the topic under study under the following sub-headings: computer usage in management and administration, administrative tasks, availability of ICT resources, integration of ICT in schools, attitudes of school administrators towards integration of ICT, availability of ICT technical support, ICT skills level in the administration of public primary schools, summary of the literature review, theoretical and conceptual framework.

2.2 Computer usage in management and administration

Change has been happening at an even pace in any growth-oriented industry and the education sector has no exception. Rapid growth in the field of education has made governance in academic sector a very complex task. The 21st century has witnessed tremendous advancements in technology which has led to far-reaching developments in the administrative system. Cost effective technology combined with the flexibility in learning and administrative activities is essential to enhance efficiency (Dawes, 2010).

Computers can be used extensively for educational administration. Areas where computers can be used for effective educational include: general administration, pay roll and finance, student data, inventory management, personnel records, maintenance and library system (Best, 2003).

Information and Communication Technology plays a vital role in supporting powerful, efficient management and administration in education sector. It is specified

that technology can be used right from student administration to various resource administration in education institutions (Maki, 2005).

As a part of strategy, many challenges in school administration could be overcome with the proper usage of technology. The Head teacher needs to be prepared, if not computer literate by attending to part time computer classes in order to acquaint with the knowledge of ICT. Moreover, for those who are ICT compliant needs to integrate the skills learned to their daily routine administrative work into the use of ICT. However, many studies reveal the need for ICT integration into administrative activities of higher education institutions. There are various ways of introducing technology in education institution administration including sending e-mail notices and agendas to staff, rather than printing and distributing them, submission of schemes of work and lesson plans through e-mail, foster technology growth by asking parents to write e-mail addresses on admission forms for easy communication, and insisting that all teachers create a class web page.

Other ways include attending technology conferences to learn what other schools are doing, what other teachers are doing to integrate technology, and what Head teachers are doing to encourage the use of technology in their schools and classrooms. Admissions through web-site enable services and monitoring of day to day activities of the institution; including staff administration, are some other key areas that ICT integration would come in handy in general administration of academic institutions (Salerno, 2009).

Wims & Lawler (2007) reported on a research study that was carried out to evaluate the implementation of ICT projects in three selected educational institutions in Kenya. Using data from personal observations, documentary analysis and interviews, the

findings were that no educational software was found to be in use; teachers did not make use of ICT facilities in their schools; private companies charged exorbitantly to provide computer equipment, software and /or personnel to schools; expenditure incurred with the donation of computers could sometimes be equivalent to the purchase of new machines; former students interviewed did not use internet as a source of information on careers or training, though schools had no internet and so meaningful importance of internet was not gained.

Wims & Lawler (2007) suggested immediate reform in telecommunication sector to hasten the roll-out of computer technology in education institutions, staff training, availing computer equipment and internet to staff and students. In addition, issues of internet connectivity, importation duties, rural electrification, software provision and financial support should be addressed by the government, private sector and development partners (Wims & Lawler, 2007).

In another study to investigate the attitudes and perceptions of Kenyan educators towards the introduction of technology into education, Momanyi et al (2006) found 94% of the educators believed computers can help students learn more relevant information. Besides, leaders in education wanted to see students access learning technology that can empower them in the 21st century world of work. However, teachers were found to have little or no previous experience in training or use of educational computer applications. The researchers recommend the equipping of schools with computer technology, training of teachers, integration of ICT technology in schools and development of wireless technologies to reduce the cost of wiring schools to the internet (Momanyi et al., 2006).

As of 1998, Cossa & Cronje (2004) evaluated the process of introducing computers, into schools in Mozambique. Despite general socio-economic struggles, the negative influence of working conditions of teachers brought about by structural adjustment programs, and an employment rate of 65% (p. 91), by 2001, 13 secondary schools in 4 different cities had been involved in the "Internet for Schools Project." Partners included the Centre of Informatics at the University of Eduardo Mondlane (CIUEM), the Ministry of Education, the Embassy of the Netherlands, World Links or the World Links for Development Program (World), at times the Acacia program of the Canadian-funded International Development Resource Centre (IDRC), and eventually School Net Mozambique.

The researchers used Miller's five-phase model of technology integration in schools and found that over three years some schools had moved to the penultimate phase in which there were "changes in instructional strategies" (Cossa & Cronje, 2004: 90) such as "gradual change of the role of teachers from facilitator to collaborator of learning" and in which collaborative projects and interdisciplinary work may have become the "embryo of team teaching" (Cossa & Cronje, 2004: 97). The researchers explained that three years was too short a period to reach the unending "creation" phase in which students create knowledge, students and teachers demand frequent technology updates, and new teachers receive training in new technologies.

2.3 Administrative tasks in schools

In Kenya, the role of a school Head teacher is clearly spelt out in the Head teacher's manual, Ministry of Education (2007). The manual highlights among others that the organization and control of the staff, both teaching and subordinate is all part of the Head teacher's duties. The task performed by the Head teacher includes: curriculum

and instruction, personnel management, school community relationship, provision and maintenance of physical facilities (School Plant) and financial management (Okumbe, 2001).

2.3.1 Curriculum Administration

The Head teacher is responsible for the proper selection of subjects appearing in the school curriculum to ensure a well balanced education. He should acquire appropriate staff and facilities for the implementation of the curriculum. He is also charged with the duty to attend any in service training. He is also supposed to evaluate the whole instructional programme (Ministry of Education, 1999).

While the integration of ICT in education in Africa has lead to changes in pedagogical approaches in formal education in several different countries (Cossa & Cronje, 2004; INEADE, 2007: 3; ROCARE, 2006), there are few examples of curriculum change (Cossa & Cronje, 2004: 97), which could make ICT integration more meaningful in some cases. One teacher in Uganda, when asked why the computer lab was empty during the day but packed after classes, explained that “there is little fit between the use of computers and the national curriculum and examination system” in the country (Kozma, McGhee, Quellmalz & Zalles, 2004: 379). Research involving 174 case studies in 28 countries including one African country, South Africa, showed that 18% of the cases reported a change in curriculum goals or content. Where technology-supported curricular change did occur “it was because teachers provided a more in-depth coverage of a single subject, or schools gave students more responsibility for determining their own learning, or they emphasized a certain curricular theme” (Kozma, 2003).

Farrell (2007) outlined general factors constraining ICT implementation; inadequacy and cost of bandwidth; deficit in human resource capacity (trained teachers, school managers) to lead and support the implementation of ICT; lack of fiscal resources; lack of content in local languages alongside English; duties and taxes on ICT products are currently too high, making them expensive; and project failure after funding is over.

2.3.2 School Plant Management

School plant management is the act of planning the school site, construction and maintenance of the buildings, equipment and the grounds. When an administrator is charged with the duty of selecting a new school or a classroom site, he needs to consider the suitability of such a site. In addition to design the physical facilities, administrators are charged with the duty to maintain the school plant. This includes the day to day running of the plant, keeping the plant safe, ensuring good sanitation and attractiveness. Cleanliness must be ensured as it is the only way to maintain the compound attractive and pleasant to work in this includes planting trees, shrubs and flowers. This can only be done by careful supervision of the non-teaching personnel (Ministry of Education, 1999).

2.3.3 Personnel Management

Personnel management is the art of establishing the need for personnel, recruitment, selection, induction, orientation, maintenance and supervision of the personnel. The ability to get along with people is one of the most important assets in becoming an effective school Head teacher. In a school setting, a head teacher is faced with two kind of personnel namely the student and the staff personnel. Ministry of Education (1999) noted that the pupils are the key stakeholders within a school management.

According to a study by Cossa and Cronje (2004), there was insufficient expertise in ICT-based education for hiring pedagogical support for school-based project managers, and the 486 computers could not be repaired locally, leading the researchers to conclude that training of staff is more important than the selection of technology.

2.3.4 Finance and Business Management

Okumbe (2001) brings out the following sub tasks under the finance and business management. The first one is to understand the source of revenue for the school, second is the preparation of the school budget, third is monitoring expenditure in light of the approved budget and fourth is management of services of non-certified personnel. This sub-task includes things like travel and transport, catering services, insurance and legal services. Annas (2001) in his study observed that some head teachers use school funds for their personal needs, some delay in auditing school books of accounts and that head teachers are unable to collect fees from parents and therefore unable to provide quality services expected of them.

There were several obstacles to the integration of computers and internet in Africa, typical of other experiences and worth mentioning. Cossa and Cronje (2004) observed that on the technical front equipment shipments were delayed, the quality of second-hand equipment could not run word processing applications, the fragile telecommunications infrastructure made the internet connection unreliable, and technical support via email stopped when schools had their telephone lines cut for non-payment of bills (Cossa & Cronje, 2004).

2.3.5 School Community Relations

Castle (1996) states that a good school community is one in which the personnel is united for common interests. The administrators work as a mediator between the school and the surrounding community. He is expected to improve relations through a two way exchange of ideas and activities. He needs to familiarize himself with the leaders and members of the community so as to learn how they can contribute to his school and how the school can help the community (Ministry of Education, 1999).

2.4 Availability of ICT Resources

Physical access to ICT is the first step towards making technology accessible to schools. Collins (1996) defines infrastructure as the physical equipment (Hardware and Software) that enables a network to function. These includes: Hardware costs, software costs, connectivity costs, services cost which include maintenance technical support, infrastructure, utilities costs; like electricity connection, power consumption, furniture, security and insurance.

Technology needs to be affordable by schools if it is to be integrated. At the national level, affordability could be limited by high cost of putting infrastructure in place, and linked with the issue of poverty. At institutional level, expensive hardware and software as well as high cost of communication and services restructure access to ICT. Most schools in Kenya do not have means to purchase expensive computers and hardware and provide training for their staff. Schools could adopt cost cutting measures such as: less paper work, quick data processing, production of accurate reports and reduction of human labour (Minishi – Majanja, 2001).

Affordability could be achieved through the use of open source software or cheaper version of software which can operate on older hardware, procurement of refurbished computers, redesigning of hardware so as to lower the cost of internet access, merging internet technology to use television connection with modification and using community wireless LANs (Local Area Networks). However, Wells (2007) cautions against adoption technology for which expertise is not available, as it would result in high maintenance costs for the user.

Very few public primary schools have sufficient ICT tools for teaching and learning. The schools with ICT infrastructure have acquired it through initiatives supported by parents, the governments, NGOs, Companies or other development agencies and private sector; including the new partnership for African Development (NEPAD) e-school programme (Unwin, 2005).

2.5 Integration of Information and Communication Technology in Schools

The modern technology ICT ensures that the decentralization of education service can be effective since the Head teachers can notify changes in staff deployment, qualification, vacancies etc, as soon as they occur through SMS, Email and Website etc. By a result a vacancy can be filled without delay to fill a vacant post, make a salary change, and grant leave among others. It is also through the use of ICT that unnecessary travels for meeting are avoided by utilizing opportunities provided by video-conferencing, Email and chat lines. The use of Emails allows detailed reports to be sent instantly over short and long distances at low cost. In addition any school payment can be paid through M-Pesa technology, if well regulated.

Successful integration of ICT in public primary schools by the Head teachers needs to address interlocking frameworks for change (Hoffman, 2001). They include: ICT resources, attitude, technical support and staff development.

2.6 Attitudes of school administrators towards integration of ICT

The personal willingness of administrators and teachers to adopt and integrate innovations into their work is of crucial importance for the innovation to be successful (Johnstone & Woodbury, 2003). Akker (2003) argue that teachers' attitude of educational innovations and curriculum reform initiatives are significant factors for researchers when studying implementation processes. Watson (2006) describes teachers' perception as a specific form of educational innovation. Gruff and Mouza (2008) argue that teachers act as innovators when integrating ICT into their work. In most public primary schools, many teachers and administrators are not willing to change the way they do things. They look at it as extra work mostly due to their computer skills which desire making it more difficult to embrace ICT in school activities.

Integration of Information Technology Communication by the Head teachers can go a long way in lessening their work such that the extra time can be used for other chores of the school thus making the school to perform better, be more efficient and be more effective.

2.7 Availability of ICT Technical Support

Specialized personnel in ICT are crucial for ICT to be used effectively and efficiently. To ensure viability of ICT use in Schools, Ministry of Education needs to train more specialized ICT personnel through external and internal projects that aim at creating

cadre of self-sufficient systems in schools by building technical capacity in ICT and also building educational capacity such as ICT capacity building workshops.

In the Magazine for managers of change in education technology, Ali (2003) says that the best approach in implementation of technology is to focus on the ability to use technology rather than simply providing machines. This calls for competencies in installation, operation, maintenance of the equipment, network administration and network security for implementation in schools. Without this, much time and money may be lost due to technical breakdowns. This study will assess the availability and accessibility of ICT technical support within the Kenyan public primary schooling system.

2.8 ICT Skills level among the School Administrators

According to surveys; the majority of in-service teachers both at primary and secondary school have minimal ICT literacy or integration skills. Computer for schools Kenya and to a small extent school net Kenya and KTTC are conducting ICT foundations and integration workshop for teachers' insets, CFSK (2007). This probably explains why very few schools administrators are computer literate.

Large scale ICT capacity building workshops for inset teacher training school build off any existing structures that deliver ongoing professional development for teachers. The program should be consistent with the workshops for administrators and pre-service teachers at teachers training colleges. The foundation skills should not be the end goal. Instruction goal and activities should be highly conceptualized to address educational and administrational outcomes and the teacher reality (CFSK, 2007).

In a study carried out by the Gakuu and Kidombo (2010) on pedagogical integration of ICT in selected Kenyan Primary and Secondary Schools; it was observed that most schools in Africa use computers as an object of study rather than a tool for teaching and learning. The study results showed that the integration of ICT in administration is influenced by the schools ICT policy and school manager's level of ICT skills. Menjo (2010) in his study on challenges of using ICT in school administration in Kenya, the major study results included lack of adequate training in ICT, limited computer hardware dedicated to administrative work, lack of time and absence of appropriate administrative software.

2.9 Summary of Literature Review

The literature has revealed that the development countries have made remarkable investment ICT as well as integrating ICT in their education system characterized by well formulated ICT national policies of ICT in education. On the other hand the developing countries, Kenya included are rapidly and heavily investing in ICTs despite the other challenges they face for instance drought and famine. Despite these efforts, the countries still have low internet connectivity, inadequate power supply in the rural areas where most Schools are located coupled with regular interruptions, low number of computers in Schools. This creates a digital divide between the developed and the developing countries which miss out on the benefits of ICT in almost all aspects including education which is the cornerstone of the economy and avenue to break the poverty cycles on the developing countries. The study will be done to evaluate the factors that affect the effective integration of ICT in administration and management of public primary schools.

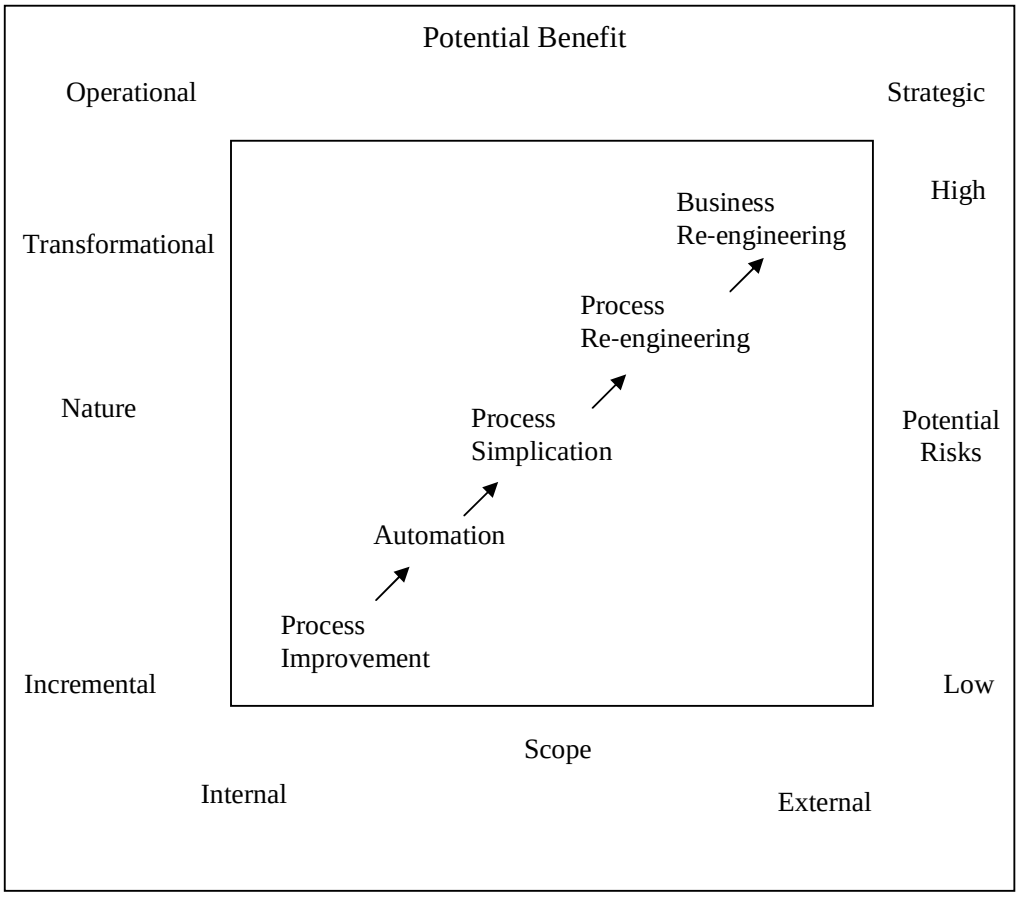
2.10 Theoretical Framework

The study is based on Transformational theory proposed by George Land in 1997. The theory describes the structure of change on the way the administrative tasks are performed as they are still using the old system to integrate ICT to make them perform their tasks efficiently and conveniently. Land's (1997) research, detailed in his seminal book Grow or Die, illustrates change as a series of interlocking S-curves, each interspersed with two breakpoints. Breakpoints are the moments in time when the rules of survival change. Two breakpoints per S-curve yield three distinct phases of growth. Phase I is characterized by experimentation, in which the system attempts to find a connection with its environment. It is not unusual for a system (organism, business, relationship) to die before finding this connection. Assuming this connection is found, the first breakpoint is reached. It is at this point that the rules for success change from experimentation to replication of success. The system must cease searching and begin capitalizing on its connection — food supply, market appeal, common interests — by simply repeating its formula for success. In Phase II, the system enjoys tremendous growth, limited only by the environment that provides resources for that growth. Assuming the system is allowed this ideal growth without unexpected changes, it eventually consumes those resources. This is often disconcerting to conscious systems; in Land's terms, "nothing fails like success." At this second breakpoint the (successful) system enters a bifurcation: it begins to open up to innovative changes, to accept information or resources that were explicitly rejected in Phase II, and it simultaneously reinvents itself. A new S-curve is born at the second breakpoint (Land, 1997).

Mapping this theory to education system may yields these familiar conditions: Entrepreneurship, Success and Growth, Diversification. Mapping to the creative

process, it yields three distinct approaches to problem solving: Invention, Improvement and Innovation. Land's unique contribution is that he clearly differentiates three different sets of rules for survival; the implication is that the system must be aware of which set of rules are currently operative. Land's theory is useful in the planning and execution in systems large and small (Land, 1997). Schools are encouraged to integrate ICT in little increment as summarized in figure 2.1

Figure 2.1 Theoretical Framework



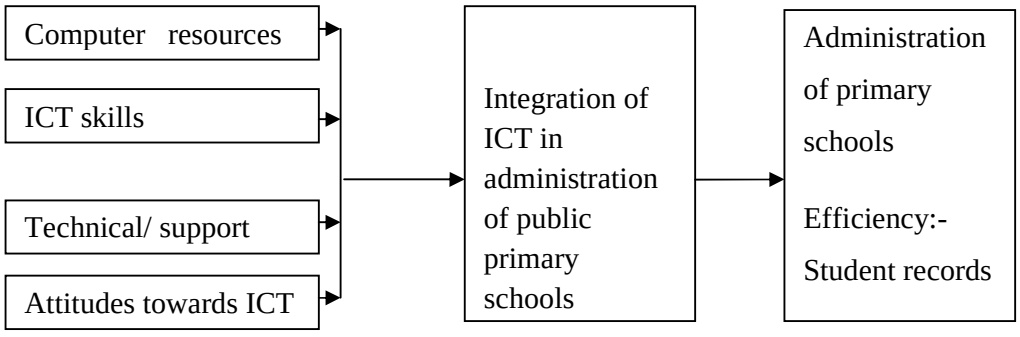
The transformation theory focuses on business processes where the processes are re-conceptualized to work in a different way. It offers the opportunity to re-think

individual processes. It is through this process that organizations change the way their business work by re-thinking, re-designing the entire business behind a more competitive strategy. The head teachers can change their ways of administration from manual to automation using ICT. This can be done through the availability of the computers in their offices, the positive attitude and ICT skill levels towards integration of student and personnel management making the transformational change required for better standards and efficient administration. Under this theory, schools are encouraged to adopt and integrate the ICT changes in little increments, inform of process simplification, process improvement and automation. Those that will not embrace ICT in tandem with the changing environment will find it very difficult in future simply because they will have to invest in re-engineering processes which are quite expensive and require costly expertise to implement.

2.11 Conceptual Framework

The research study conceptualized that integration of ICT is influenced by perceived availability of equipment, availability of skills, technical support and attitudes of stakeholders among others as shown in Figure 2.2

Figure 2.2 Conceptual Framework



According to Orodho (2005), a conceptual framework is a model of presentation where a researcher presents the relationship between variables in the study and shows relationships diagrammatically.

The Head Teachers preparedness for integration of ICT in administration of public primary schools needs the Independent variables to facilitate data processing, production of accurate reports in good time. Due to the repetitive nature of the information needed time and again, many hours of human labour are saved by use of ICT because of the storage and retrieval ability of the computer hence their work becomes more efficient. The study conceptualizes that, if schools integrate ICT in administration by investing in computer resources, ICT skills, ICT technical support and positive attitudes towards ICT, then efficiency would be achieved in running of public primary schools in Changamwe District, Mombasa County, Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers the research methodology which will be organized under research design, target population, sample size and sampling procedures, research instrument, piloting, instrument validity, instrument reliability and data collection procedure and analysis techniques to be used on the study.

3.2 Research design

This study adopted a descriptive survey design. This particular design is intended to produce statistical information about aspects of education that interests the policy makers and educators. The choice of the descriptive survey research design has been made based on the fact that in this study, the researcher is interested on the state of affairs already existing in the field and no variable will be manipulated (Mugenda & Mugenda, 2003).

3.3 Target population

The study was carried out in Changamwe District and target all the 20 (Twenty) public primary schools in Changamwe District. The district consist of 20 public primary schools with a population of 20 head teachers, 20 deputy head teachers and 100 Head of Departments (DEO Changamwe, 2014) as of the time of study.

3.4 Sample size and sampling procedure

Orodho (2005) says a sample is a small portion of a target population. Sampling mean as selecting a given number of subjects from a define population as representative of that population any statement made about the sample should also be true of the

population. It is however agreed that the larger the sample the small the sampling error.

Mugenda and Mugenda (2003) advocated that sample size should range from 10 – 30 percent of the entire population. The researcher used all the schools and their administrators in the district to determine the number of respondents in each category. A census of all head teachers and deputy head teachers was done while simple random sampling was used to obtain five heads of departments from each school. Given that there are 20 public primary schools in Changamwe District, 20 Head teachers, 20 Deputy Head teachers and 100 Head of Departments were selected to make a total sample size of 140 respondents. The sampling procedure is summarized as shown in the Table 3.1

Table 3.1 Sample Size

	No. of schools	Head teachers	Deputy H/teachers	Head of Departments
Population	20	20	20	100
Number selected	20	20	20	100
Method used	Census	Census	Census	Simple random sampling

3.5 Research instrument

The questionnaire was used to collect data from the school administrators. Mutai (2000) defines a questionnaire as a list of questions in a set form meant to be point to respondents in a prescribed to the sequence. A questionnaire was chosen because it enabled one to collect as much information as possible in a short time. Besides, use of

questionnaire enables respondents to feel free to note down their responses without inhibition since they are not being observed.

The questionnaire will have five sections: section A collecting demographic data on the school administrators while section B solicits information on the availability of ICT resources in their respective schools. Section C collects information on the attitude of the School administrators towards integration of ICT, while Section D will be on the availability of technical support within the school. Lastly, section E will gather information on the ICT skills level among the administrators.

3.6 Validity of the research Instruments

Validity is the degree to which an instrument measures what it purports to measure. Orodho (2004) contends that validity is the degree to which results obtained from the analysis of the data actually represents the phenomenon under investigation. Piloting is exposing the instruments to a small number of respondents to test the validity and reliability. The instruments were piloted in two schools. Piloting help the researcher to eliminate any ambiguity in the research instruments to ensure it generates valid results of the research. The schools where piloting took place, they were excluded to avoid bias results of the study. Validity was ensured by seeking expert judgment on the suitability of research instrument to collect information as intended.

3.7 Reliability of the Instruments

Orodha (2007), states that reliability is a measure of degree to which a research instrument yields consistent results or data after repeated trials. The test-retest technique would be used to test the consistence of the instrument. This is where the instrument would be administered to the same group twice. If the instrument is reliable, the individuals taking the test are supposed to score the same or similar

scores in the second test as they did the first one. To ensure reliability of findings, there would be a time lapse of two weeks between the test and the second test for within this short period of time, the respondents were in a position to remember what they learnt in the first test. The scores from test one and test two be correlated to get the reliability of the instruments using Pearson's Product Moment formula coefficient. Thus,

$$r = \frac{\sum xy - (\sum x)(\sum y)/N1}{\sqrt{[\sum x^2 - (\sum x)^2/n][\sum y^2 - (\sum y)^2/N]}}$$

X = Scores from test one.

Y = Scores from test two

N = The number of respondents.

A correlation coefficient, which may range -1.00 to +1.00, shows the size and direction of a relationship between two sets of scores. The larger the absolute value of the number, the stronger the relationship whether be it positive or negative (Best and Kahn, 2006). A coefficient of 0.8 will be considered adequate. Therefore, the higher the correlation coefficient the higher the test – retest reliability.

3.8 Data collection procedure

A research permit to conduct the study has been sought from the National Council for Science, Technology and Innovation the relevant authority to undertake research. The DEO – Changamwe has been contacted and informed that the study will take place in the district. The researcher has visited the sampled Schools and administers the questionnaires to the head teachers, deputy head teachers and heads of departments. Appointments to the sampled Schools were arranged prior to visits to avoid any inconveniences to the respondents. The researcher emphasized that the information

given will be specifically for the study and it will be private and confidential and that names will not be necessary.

3.9 Data analysis techniques

Data analysis refers to examining the coded data critically and making inferences (Kombo & Tromp, 2006). After all data was collected, data cleaning was done in order to determine inaccurate, incomplete or unreasonable data and then improve the quality through correction of detected errors and omissions. After data cleaning, data was coded and entered in the computer for analysis. Each research instrument was analyzed through tally method and data analysis procedures. Quantitative data was analyzed using descriptive statistics such as frequency count, means and percentages while Statistical Package for Social Sciences (SPSS) was also used to analyze quantitative data. SPSS was able to handle large amount of data, given its wide spectrum of statistical procedures purposefully designed for social sciences.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSION

4.1 Introduction

This chapter presents the data analysis and interpretation of the study findings. It start with the response rate, demographic information of the respondents and the objectives which include to establish the availability of ICT resources for use by the Head teachers in administration of public primary schools in Changamwe District; to determine the attitudes of school Head teachers' preparedness towards integration of ICT in administration of public primary schools in Changamwe District; to determine the availability of ICT technical support to help in the use ICT in the administration of public primary schools in Changamwe District; and to ascertain the ICT skills level of Head teachers' in administration of public primary schools in Changamwe District.

4.2 Response Rate

The study sample was 20 head teachers, 20 deputy head teachers and 100 head of the departments. Out of the 140 respondents, 119 questionnaires that were appropriately filled were collected from 17 head teachers, 17 deputy head teachers and 85 head of the departments. This translates into a response rate of 85%. This response rate was considered adequate for making conclusions as recommended by Babbie (2002) that any response rate above 50% is appropriate for analysis and making conclusions, as shown on the table 4.1 below:

Table 4.1: Sample Return Rate

	Frequency	**Percentage %**
Head teachers	17	85
Deputy head teachers	17	85
Head of the departments	85	85
Total	**119**	**85**

4.3 Demographic Information

This study targeted three categories of respondents. They included the Head teachers, deputy Head teachers and head of departments. Demographic information for each category is presented below.

4.3.1 Gender of Respondents

a. Head teacher

The researcher wanted to know the distribution of head teachers by gender. The head teachers were asked to indicate their gender. Figure 4.1 shows these results.

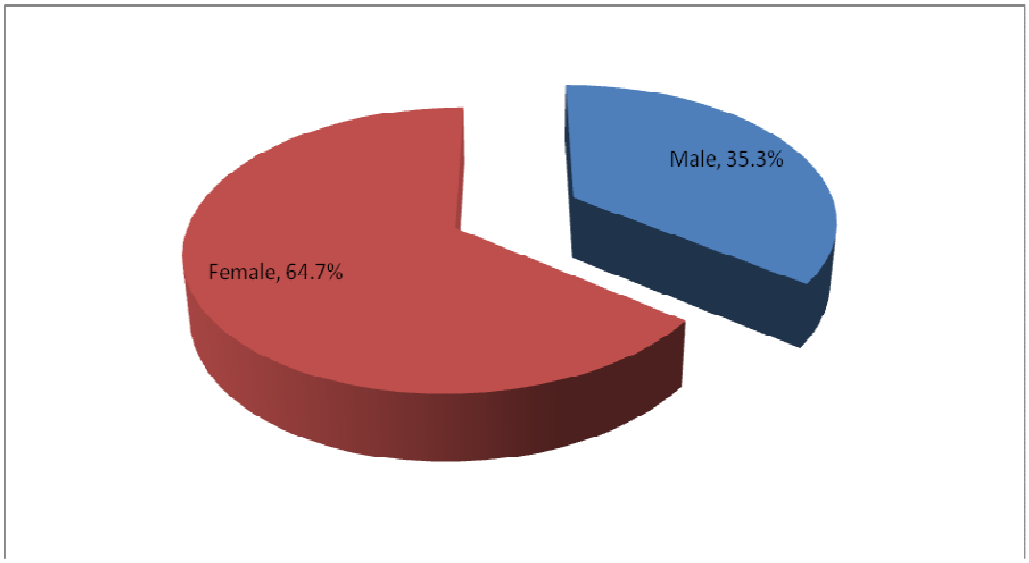


Figure 4.1: Head Teachers' Distribution by Gender

The majority of them were female frequency of 11 (64.7%) as compared to frequency of 6 (35.3%) who were male. This could be attributed to the dominance of women in teaching profession owing to gendered roles in the society where the role of taking care of the children is assigned to women.

b. Deputy Head Teachers

The researcher wanted to know the distribution of deputy head teachers by gender. Deputy Head teachers were asked to indicate their gender. Figure 4.2 shows deputy head teachers by gender.

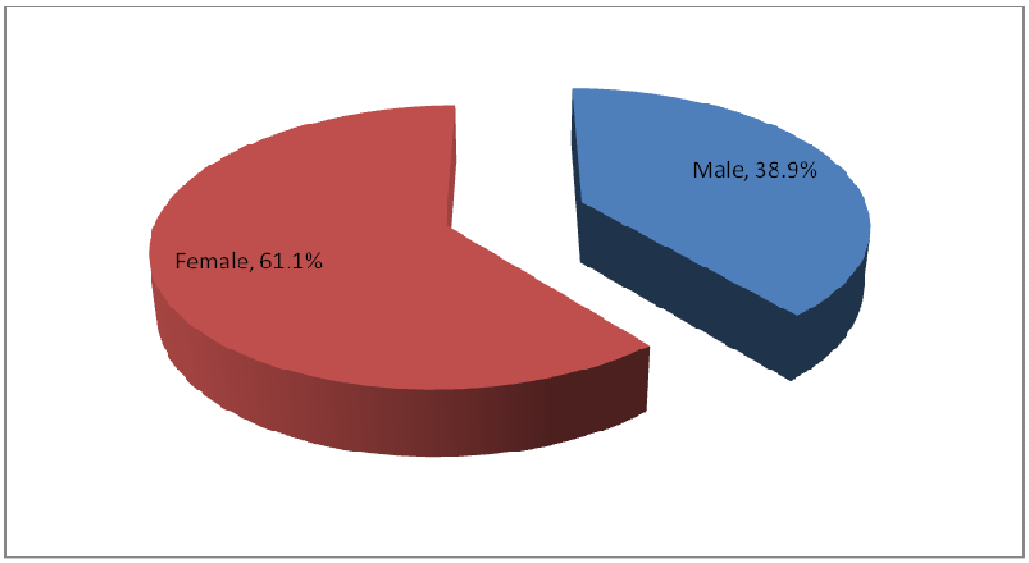


Figure 4.2: Deputy Head Teachers' Distribution by Gender

The majority of the deputy head teachers were female frequency of 10 (61.1%) as compared to frequency of 7 (38.9%) who were male. These results show there is gender disparity in leadership of public primary schools in Changamwe District where the leadership is female dominated. This is in contrast with what is expected in a patriarchal system.

c. Head of the Departments

The researcher wanted to know the distribution of head of departments by gender. The head of departments were asked to indicate their gender. Figure 4.3 shows the results.

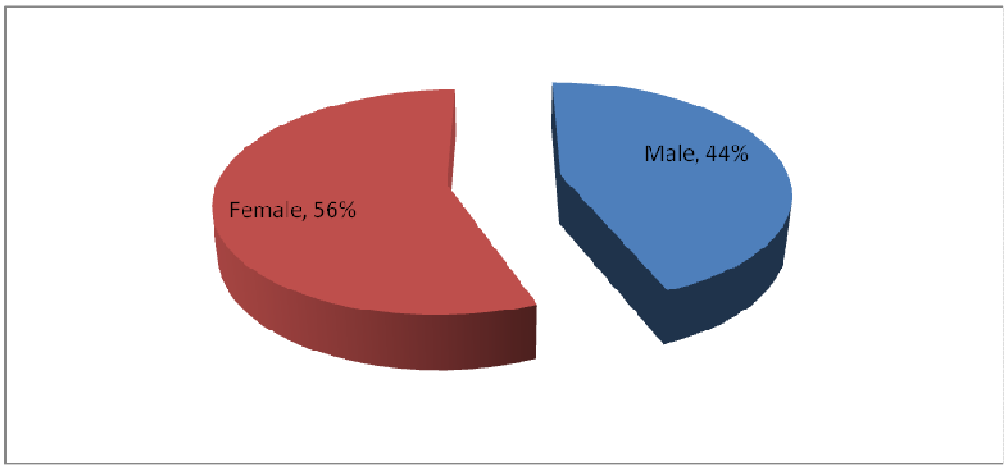


Figure 4.3: Head of Departments Distribution by Gender

The majority of the head of departments were female frequency of 10 (56%) as compared to male who were frequency of 7 (44%). The results further confirm gender parity in leadership of public primary schools in Changamwe District where female gender dominates contrary to expectations in a patriarchal society.

4.3.2 Age of Respondents

a. Head Teachers

The researcher wanted to know the distribution of head teachers by age. The head teachers were also requested to indicate their age bracket. Table 4.2 shows these results.

Table 4.2: Head Teachers

	Frequency	Percent
31-40 years	3	17.6
41-50 years	10	58.8
51-60 years	4	23.5
Total	17	100.0

The majority of the head teachers were aged 41-50 years 58.8% while 23.5% and 17.6% were aged 51- 60 years and 31- 40 years respectively. This age distribution could be attributed to the number of years that teachers take to gain experience as they ascend to leadership positions.

b. Deputy Head Teacher

The researcher wanted to know the distribution of deputy head teachers by their age brackets. Deputy Head teachers were asked to indicate their age brackets. These results are presented in table 4.3

Table 4.3: Deputy Head teachers

	Frequency	**Percent**
31- 40 years	2	11.1
41- 50 years	13	72.2
51- 60 years	3	16.7
Total	18	100.0

The results indicate that majority of the deputy head teachers were aged 41- 50 years 72.2% while 16.7% were aged 51- 60 years. Only 11.1% of the deputy head teachers indicated that they were aged 31- 40 years. These results show that leadership of public primary schools in Changamwe District is comprised of the middle aged teachers and the elderly. This could be attributed to their experience in handling issues pertaining to education administration.

c. Head of the Departments

The researcher wanted to know the distribution of head of department by age brackets. The head of departments were asked to indicate their age bracket. Table 4.9 presents the results.

Table 4.4: Head of the Departments

	Frequency	Percent
31- 40 years	22	22.0
41- 50 years	70	70.0
51- 60 years	7	7.0
Over 60 years	1	1.0
Total	100	100.0

The majority of the head of departments were aged 41- 50 years 70% while 22% were aged 31-40 years. Only 7% and 1% were aged 51-60 years and over 60 years respectively. The results show that leadership of public primary schools in Changamwe District comprises of the middle aged teachers and the elderly. Their experience in education administration matters could be the reason for this.

4.3.3 Academic Qualifications of Respondents

a. Head teachers

The researcher wanted to know the head teachers academic qualifications. The researcher asked head teachers to indicate their highest academic qualifications. Table 4.5 presents these findings.

Table 4.5: Head Teachers

	Frequency	Percent
BED	6	35.3
Post-graduate diploma	4	23.5
Diploma in Education	7	41.2
Total	17	100.0

The results show that 41.2% of the head teachers had a Diploma in education while 35.3% had a Bachelors degree in education. Only 23.5% of the head teachers had a Post-Graduate Diploma. These results show that head teachers had the basic academic qualifications while others had high academic qualifications.

b. Deputy Head Teachers

The researcher wanted to know deputy head teachers academic qualifications. Deputy Head teachers were asked to indicate their highest academic qualifications. The results are summarized in table 4.6

Table 4.6: Deputy Head Teachers

	Frequency	Percent
BED	6	35.3
Post-graduate diploma	3	17.6
Diploma in Education	8	47.1
Total	17	100.0

The results indicate that 47.1% of the deputy head teachers were Diploma in education holders while 35.3% had a Bachelors degree in education. Only 17.6% of the deputy head teachers indicated they had a Post - Graduate Diploma. The results

show adequate training for the leadership of public primary schools in Changamwe District.

c. Head of Departments

The researcher wanted to know the academic qualifications of the head of departments. Head of departments were asked to show their highest academic qualifications. The findings are summarized in table 4.7.

Table 4.7: Head of Departments

	Frequency	Percent
BED	20	23.8
Post- graduate diploma	19	22.6
Diploma in Education	45	53.6
Total	84	100.0

The results indicate that majority of the head of departments 53.6% were Diploma holders in education. The results further show that 23.8% and 22.6% had Bachelors degree in education and a Post-Graduate Diploma respectively. These results further confirm that leadership of public primary schools in Changamwe District is adequately trained.

4.3.4 Duration in Teaching Profession

a. Head Teachers

The researcher wanted to know the duration of head teachers in teaching profession. Head teachers were asked to indicate the duration they have been in teaching profession. These results are presented in table 4.8.

Table 4.8: Head Teachers

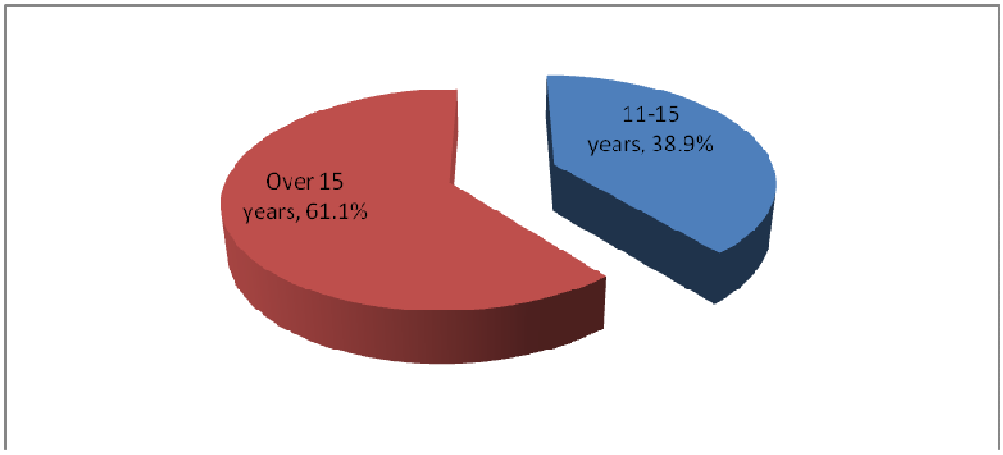
	Frequency	Percent
6-10 years	4	23.5
11-15 years	6	35.3
Over 15 years	7	41.2
Total	17	100.0

The results show that 41.2% had been in the teaching profession for over 15 years while 35.3% indicated 11-15 years. Only 23.5% of the head teachers indicated that they have been in the teaching profession for 6 -10 years. These results indicate that head teachers were experienced and able to provide the study with insightful information on the phenomenon under study.

b. Deputy Head Teachers

The researcher wanted to know the duration that the deputy head teachers have been in teaching profession. The deputy head teachers were asked to indicate the duration they have been in teaching profession. Figure 4.4 shows the results

Figure 4.4: Deputy Head Teachers Duration in Teaching



The majority of the deputy head teachers indicated they have been in the teaching profession for over 15 years frequency of 10 (61.1%) while frequency of 6 (38.9%) indicated they have been in the profession for 11-15 years. The results show that deputy head teachers had adequate experience to offer informed comments on leadership of public primary schools in Changamwe District preparedness in integration of ICT in education administration.

4.3.5 Duration taught in Current Station

a. Head Teachers

The researcher further wanted to know the duration that the head teachers had taught in the current station. Head teachers were asked to indicate the duration they had taught in their respective stations. Table 4.9 summarizes the results.

Table 4.9: Head Teacher

	Frequency	Percent
1-5 years	6	35.3
6-10 years	5	29.4
11-15 years	3	17.6
Over 15 years	3	17.6
Total	17	100.0

The results show that 35.3% had taught in their current station for 1-5 years, 29.4% had taught in current station for 6 -10 years while 17.6% had taught in current station for 11-15 years and over 15 years each. These results show that head teachers had worked in their stations for a long time hence able to give context based information on the situation in their schools.

b. Deputy Head Teachers

The researcher wanted to know the duration that the deputy head teachers have taught in their current station. The deputy head teachers were asked to indicate the duration they have taught in their current station. The results are summarized in table 4.10.

Table 4.10: Deputy Head Teachers

	Frequency	Percent
1- 5 years	3	16.7
6 -10 years	8	44.4
11-15 years	5	27.8
Over 15 years	2	11.1
Total	18	100.0

The results show that 44.4% of the deputy head teachers had taught in their current station for 6-10 years while 27.8% indicated 11-15 years. Deputy Head teachers who had taught in current station for 1-5 years were 16.7% while those who had taught for over 15 years were 11.1%. The results indicate that deputy head teachers had taught in their respective station for a duration long enough to enable them give context based information on leadership preparedness in integration of ICT in education administration.

4.4 School Set up

The researcher wanted to know the school set up where the head teachers taught. The head teachers were asked to indicate whether it was boys' school, girls' school or mixed. They were also asked to indicate whether their schools were boarding, day or boarding and day. These results are presented in table 4.11.

Table 4.11: School set up by Head Teachers

	Frequency	Percent
Mixed	17	100.0
Day	17	100.0

The results indicate that 100% of the schools were mixed and they were day schools. These results show that type of school does not matter in head teachers' preparedness for integration of information communication technology in administration of public primary schools in Changamwe District.

4.5 Availability of ICT Resources for Administration

The researcher wanted to know whether schools have computers. Head teachers were asked whether they have computers in their schools. The results are shown in table 4.12.

Table 4.12: Have Computers in their Schools

	Frequency	Percent
Yes	11	64.7
No	6	35.3
Total	17	100.0

The majority of them indicated yes 64.7% as compared to 35.3% of the head teachers who indicated no. The results show that many of the public primary schools in Changamwe District have computers.

The researcher wanted to know how many computers each school had. Head teachers were asked how many computers their school had. Table 4.13 shows the results.

Table 4.13: Number of Computers

	Frequency	Percent
10 and below	9	81.8
11- 20	1	9.1
31- 40	1	9.1
Total	11	100.0

The majority of the head teachers indicated 10 and below 81.8%. The results also show that those with 11-20 and 31-40 computers were 9.1% each. These results indicate that most public primary schools in Changamwe District had 10 or less computers.

The researcher wanted to know about computer utilization in public primary schools in Changamwe District. Head teachers were asked to indicate how computers were utilized in their schools. Table 4.14 shows results on computer utilization.

Table 4.14: Computer Utilization

	Yes		No	
	F	%	F	%
Utilized for pupils computer lab	2	13.3%	13	86.7%
Utilized for administration work	10	66.7%	5	33.3%

The majority of the head teachers 86.7% indicated that those computers were not utilized for pupils' computer lab as compared to 13.3% of the head teachers who indicated that were utilized for pupils' computer lab. The majority of the head teachers indicated that computers were utilized for administration work 66.7% as

compared to 33.3% of the head teachers who indicated that computers were not utilized for administration work. These results show that the few computers available in public primary schools in Changamwe District were largely utilized for administration work.

The researcher wanted to know whether the head teacher have been allocated a computer in his or her office. The head teachers were asked to indicate whether the head teacher have been allocated a computer in his or her office. Table 4.15 shows the results.

Table 4.15: Head Teacher Allocated a Computer in his/her Office

	Frequency	Percent
Yes	9	52.9
No	8	47.1
Total	17	100.0

The majority of the head teachers indicated yes 52.9% as compared to 47.1% of the head teachers who indicated no on whether the head teachers have been allocated a computer in his or her office. The results show that slightly more than half of the head teachers of public primary schools in Changamwe District have been allocated computers in their offices while almost half of them have not been allocated. This could jeopardize the preparedness efforts of those not allocated computers in integration of ICT in education administration.

The researcher wanted to know who uses computer in head teachers' office. The head teachers were asked to indicate who uses computer in head teachers' office. The results are shown in table 4.16.

Table 4.16: Computer Usage in Head Teachers Office

	Frequency	Percent
Head teacher	3	33.3
Both head teacher and secretary	6	66.7
Total	9	100.0

The majority of the head teachers 66.7% indicated both the secretary and the head teacher while 33.3% indicated head teacher alone. These results show that computer utilization is associated with the office of the head teacher and not the head teacher alone.

Asked to list the tasks that the computer in the head teacher's office is used to accomplish, head teachers cited correspondence, minutes writing, preparation of school records, e-mailing and saving information. The head teachers were asked to indicate who else uses computer for administrative work in the school. They cited school clerk, deputy head teacher, secretary, senior teachers and teachers.

The researcher wanted to know the equipments which were available for administrators at their school. The head teachers were asked to indicate out of a number of equipments which were available for administrators at their school. Table 4.17 shows the results.

Table 4.17: Equipment Available for Administrators

Equipment	Available		Not available	
	F	%	F	%
Printers	9	52.9%	8	47.1%
Telephone	1	5.9%	16	94.1%
Scanners	2	11.8%	15	88.2%
Fax	0	0%	17	100%

The results show that printers were available for administrators according to 52.9% of the head teachers while 47.1% indicated that they were not available. Telephone and scanners were not available to administrators according to 94.1% and 88.2% respectively. Fax was not available at all to the administrators according to 100% of the head teachers. The results show that only slightly more than half of the schools where administrators had access to printers while the other important office equipment such as telephone, scanners and fax were not available to the administrators. These equipments are important to use with computer in education administration.

The researcher wanted to know whether head teachers had internet connection in their school and the offices connected to the internet. Head teachers were asked whether their schools and offices were connected to the internet. Figure 4.5 shows the findings.

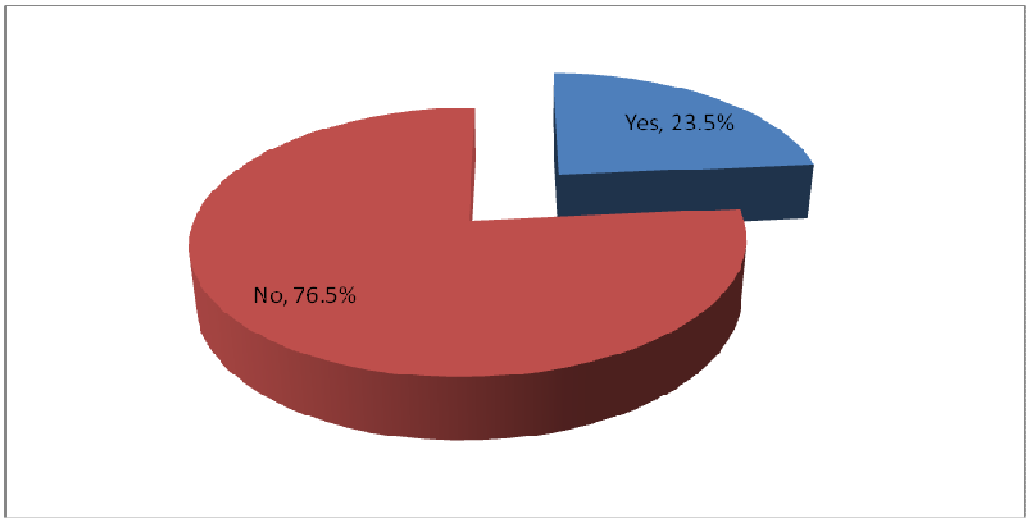


Figure 4.5: Have Internet Connection in Your School

Majority of the head teachers indicated no frequency of 13 (76.5%) while frequency of 4 (23.5%) of the head teachers indicated yes on whether schools and offices were connected to the internet. The results show that most of the computer use was

therefore offline. The few of the Head teachers who indicated that their schools and offices were connected to the internet were asked to indicate the offices connected to the internet. The head teachers cited head teacher's and deputy head teacher's office, computer room or ICT laboratory.

4.6 Attitudes towards Integration of ICT

The researcher wanted to know whether head teachers, deputy head teachers, and head of departments were computer literate. The head teachers were asked whether their deputy head teachers were computer literate while the head of departments and deputy head teachers were asked the same about their head teachers. The findings are summarized in table 4.18.

Table 4.18: Deputy Head Teacher, Senior Teachers and Head of Departments Computer Literacy

	Yes		No	
	F	**%**	**F**	**%**
Deputy Head teacher	13	76.5%	4	23.5%
Senior Teachers	12	70.6%	5	29.4%
Head of Departments	9	52.9%	8	47.1%

The majority of the head teachers 76.5% indicated that their deputy head teachers were computer literate as compared to 23.5% who indicated they were not computer literate. They also indicated that their senior teachers and head of Departments were computer literate at 70.6% and 52.9% respectively.

The researcher wanted to know the perspective of Head of Departments on their computer literacy and that of their head teachers. Head of Departments were asked to indicate whether their head teachers and Head of Departments were computer literate. Table 4.19 shows the results.

Table 4.19: Computer Literacy by Head of Departments

	Yes		No	
	F	**%**	**F**	**%**
Head teacher	63	63%	37	37%
Head of Departments	55	55%	45	45%

According to 63% and 55% of head of departments, head teachers and head of departments were computer literate respectively as compared to 37% and 45% of the head of departments who indicated that they were not computer literate. The results show that computer literacy among the head of departments and head teachers were rated fairly by head of departments. The researcher wanted to know whether there were plans to train administrators in ICT skills. The head teachers were asked to indicate whether there were plans in place to have school administrators taught about ICT skills.

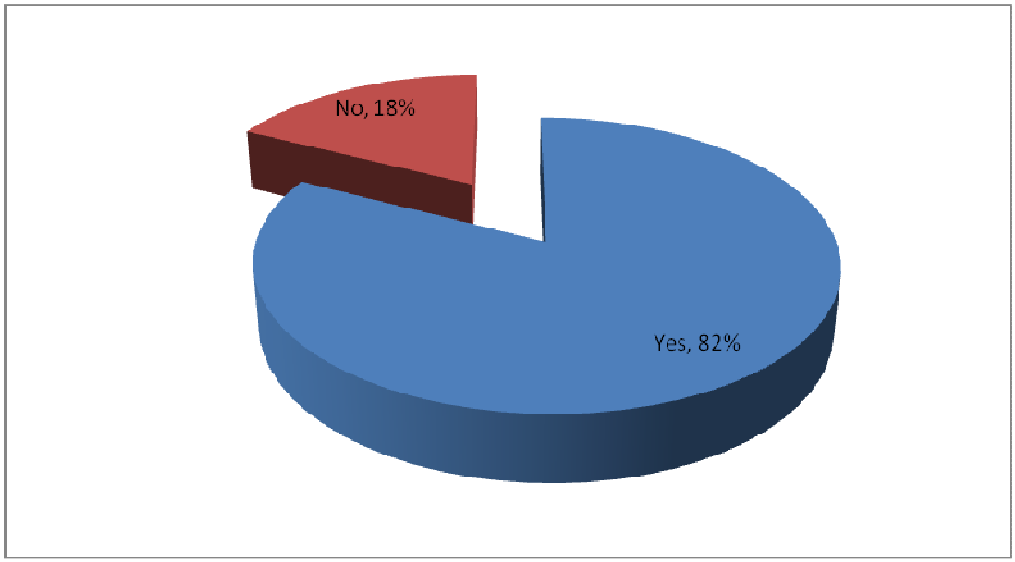


Figure 4.6: Plans for Training of ICT Skills

The majority of the head teachers indicated yes frequency of 82 (82%) as compared to frequency of 18 (18%) of the head teachers who indicated no on whether there were plans to train administrators in ICT skills. The results show that the leadership of public primary schools in Changamwe District feels there is need for administrators to enhance their skills in ICT.

The head of departments were asked to indicate whether there were plans to train administrators in ICT skills. Table 4.20 shows the results.

Table 4.20: Plans in place for head of departments' to be taught about ICT skills

	Frequency	Percent
Yes	57	57.6
No	42	42.4
Total	99	100.0

According to 57.6% of head of departments, there are plans in place for head of department members to be taught about ICT skills. However, 42.4% of the head of

departments indicated that there were no plans in place for head of departments to be taught about ICT skills. The results confirm that the leadership of public primary schools in Changamwe District feels there is need for administrators to enhance their skills in ICT.

4.7 Sponsor

a. Head Teachers

Those head teachers who indicated that there were plans to teach school administrators about ICT skills were asked who the sponsor of such an initiative was. Table 4.21 shows the results.

Table 4.21: Head Teachers

	Frequency	Percent
BOM	5	35.7
Ministry of Education	4	28.6
Donors	5	35.7
Total	14	100.0

The results show that 35.7% indicated Board of Management and donors as the sponsors each. Ministry of Education was indicated as a sponsor by only 28.6% of the head teachers. The results indicate that the Ministry of Education is not seen as a keen advocate of ICT integration in public primary schools administration in Changamwe District by the head teachers.

b. Head of Departments

The researcher asked the same question to head of departments on who was the sponsor of plans to teach school administrators about ICT skills. Table 4.22 shows the results.

Table 4.22: Head of Departments

	Frequency	Percent
BOM	19	32.8
Ministry of Education	15	25.9
Donors	19	32.8
NGO's	5	8.6
Total	58	100.0

On the sponsors of training about ICT, 32.8% of Head of Departments indicated BOM and donors as the sponsors each. The Ministry of Education and NGOs were indicated as sponsors of such an initiative by 25.9% and 8.6% of the head of departments respectively. The results show that BOM is seen as the champion of ICT plans to teach administrators about ICT skills but the Ministry of Education is not seen as a keen advocate of ICT integration in public primary schools administration in Changamwe District by the Head of Departments.

The researcher wanted to know head teachers attitude towards the use of some administrative tasks in regard to computer use. The head teachers were asked to indicate their attitude towards the use of some administrative tasks in regard to computer use. Table 4.23 presents the details.

Table 4.23: Attitude Towards Computer use in Administrative Tasks

	N	Mean	Std. Deviation
Maintenance of library records (Issuing books to pupils)	17	1.71	.920
Maintenance of teachers' attendance records	16	1.69	.873
Preparation of community speeches	17	1.65	.862
Keeping teachers' performance records	17	1.65	.786
Maintenance of teachers leaves application	16	1.63	.806
Fixed assets inventory	17	1.59	.795
Preparation of SMC minutes	17	1.53	.800
Preparation of workers payrolls	17	1.53	.800
Preparation of record of work and teachers' notes	17	1.53	.800
Preparation of schemes of work and lesson notes	17	1.53	.800
Preparation of the school time table	17	1.53	.800
Discipline records of pupils in your school	17	1.53	.874
Records of class attendance	17	1.53	.800
Registration of new pupils in your school	17	1.53	.800
Maintenance of school suppliers records (Text books and stationery)	17	1.47	.717
Preparation of school budget	17	1.47	.800
Issuance of receipts for money paid	17	1.47	.800
Preparation of pupils' report forms	17	1.41	.712
Preparation of school income and expenditure statements	17	1.35	.702
Valid N (list wise)	16		

The results shows that maintenance of school suppliers records (text books and stationery), preparation of school budget, issuance of receipts for money paid, preparation of pupils' report forms, and preparation of school income and expenditure statements were preferred by head teachers. The results show that only in a few operational administrative tasks head teachers used computers. Other daily administrative tasks were perhaps done manually despite computer being in school.

The head of departments also registered their attitudes towards computer use in administrative tasks. Using descriptive statistics, tasks that head of departments liked using computer to perform are ranked as follows where 1 means like using computer,

2 means do not like using computers and 3 means the head of department does not know. Table 4.24 shows the results.

Table 4.24: Attitude Towards Computer use in Administrative Tasks by head of departments

	N	Mean	Std. Deviation
Preparation of SMC minutes	99	1.61	.855
Registration of new pupils in your school	99	1.62	.842
Preparation of pupils' report forms	99	1.62	.854
Records of class attendance	99	1.64	.839
Preparation of record of work and teachers' notes	99	1.65	.861
Preparation of community speeches	99	1.65	.861
Maintenance of teachers' attendance records	99	1.66	.847
Preparation of school budget	99	1.66	.859
Preparation of the school time table	99	1.66	.883
Maintenance of teachers leaves application	99	1.66	.871
Fixed assets inventory	99	1.67	.869
Discipline records of pupils in your school	99	1.67	.881
Preparation of schemes of work and lesson notes	99	1.67	.869
Issuance of receipts for money paid	99	1.68	.867
Preparation of workers payrolls	99	1.68	.879
Preparation of school income and expenditure statements	99	1.69	.877
Maintenance of library records (Issuing books to pupils)	99	1.69	.877
Keeping teachers' performance records	99	1.70	.886
Maintenance of school suppliers records (Text books and stationery)	99	1.71	.895
Valid N (list wise)	99		

The results indicate that attitude was mixed where some liked using computers while others did not. Though majority of the head teachers do not use computers in office, find it more convenient to integrate ICT in their administrative tasks.

The head teachers were asked whether they have a computer management system and whether parents are able to access it on the internet. Table 4.25 shows detailed findings on computer management system and its accessibility by parents online.

Table 4.25: Computer Management System and its Accessibility by Parents Online

	Yes		No	
	F	%	F	%
Have a computer management system	2	11.8%	15	88.2%
Parents are able to access it on the internet	1	33.3%	2	66.7%

The results show that majority of the head teachers 88.2% indicated that they do not have a computer management system and therefore parents do not have access to it on the internet. The computer use is therefore largely for some internal processes.

The head teachers were asked which other computer programs that they use especially those who indicated that they do not have a computer management system. They cited that they use word, excel, PowerPoint, email and internet. This shows that the head teachers only use the computer basics.

The head of departments were asked whether they have a computer management system. Table 4.26 shows the results.

Table 4.26: Have Computer School Management System by head of departments

	Frequency	Percent
Yes	13	13.1
No	86	86.9
Total	99	100.0

According to 86.9% of the head of departments, there is no computer management system in their school while 13.1% indicated that there was one. The absences of computer management system in most of the schools indicate that ICT integration in administration by leadership of public primary schools in Changamwe District is far from being achieved.

The researcher asked the head of departments whether the parents have access to computer school management system on the internet. Table 4.27 shows the results.

Table 4.27: Parents able to access computer school management system on the internet by head of departments

	Frequency	Percent
Yes	2	15.4
No	11	84.6
Total	13	100.0

Head of departments 84.6% indicated that parents do not have access to computer management system, while 15.4% they do. These further confirm the challenge of ICT integration in educational administration in schools and also shown in other studies in classroom teaching using of ICT.

4.8 Availability of ICT Technical Support

The head teachers were asked who advices on the computer equipment to be bought at the school. Table 4.28 shows the results.

Table 4.28: Advises on the computer equipment to be bought in school

	Frequency	Percent
BOM	3	17.6
Computer teacher	4	23.5
Hired technician	10	58.8
Total	17	100.0

The majority of the head teachers 58.8% indicated that a hired technician advices on the computer equipment to be bought at the school while 23.5% and 17.6% indicated computer teacher and Board of Management respectively. The results show that in most of the schools, hired technician advices on the computer equipment to be bought at school in Changamwe District.

The researcher also wanted to know who repairs the computer once it breaks down. Table 4.29 shows these results.

Table 4.29: Repairs the Computer

	Frequency	Percent
Computer teacher	3	18.8
Hired Technician	13	81.3
Total	16	100.0

The majority of the head teachers 81.3% indicated that a hired technician repairs the computers while 18.8% indicated it was the computer teacher who repairs computers once they break down.

The head teachers were asked who cleans computers in their school. Table 4.30 shows these results.

Table 4.30: Cleans Computers

	Frequency	Percent
Myself	1	6.7
BOM	1	6.7
Computer teacher	12	80.0
Hired technician	1	6.7
Total	15	100.0

The majority of the head teachers 80% indicated that computer teacher cleaned the computers while others indicated they cleaned themselves 6.7%, Board of Management 6.7% and hired technician 6.7%.

The head of departments' response on who advices on computer equipment to be bought at school reflects a similar trend. Table 4.31 shows the results.

Table 4.31: Advises and Repair of Computers

	Computer teacher		Hired technician	
	F	%	F	%
Advices on the computer equipment to be bought in school	14	14%	86	86%
Repairs the computer	8	8%	92	92%

According to 86% and 92% of head of departments, hired technicians advises on the computers to be bought at school and repairs the computers.

The researcher asked whether head of departments' school had a contract with any organization to service their computers. Table 4.32 shows the results.

Table 4.32: Have a Contract with any Organization to Service Computers

	Frequency	Percent
Yes	3	17.6
No	14	82.4
Total	17	100.0

The majority of the head of departments indicated no 82.4% as compared to 17.6% who indicated yes on whether head of departments' had a contract with any organization to service their computers.

4.9 ICT Skills Level among the Administrators

The researcher wanted to know whether head teachers ever attended training on ICT. The head teachers were asked whether they have ever attended training on ICT. Table 4.33 shows the results.

Table 4.33: Have ever attended training on ICT

	Frequency	Percent
Yes	12	70.6
No	5	29.4
Total	17	100.0

The majority of them indicated yes 70.6% as compared to 29.4% who indicated no on whether head teachers ever attended training on ICT. Head teachers who indicated they have attended training on ICT were asked to indicate the courses taught. Most head teachers cited computer basics and packages such as Microsoft Office including Ms word, Ms excel, Ms PowerPoint, email and internet.

The head of departments were asked whether they have ever attended training on ICT. Table 4.34 shows the results.

Table 4.34: Head of Departments have attended Training on ICT

	Frequency	Percent
Yes	58	58.6
No	41	41.4
Total	99	100.0

According to 58.6% of the head of departments, they have attended training on ICT while 41.4% have never attended training on ICT.

The head teachers were asked whether the training on ICT they have attended was relevant to the current line of work.

Table 4.35: Training Relevant to Current Line of Work

	Frequency	Percent
Yes	11	91.7
No	1	8.3
Total	12	100.0

The majority of the head teachers indicated yes 91.7% as compared to 8.3% of the head teachers who indicated no on whether the training on ICT they have attended was relevant to the current line of work.

Head of departments were asked whether the courses taught were relevant to their work. Table 4.36 shows the results.

Table 4.36: Training relevant to current line of work by Head of Departments

	Frequency	Percent
Yes	61	98.4
No	1	1.6
Total	62	100.0

The majority of head of departments' 98.4% indicated yes as compared to 1.6% who indicated no on whether the courses taught were relevant to their work.

The head teachers were asked to rate their proficiency in the most common computer programs available in administration setting. Table 4.37 shows the results.

4.10 Basic Computer Proficiency

Table 4.37: Head Teachers

Computer proficiency	Very good	Good	Average	Very poor	Mean	Standard deviation
Microsoft word	11(68.8%)	2(12.5%)	1(6.3%)	0(0%)	1.63	1.088
Microsoft excel	9(52.9%)	2(11.8%)	2(11.8%)	2(11.8)	2.06	1.482
Microsoft PowerPoint	8(50.0%)	2(12.5%)	8(50.0%)	2(12.5)	2.31	1.580
Microsoft access	0(0%)	0(0%)	3(18.8%)	4(25.0)	3.75	.856
Microsoft publisher	0(0%)	1(6.3%)	4(25.0%)	10(62.5)	4.31	1.014
Email & internet	1(6.3%)	8(50.0%)	1(6.3%)	0(0%)	2.56	.892
Quick books	0(0%)	0(0%)	1(6.3%)	2(75)	4.69	.602
Photoshop	0(0%)	0(0%)	1(6.3%)	13(81.3)	4.75	.577
Page maker	0(0%)	0(0%)	1(6.3%)	13(81.3)	4.75	.577

Table 4.38: Head of the Departments

Computer proficiency	Very good	Good	Average	Very poor	Mean	Standard deviation
Microsoft word	60(60.0%)	5(5.0%)	8(8.0%)	9(9.0%)	2.11	1.490
Microsoft excel	55(55.0%)	8(8.0%)	6(6.0%)	25(25.0%)	2.38	1.728
Microsoft PowerPoint	41(41.0%)	6(6.0%)	13(13.0%)	31(31.0%)	2.83	1.741
Microsoft access	2(2.0%)	6(6.1%)	21(21.2%)	42(42.4%)	4.03	1.035
Microsoft publisher	5(5.1%)	1(1.0%)	7(7.1%)	70(71.4%)	4.47	1.037
Email & internet	44(44.0%)	9(9.0%)	10(10.0%)	17(17.0%)	2.57	1.603
Quick books	4(4.0%)	1(1.0%)	3(3.0%)	76(76.0%)	4.59	.922
Photoshop	2(2.0%)	0(0%)	5.0%	91(91.0%)	4.85	.609
Page maker	1(1.0%)	0(0%)	5.0%	94(94.0%)	4.91	.452

The head teachers rated their proficiency in Microsoft word, Microsoft excel, Microsoft power point, Email and Internet as v

ery good and good. They rated their proficiency in Microsoft access as average. They also rated their proficiency in Microsoft publisher, Quick books, Photoshop and Page maker as poor.

The head of departments were asked to rate their basic computer proficiency. Table 4.37 shows the results.

The head of departments indicated that they are good in Microsoft word, Microsoft excel, Email and Internet, and Microsoft power point. They also indicated that they are poor in Microsoft access, Microsoft publisher, Quick books, Photoshop and Page maker. These findings are congruent to those of Wims & Lawler (2007) who found that teachers did not make use of ICT facilities in their schools.

The head teachers were asked to indicate the challenges that they face when using ICT in administration of the school. Head teachers cited lack of computers and other facilities. Other challenges cited by head teachers include poor attitude to embrace ICT, ICT illiteracy, lack of power supply at school, lack of internet connection, maintenance of the computers being costly and also not having enough computers for pupils. These findings are consistent with those of Momanyi et al (2006) who established that teachers have little or no previous experience in training or use of educational computer applications. Head of departments cited similar challenges such as lack of computer knowledge, attitude towards computer usage and lack of computers and facilities to enable ICT integration in school administration.

The researcher asked the head teachers to indicate the strategies they use to encourage the integration of ICT in administration at school. The head teachers cited their strategies to encourage the integration of ICT in school administration as connecting computers to internet, sourcing for more computers, connecting school to power supply, encouraging stakeholders to donate computers, encouraging teachers to integrate ICT in their administration work, going for workshops, advising learners and teachers to go for computer courses, involving all the stakeholders to be able to be ICT literate and training teachers on ICT. These strategies can be seen in light of findings by Cossa and Cronje (2004) who established that there was insufficient expertise in ICT-based education for hiring pedagogical support for school-based project managers. Head of departments indicated that they have tried as much as possible to build capacity for the administrators to adopt ICT. They also expressed their desire to source for more computers and facilities from donors and government to ensure ICT integration in schools. These challenges were also echoed by Farrell (2007).

4.11 Challenges faced by the Administrators while integrating ICT

On challenges faced by the Head Teachers when integrating ICT in administration; the head teachers cited breaks down of computers to be quite high which could be attributed to the fact that they got very scanty technical support on the acquisition, usage and maintenance of computers. The head teachers also indicated that finances were not adequate to procure computers for the school administrators.

Computer illiteracy levels were found to be too low among the administrators which were a major hindrance in integrating ICT in administration.

Power breakdowns were found to be major hindrances to ICT integration given that computers solely rely on electricity and in absence of electricity, the whole of administration would be grounded to a halt if it solely relied on computers.

Some head teachers also complained that use of computers led to a lot of printing which had a major cost implication on printer toners and paper used.

On the coping strategies the head teachers encouraged the deputy head teachers and Head of departments to make full utilization of integrating ICT in their work for them to become computer literate.

The head teachers recommended the account clerk offices be fitted with financial management software, while head of departments offices be fitted with a centralized place for keying in student marks. They also recommended introduction of computer lessons for teachers to help upgrade their computer skills.

In summary, the study established positive attitude towards integration of ICT in administration of public primary schools in Changamwe District, Kenya. However, there is need to strengthen the capacity in procurement of computers, service contracts for computers, proficiency skills and availability of ICT resources.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the study findings as set out in study objectives. The chapter also covers the conclusions of the study as derived from the study findings. The chapter ends with recommendations informed by study findings and conclusions.

5.2 Summary of the study findings

The purpose of the study was to investigate the Head teachers' preparedness to integrate ICT in administration of public primary schools in Changamwe District, Mombasa County, Kenya. This study sought to investigate the head teachers, deputy head teachers and head of departments' use of ICT in school administration. The study sought to understand the availability of ICT resources for administration, attitudes of school administrators towards integration of ICT, availability of ICT technical support and ICT skills level among the administrators. The study targeted all public primary schools in Changamwe District with a population of 20 Head teachers, 20 deputy head teachers and 100 head of departments. A sample of 140 respondents was selected purposively. A response rate of 85% was achieved (119). Descriptive survey research design was adopted as it brings out quantifiable information from the sample. Three sets of questionnaires were developed and administered to Head teachers, deputy Head teachers and head of departments respectively. To determine the validity, the instrument was pretested in one school with one head teacher, one deputy head teacher and five subjects' Head of Departments. Data was analyzed quantitatively by the use of Statistical Package for Social Scientist computer program.

The study established that there are computers in some schools but they are not enough for effective ICT integration in school. The other equipment supposed to be used with computers in administration tasks apart from printers such as telephone, scanners and fax were not in place in most schools.

The attitude towards ICT integration in school administration was mixed because some administrators were computer literate and encouraged this integration. However, plans to train school administrators on ICT seem to be sponsored by donors and board of management with the government through the Ministry of Education not leading such an initiative. The administrative tasks that the administrators like to perform using computers are also basic hence limiting ICT integration in school administration. Important systems like computer management system were found not to be in place at most of the schools and therefore parents could not access them on the internet.

This study revealed that technical support for those schools with computers is a challenge both in man power and cost. In most of the schools the computer teachers clean and repair computers once they broke. Few of the schools had a contract with an organization to service their computers.

The ICT skills level among the administrators was found to be on the basic minimum. The administrators were found to have been trained on the basic computer packages such as Microsoft Office. They can therefore perform basic tasks using word, excel, PowerPoint, email and internet.

Only a few of the head teachers, their deputies and HODs had a good proficiency of Microsoft word and were in a position to type letters, memos, minutes, notes, report forms and such like documents that required word editors; majority of the

administrators were only average users. Similarly, only a few of the administrators had a good proficiency in Microsoft excel to do analysis such as students marks and accounting tasks that required spreadsheets. Findings show that the level of competence was quite low on Microsoft's PowerPoint, Access, Outlook, Publisher, Quick books, Photoshop and PageMaker. However the competence and usage of Email and Internet was quite high among the administrators.

5.3 Conclusions

a) This study concludes that the available ICT resources for schools in Changamwe District are not enough. Those who have computers they are not enough. This has hindered ICT integration in school administration.

b) The school head teachers in Changamwe District are not enthusiastic about ICT integration in school administration as their ICT skills level is wanting. This could be explained by the few administrative tasks that these administrators are willing to perform using computers.

c) The administrators have not put basic systems for ICT integration in place. This can be demonstrated by the fact that computer management system was not in place in most of the schools. Some schools which do not even have electricity or power supply connection and therefore make it hard for such schools to even take initiatives of getting computers. For such schools, ICT integration in school administration remains a pipe dream.

d) The schools with computers had another challenge that could hinder ICT integration in school administration. This challenge emanate from the availability and cost of technical support. Hiring of technicians to advice on computers to be

bought, repair and cleaning. This role in many schools is assigned to the computer teacher who may not have the capacity to do all these tasks. In addition, such a role overwork computer teachers and this could interfere with their ability to deliver to the students.

5.4 Recommendations

This study recommends that Mombasa County government and the central government through the Ministry of Education should provide the requisite ICT resources for administration in schools. These governments should ensure that schools in Changamwe District have enough computers. The central government through the Ministry of Energy should ensure that all schools in Mombasa County are connected to power supply.

The Ministry of Education should create awareness among the school administrators in Changamwe District on the importance of ICT integration in administration. Training by the Ministry of Education, donors and other stakeholders could also change the administrators' attitude towards ICT which impedes ICT integration in school administration.

The government should hire computer technicians for schools and allocate budget for computer maintenance. This will solve the challenge of cost and man power that face schools with computers. This study recommends that schools intending to buy computers should also seek technicians' advice on the best specifications to buy for their use. The technician will be able to advice appropriately.

The head teachers and deputy head teachers should enhance their ICT skills level through attending training. Those who have not attended any training should do so

while those with basic training should utilize their skills more often to gain the requisite experience for ICT integration in school administration.

5.5 Suggested Studies

This study recommends that future scholars should focus on differentiation of the factors hampering ICT integration in school administration and management. This study also recommends that scholars of school administration and management should establish the appropriate model for ICT integration in schools. Further studies should focus on ICT integration not only for administration and management but also for learners. This will ensure that future administrators and school managers have the requisite skills for their work.

REFERENCES

Akker (2003). *Management in Education.* Educational Research and Publication magazine.

Ali, A. (2003). *Faculty Adoption of Technology: Training comes First in Educational Technology*. The Magazine for Managers of Change in Education.

Annan, K. (2001) *Launching Information and Communication Technology (ICT) Task force.* Applications (6TH Ed). Print wise USA: (Library of congress cataloging – in - publication data)

Becta, F., (2001) *The "Digital Divide" a discussion paper*. Coventry: BECTA

Best, W. J. and Kahn, V. J. (2003). *Research in Education*. New Delhi: Prentice Hall

Collins, J. & Duguid, P. (2000). *The Social life of information*. Cambridge Mass: Harvard University Press.

Cossa, G.G., & Cronje, J.C. (2004). Computers for Africa: Lessons learnt from introducing computers into schools in Mozambique. *International Journal of Learning Technology*, 1(1), 84-99.

Dawes, L. (2010). *What stops teachers using new technology*. In M. Leask (ed.), issues in teaching using ICT, London: Routlegefalmer.

Farrell, G. (2007). ICT in education in Kenya. Retrieved 27 March, 2015 from www.infodev.org

Gakuu, C. M. & Kidombo H. (2010). *Pedagogical Integration of ICT in selected Kenyan Secondary Schools.* Application of Bennett's Hierarchy, University of Nairobi, Kenya.

James, J. (2001). *Low-cost computing and related ways of overcoming the global divide*. Journal of Information Science, 27(6), 385 – 392

Johnstone, H. & Woudbury, Y. G. (2003). *School – based ICT policy planning in a context of Curriculum reform.* Retrieval from: www.ondderwiskunde.ugent.be/download.

Kasomo, D. (2006). *Research Methods in Humanities and education.* Egerton University Press.

Kelles – Viitman, A., (2005). *The Role of ICT in governing rural development.*

Kenya Ministry of Education Science and Technology (2008). *Kenya Education Sector Support Programme 2005 – 2010.* Nairobi: Government Printers.

Kenya Ministry of Education. (2005). *ICT in Education Options paper*. Retrieval from http: www.pdf.usaid.gov/pdf/PNA1D1898.pdf.

Kombo, K.D & Tromp, A.L.D (2006). *Thesis Writing*: An Introduction: Nairobi: Pauline's Publication.

Kozma, R., McGhee, R., Quellmalz, E., & Zalles, D. (2004). Closing the Digital Divide: Evaluation of the World Links Program. International Journal of Educational Development, 24(4), 361-381.

Kozma, R.B. (2005). National policies that connect ICT based education reform to economic and social development. *An interdisciplinary journal on Humans in ICT Environments*, 1(2), 117 - 156

Land, G. (1997). *Grow or Die: The Unifying Principle of Transformation*. Leadership 2000 Inc: New York.

Maki, C. (2008). Information and Communication Technology for Administration and Management for Secondary Schools in Cyprus, *Journal of Online Learning and Teaching*. 4 (3)

Mbiti, D.M.(2007). *Foundation of School Administration.* Nairobi: Oxford University Press.

Minishi – Majanja, M. (2007) *Integration of ICT in Library and Information Science Education in Sub- Saharan Africa.* Paper presented at the World Library and Information Congress. 73RD IFLA General Conference and Council. Retrieval from: http//www.org/1v/1fla.73/index.htm

Ministry of Education (2007). *Kenya Education Sector Support Programme, CFSK Computer for Schools Kenya:* Government Printers.

Momanyi, L., Norby, R., & Strand, S. (2006). The need for integration of technology in K-12 school settings in Kenya, Africa. *AACE Journal*, 14 (2), 154-177.

Mugenda, D. M. & Mugenda, S. G. (2003). Research methods: *Quantitative and qualitative Approaches.* Nairobi: Acts Press.

Mugenda, M. & Mugenda, A. (2003) *University Roles in meeting Aspirations for ICT and Economic Development. Partnership for Higher Education in Africa.* Nairobi: Acts Press.

Mutai,B.K.(2002). How to write quality research proposal: A complete and simplified recipe. New Delhi: Thelley Publications.

Nairobi: Masola Publishers.

National Council for Science and Technology (2010), *ICT Capacities and Capabilities in Secondary Schools.* Nairobi: Government printers.

Nduati, C. and Bowman, W. (2005). W*orking from the sidelines*: The Kenya Private Sector foundation ICT board story. In E. f. Etta & L. Elder (Eds); At the crossroads: ICT Policy Making in East Africa (pp. 56 – 67). Nairobi: East Africa Educational Publishers Ltd.

Okumbe, S. A. (2001). *Human Resource Management An Educational Perspective Educational development research Bureau*. Nairobi: University Printers.

Orodho, A. J. (2005)*Elements of Education and Social Sciences Research Methods.*

Orodho, A.J. (2004). *Technique Writing Research Project and Reports*. Nairobi. Kenya. Masalo Publishers.

Republic of Kenya (2005), Sessional paper No. 1 of 2005, *A policy framework for Education, Training and Research.* Nairobi: Government Printers.

Republic of Kenya. Education Sector Support Programme. CFSK. Computer for Schools Kenya. *Fourth annual joint education Review;* October 6TH 2008 – 16TH October 2008. Nairobi Kenya: Government Printers.

Salerno, C. (2009) *Administrator's Role in Technology Integration,* Education World.

U.N. Economic and Social Council. (2000). *Development and international cooperation in the twenty first century.* The role of information technology in the context of knowledge - based global economy. Paris: UNESCO

United Nations Development Programme (UNDP), (2002). *Using distance learning and ICT to improve teacher quality in poor areas.* UNDP.

Waema, M. T. (2005). *A brief history of the development of an ICT Policy in Kenya.* In E. F. Etta and L. Elder (Eds.), At the Crossroads: ICT Policy making in East Africa (pp. 25 – 43). Nairobi: East African Educational Publishers Ltd.

Wells, R. and Wells, S. (2007). *Challenges and Opportunities in ICT educational development:* A Ugandan Case Study. *International Journal of Education and Development using Information and Communication Technology (IJEDICT),* 3 (2), 100 – 108.

Wims, P. & Lawler, M. (2007). Investing in ICT's in educational institutions in developing countries: an evaluation of their impact in Kenya, *International Journal of Education and Development using Information and Communication Technology (IJEDICT)* 3(1): 5-22.

APPENDICES

APPENDIX 1

LETTER OF INTRODUCTION

University of Nairobi
P. o. box 30197
Nairobi
5TH January, 2015

To,
The Head teacher
……. Primary School

Dear Sir / Madam,

REF**: PARTICIPATION IN EDUCATIONAL REASERCH**

I am a student at the University of Nairobi doing a masters degree in Educational Administration. I am carrying out an academic research on **head teachers' preparedness for integration of Information Communication Technology in administration of public primary schools in Changamwe District, Mombasa.**

I hereby promise that all the information offered to me will be used for the study only and your identity will not be disclosed.

Your assistance and co-operation will be greatly appreciated.

Thanking you in advance.

Yours Faithfully,

Ali Abdallah Ali

APPENDIX II

HEAD TEACHER'S QUESTIONAIRE

This Research is meant for academic purposes. Kindly answer all questions as honestly and precisely as possible. Responses to these questions will be treated as confidential. Please do not write your name or that of your school anywhere on this questionnaire. Put a tick ( ) where appropriate or fill in the required information in the space provided.

Part A**: Personal Information**

1. What is your gender? Male ( ) Female ( )

2. What is your age bracket?
   20 – 30yrs ( ) 31-40 yrs ( ) 41- 50yrs ( ) 51 – 60 yrs ( ) Over 60yrs ( )

3. What is your highest academic qualification?

   Phd( ) M.ED ( ) B.ED ( ) Post-graduate Diploma( ) Diploma in Education( )

   Any other? (Please Specify) ……..

4. For how long have you been in the teaching profession?
Below 1yr ( ) 1 – 5 yrs ( ) 6 – 10 yrs ( ) 11 – 15yrs ( ) Over 15yrs ( )

5. For how long have you taught in your current station?
Below 1yr ( ) 1 – 5 yrs ( ) 6 – 10 yrs ( ) 11 – 15yrs ( ) Over 15yrs ( )

6. What is your school set up?
a) Boys ( ) Girls ( ) Mixed ( )

b) Boarding ( ) Day ( ) Boarding and Day ( )

Part B: **Availability of ICT resources for administration**

7. Do you have computers in your school? Yes ( ) No ( )

a) If yes, how many do you have in your school? ……..
b) If yes, how are they utilized?
i) For pupils computer lab: Yes ( ) No ( )

ii) For administration work: Yes ( ) No ( )

8. a) Has the Head teacher been allocated a computer in his office? Yes ( ) No ( )

b) If yes, who uses it? Head teacher ( ) Secretary ( ) Both ( )

9. What tasks do you use the computer to accomplish? List all

……

……

10. Who else uses a computer for administrative work in your school? List all

……

……

11. Which other equipment is available for administrators at your school? Please tick

Equipment	Available	Not available
Printers		
Telephones		
Scanners		
Fax		

12. Do you have internet connection in your school? Yes ( ) No ( )

If yes, which offices have been connected to the internet?

……

Part C: **Attitudes of school Head teacher towards integration of ICT.**

13. Is your Deputy Head teacher computer literate? Yes ( ) No ( )

14. Are your subject Head of Departments computer literate? Yes ( ) No ( )

15. Are there plans in place to have school administrators taught about ICT skills? Yes ( ) No ( ) If yes, who is the sponsor? BOM ( ) Ministry of Education ( ) Donors ( ) NGOs' ( )

16. Do you have a Computer School Management System? Yes ( ) No ( )

If yes, are parents able to access it on the internet? Yes ( ) No ( )

17. The following are some of administrative tasks involving pupils' and teachers' in your school. By use of a tick, Please indicate the schools' attitude towards the use of computers in the following tasks

Statement	Like using Computers	Do not like using Computers	Do not know
Registration of new pupils in your school?			
Records of class attendance?			
Preparation of pupils' report forms?			
Discipline records of pupils in your school?			
Preparation of the School time table?			
Preparation of Schemes of work & lesson notes?			
Preparation of record of work & teachers' notes?			
Maintenance of library records(Issuing books to pupils)			
Maintenance of teachers' attendance records?			
Maintenance of teachers leaves application?			
Keeping teachers' performance records?			
Issuance of receipts for Money paid?			
Preparation of workers payrolls?			
Fixed assets inventory?			
Preparation of School Budget?			
Preparation of Schools income & expenditure statements?			
Maintenance of School suppliers records(Textbooks and stationery)			
Preparation of Community speeches?			
Preparation of SMC Minutes?			

18. If you do not have a School Management System, What computer programs do you use? List all……
……

Part D: **Availability of ICT technical Support**

20. Who advices on the Computer equipment to be bought at the School?

Myself ( ) BOM ( ) Computer Teacher ( ) Hired Technician ( )

21. When the Computer breaks down who repairs the computer?

Computer Teacher ( ) Hired Technician ( )

22. Who cleans the computer?

Myself ( ) BOM ( ) Computer Teacher ( ) Hired Technician ( )

23. Do you have a contract with any organization to service your computers?

Yes ( ) No ( )

Part E: **ICT Skills level among the administrator**

24. Have you ever attended training on ICT? Yes ( ) No ( )

a) If yes, which courses were you taught?

……

If yes, was training relevant to your current line of work? Yes ( ) No ( )

25. The following is a list of the most common computer programs available in administration setting. Please tick your proficiency in the following computer packages:

Computer Packages	Very Good	Good	Average	Poor	Very Poor
Microsoft Word					
Microsoft Excel					
Microsoft Power point					
Microsoft Access					
Microsoft Publisher					
Email & Internet					
Quick books					
Photoshop					
Page Maker					
Others:					

26. What challenges do you face when using ICT in administration of the School?

……

27. What strategies do you use to encourage the integration of ICT in administration at your School?.....

THANK YOU.

APPENDIX III

QUESTIONAIRE FOR DEPUTY HEADTEACHER'S

This Research is meant for academic purposes. Kindly answer all questions as honestly and precisely as possible. Responses to these questions will be treated as confidential. Please do not write your name or that of your school anywhere on this questionnaire. Put a tick ( ) where appropriate or fill in the required information in the space provided.

Part A**: Personal Information**

1. What is your gender? Male ( ) Female ( )

2. What is your age bracket?
   20 – 30yrs ( ) 31-40 yrs ( ) 41- 50yrs ( ) 51 – 60 yrs ( ) Over 60yrs ( )

3. What is your highest academic qualification?

   Phd( ) M.ED ( ) B.ED ( ) Post-graduate Diploma( ) Diploma in Education( )

   Any other? (Please Specify) ……..

4. For how long have you been in the teaching profession?
Below 1yr ( ) 1 – 5 yrs ( ) 6 – 10 yrs ( ) 11 – 15yrs ( ) Over 15yrs ( )

5. For how long have you taught in your current station?
Below 1yr ( ) 1 – 5 yrs ( ) 6 – 10 yrs ( ) 11 – 15yrs ( ) Over 15yrs ( )

6. What is your school set up?
c) Boys ( ) Girls ( ) Mixed ( )

d) Boarding ( ) Day ( ) Boarding and Day ( )

Part B: **Attitudes of school Administrators towards integration of ICT**

7. Are you computer literate Yes ( ) No ( )

8. Is your Head teacher computer literate? Yes ( ) No ( )

9. Are your subject Head of Departments computer literate? Yes ( ) No ( )

10.a) Are there plans in place to have school administrators taught about ICT skills?

Yes ( ) No ( )

b)If yes, who is the sponsor? BOM ( ) Ministry of Education ( ) Donors ( ) NGOs' ( )

11. The following are some of administrative tasks involving pupils' and teachers' in your school. By use of a tick, Please indicate the schools' attitude towards the use of computers in the following tasks

Statement	Like using Computers	Do not like using Computers	Do not know
Registration of new pupils in your school?			
Records of class attendance?			
Preparation of pupils' report forms?			
Discipline records of pupils in your school?			
Preparation of the School time table?			
Preparation of Schemes of work & lesson notes?			
Preparation of record of work & teachers' notes?			
Maintenance of library records(Issuing books to pupils)			
Maintenance of teachers' attendance records?			
Maintenance of teachers leaves application?			
Keeping teachers' performance records?			
Issuance of receipts for Money paid?			
Preparation of workers payrolls?			
Fixed assets inventory?			
Preparation of School Budget?			
Preparation of Schools income & expenditure statements?			
Maintenance of School suppliers records(Textbooks and stationery)			
Preparation of Community speeches?			
Preparation of SMC Minutes?			

12. Do you have a Computer School Management System? Yes ( ) No ( )

If yes, are parents able to access it on the internet? Yes ( ) No ( )

13. If you do not have a School Management System, What computer programs do you use? List all

……
……

Part C: **Availability of ICT technical Support**

14. Who advices on the Computer equipment to be bought at the School?

Myself ( ) BOM ( ) Computer Teacher ( ) Hired Technician ( )

15. When the Computer breaks down who repairs the computer?

Computer Teacher ( ) Hired Technician ( )

16. Who cleans the computer?

Myself ( ) BOM ( ) Computer Teacher ( ) Hired Technician ( )

17. Do you have a contract with any organization to service your computers?

Yes ( ) No ( )

Part E: **ICT Skills level among the administrator**

18. Have you ever attended training on ICT? Yes ( ) No ( )

a) If yes, the courses you were taught

……
……

If yes, was training relevant to your current line of work? Yes ( ) No ( )

19. The following is a list of the most common computer programs available in administration setting. Please tick your proficiency in the following computer packages:

Computer Packages	Very Good	Good	Average	Poor	Very Poor
Microsoft Word					
Microsoft Excel					
Microsoft Power point					
Microsoft Access					
Microsoft Publisher					
Email & Internet					
Quick books					
Photoshop					
Page Maker					
Others:					

20. What challenges do you face when using ICT in administration of the School?

    ……

    ……

21. What strategies do you use to encourage the integration of ICT in administration at your School? .....

    ……

    ……

THANK YOU.

APPENDIX IV

QUESTIONAIRE FOR HEADS OF THE DEPARTMENT

This Research is meant for academic purposes. Kindly answer all questions as honestly and precisely as possible. Responses to these questions will be treated as confidential. Please do not write your name or that of your school anywhere on this questionnaire. Put a tick ( ) where appropriate or fill in the required information in the space provided.

Part A**: Personal Information**

3. What is your gender? Male ( ) Female ( )

4. What is your age bracket?
   20 – 30yrs ( ) 31-40 yrs ( ) 41- 50yrs ( ) 51 – 60 yrs ( ) Over 60yrs ( )

3. What is your highest academic qualification?

Phd( ) M.ED ( ) B.ED ( ) Post-graduate Diploma( ) Diploma in Education( )

Any other? (Please Specify) …….

4.For how long have you been in the teaching profession?
Below 1yr ( ) 1 – 5 yrs ( ) 6 – 10 yrs ( ) 11 – 15yrs ( ) Over 15yrs ( )

7. For how long have you taught in your current station?
Below 1yr ( ) 1 – 5 yrs ( ) 6 – 10 yrs ( ) 11 – 15yrs ( ) Over 15yrs ( )

8. What is your school set up?
e) Boys ( ) Girls ( ) Mixed ( )

f) Boarding ( ) Day ( ) Boarding and Day ( )

Part B: **Attitudes of school Administrators towards integration of ICT**

7. State your position in the Department ……

8. Is your Head teacher computer literate? Yes ( ) No ( )

9. Are your subject Head of Departments computer literate? Yes ( ) No ( )

10.a) Are there plans in place to have school administrators taught about ICT skills?

Yes ( ) No ( )

b)If yes, who is the sponsor? BOM ( ) Ministry of Education ( ) Donors ( ) NGOs' ( )

11. The following are some of administrative tasks involving pupils' and teachers' in your school. By use of a tick, Please indicate the schools' attitude towards the use of computers in the following tasks

Statement	Like using Computers	Do not like using Computers	Do not know
Registration of new pupils in your school?			
Records of class attendance?			
Preparation of pupils' report forms?			
Discipline records of pupils in your school?			
Preparation of the School time table?			
Preparation of Schemes of work & lesson notes?			
Preparation of record of work & teachers' notes?			
Maintenance of library records(Issuing books to pupils)			
Maintenance of teachers' attendance records?			
Maintenance of teachers leaves application?			
Keeping teachers' performance records?			
Issuance of receipts for Money paid?			
Preparation of workers payrolls?			
Fixed assets inventory?			
Preparation of School Budget?			
Preparation of Schools income & expenditure statements?			
Maintenance of School suppliers records(Textbooks and stationery)			
Preparation of Community speeches?			
Preparation of SMC Minutes?			

12. Do you have a Computer School Management System? Yes ( ) No ( )

If yes, are parents able to access it on the internet? Yes ( ) No ( )

13. If you do not have a School Management System, What computer programs do you use? List all……

……

Part C: **Availability of ICT technical Support**

14. Who advices on the Computer equipment to be bought at the School?

Myself ( ) BOM ( ) Computer Teacher ( ) Hired Technician ( )

15. When the Computer breaks down who repairs the computer?

Computer Teacher ( ) Hired Technician ( )

16. Who cleans the computer?

Myself ( ) BOM ( ) Computer Teacher ( ) Hired Technician ( )

17. Do you have a contract with any organization to service your computers?

Yes ( ) No ( )

Part E: **ICT Skills level among the administrator**

18. Have you ever attended training on ICT? Yes ( ) No ( )

a) If yes, the courses you were taught

……
……

If yes, was training relevant to your current line of work? Yes ( ) No ( )

19. The following is a list of the most common computer programs available in administration setting. Please tick your proficiency in the following computer packages:

Computer Packages	Very Good	Good	Average	Poor	Very Poor
Microsoft Word					
Microsoft Excel					
Microsoft Power point					
Microsoft Access					
Microsoft Publisher					
Email & Internet					
Quick books					
Photoshop					
Page Maker					
Others:					

20. What challenges do you face when using ICT in administration of the School?

……

……

21. What strategies do you use to encourage the integration of ICT in administration at your School? .....

……

…….

THANK YOU.

APPENDIX V

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

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

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

Ref: No.

Date:
2nd December, 2014

NACOSTI/P/14/3444/4358

Ali Abdallah Ali
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Headteachers' preparedness for integration of Information Communication Technology in administration of public primary schools in Changamwe District, Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **Mombasa County** for a period ending **30th January, 2015.**

You are advised to report to **the County Commissioner and the County Director of Education, Mombasa County** before embarking on the research project.

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

DR. S. K. LANGAT, OGW
FOR: SECRETARY/CEO

COUNTY COMMISSIONER - MOMBASA
RECEIVED
22.12.14
P.O. Box 90424-80100, MSA.

COUNTY DIRECTOR OF EDUCATION
RECEIVED
21 DEC 2014

Copy to:

The County Commissioner
Mombasa County.

The County Director of Education
Mombasa County.

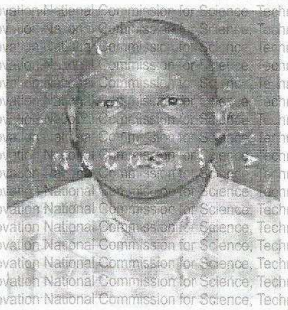
THIS IS TO CERTIFY THAT:
MR. ALI ABDALLAH ALI
of UNIVERSITY OF NAIROBI, 0-80100
MOMBASA,has been permitted to
conduct research in *Mombasa County*

on the topic: *HEADTEACHERS PREPAREDNESS FOR INTEGRATION OF INFORMATION COMMUNICATION TECHNOLOGY IN ADMINISTRATION OF PUBLIC PRIMARY SCHOOLS IN CHANGAMWE DISTRICT, KENYA.*

for the period ending:
30th January,2015

.....
Applicant's Signature

Permit No : NACOSTI/P/14/3444/4358
Date Of Issue : 2nd December,2014
Fee Recieved :Ksh 1,000



.....
Secretary
National Commission for Science, Technology & Innovation

CONDITIONS

1. You must report to the County Commissioner and the County Education Officer of the area before embarking on your research. Failure to do that may lead to the cancellation of your permit
2. Government Officers will not be interviewed without prior appointment.
3. No questionnaire will be used unless it has been approved.
4. Excavation, filming and collection of biological specimens are subject to further permission from the relevant Government Ministries.
5. You are required to submit at least two(2) hard copies and one(1) soft copy of your final report.
6. The Government of Kenya reserves the right to modify the conditions of this permit including its cancellation without notice

REPUBLIC OF KENYA

National Commission for Science, Technology and Innovation

RESEARCH CLEARANCE PERMIT

Serial No. A 3819

CONDITIONS: see back page

OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

Telegrams: "PROVINCER", COAST
Telephone: Mombasa 2311201
Fax No.041-2013846
Email: *msacountycommissioner@yahoo.com*
when Replying please quote

COUNTY COMMISSIONER'S OFFICE
P.O. BOX 90424-80100
MOMBASA
Tel.0722371400

REF. NO. MCC/ADM.25/34

22nd December, 2014

TO WHOM IT MAY CONCERN

RE: RESEARCH AUTHORIZATION
ALI ABDALLAH ALI – ID/NO. 11459722

This is to confirm that Ali Abdallah Ali , a student at University of Nairobi (Registration Number E55/66146/2011) has been authorized to carry out research on **"Headteachers' preparedness for integration of information communication technology in administration of public primary schools in Changamwe District"** Mombasa County for the period ending 30th January, 2015

Any assistance given to him will be highly appreciated.

Thank you.

NELSON MARWA SOSPETER
COUNTY COMMISSIONER
MOMBASA COUNTY

C. C.

Deputy County Commissioners
CHANGAMWE COUNTY