FACTORS INFLUENCING INTERGRATION OF INFORMATION COMMUNICATION TECHNOLOGY PROJECTS IN PUBLIC PRIMARY SCHOOLS IN MOMBASA SUB-DISTRICT, MOMBASA COUNTY

BY

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A RESEARCH PROJECT REPORT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF ARTS DEGREE IN PROJECT PLANNING AND MANAGEMENT OF THE UNIVERSITY OF NAIROBI

2016

DECLARATION

This research project report is my original work and has not been submitted to any other university or institution of higher learning for examination.

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This research project report has been submitted for examination with my approval as the University supervisor.

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DEDICATION

This work is dedicated to my late father Shadrack Ogada Akelo for motivating me always to study.

ACKNOWLEDGEMENT

I wish to express my gratitude to the University of Nairobi for giving me the opportunity to undertake this course. To my supervisor, Dr. Moses Otieno, thank you for guiding me through the entire project proposal. To the course lecturers, Staff in the department of Extra mural Studies, your invaluable support enabled me to successfully go through this course.

I wish to thank my colleagues who were a source of encouragement thus enabling me to go through this course. Last but not least, I wish to thank God almighty for His health provisions and protection throughout the times, seasons and moments of study for this degree.

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LIST OF ACRONYMS AND ABBREVIATIONS

FAO	Food and Agriculture Organization
HCD	Human Capital Development
ICT	Information Communication Technology
MGDS	Millennium Development Goals
MOE	Ministry of Education
SPSS	Statistical Package for Social Sciences
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations International Children's Emergency Fund
ICTE	Information Communication Technology for Education
ESP	Economic Stimulus Programme
LCD	Less Developed Countries
OECD	Organization of Economic and Cooperative Development

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ABSTRACT

ICT projects integration in education is the adoption of modern computer related equipment into the classroom to make material preparation, teaching and learning process easy. The primary reason of the research was to discover the factors that influence integration of information communication technology projects in our public primary schools, Mombasa sub-District, Mombasa County. The study was guided by four objectives that sought to find out what really influence the price of ICT training facilities on the integration of ICT projects in public primary schools in Mombasa County, and access the influence of ICT infrastructural capacity for learning in the integration of ICT projects in public primary schools in Mombasa central sub-County. The objectives also formed the themes in literature review under various sub headings. An illustrative approach was embraced for the study since the research was more of a social research than an experimental research. In the study stratified random sampling was used in accordance to the characteristics the constituents in the population processed. The research targeted teachers, school heads involved in the day to day ICT use in schools and their deputy heads. The target population was 96 but a population sample of 76 was used. A pilot structured questionnaire which was administered personally via e-mails, enumerators and pick them after they have been filled. Data was coded and analyzed using SPSS. The data was analyzed and the relationships together with the finding in chapter four discussed in chapter five. Conclusion, recommendation and suggestions for future studies were given.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

In the resent years, universal systems of education have experienced immense demand on the practice of Information and Communication Technology to demonstrate student's expertise and needed in the twenty first century (Omwenga, N. (2007), Abwago, O. (2010)). In the recent years, governments have not only been allocating resources to education but have also been undergoing an overhaul of education reforms so as to match with the fast rate of globalization that has been influenced by the rapid technology change. This has been a major focus in educational reform structure especially in the developing countries like in Sub-Sahara Africa, parts of Asia and South American continents. These reforms have brought about the initiation of information communication technology (ICT) projects within the education system.

This introduction of ICT projects in schools takes us back to the history of internationalization and technological change because the procedures that have speeded up in tandem close to two decades have created a new global economic front that is capacitated by technology, propelled by information and also steered by knowledge. With the rise of this new global economic front, there is a serious repercussion for the essence and reason of academic institutions. Despite the fact that information is continuously shrinking and acquiring of it is continuously growing rapidly, schools should not continue to be simply places for the transferring of recommended set of information from teachers to pupils within a certain timeline. They should be schools

and institutions where acquiring knowledge is taught. In result, this will lead to obtaining of knowledge and skills which results learning to be an on going practice.

However, despite the fact that ICT integration in the education systems across the world is greatly holding water, the rate of adoption, spread, integration and implementation has not been a smooth activity among the administrators, teachers, and the students. Studies carried out by Afshari M,Abubakar K, Wong S. L & Afshari M. (2010) have shown that the factors hindering/accelerating ICT integration and adoption by various stakeholders in the world - especially the teachers - are uniform in the whole world. They sighted factors like levels of ICT knowledge by the teachers, administration styles, ICT infrastructural facilities, financial resources, cultural factor and many more to be issue that surrounded the implementation on ICT projects, use and integration in many schools around the world. In the past, researchers have had been interested in ICT implementations in several ways.

Education in turkey is controlled by a national system. It was created using the guideline of Ataturk Reforms that took place after the Turkish War of Independence. It is a state governed system whose mandate is to develop skilful professional communities of the nation. Education is compulsory for 12 years. The turkish government funds primary and secondary education in public schools making it free of charge for students with in the bracket of age of 6 to 18. By the end of the year 2001, admission of children in this category was almost hundred percent. In the year two thousand and two, the entire expense on education in Turkey constituted to $ 13.4 billion inclusive of the state budget allocated by the National Ministry of Education and corporate kitty. In 2010, the state launched a Fatih project whose sole aim was to incorporate

a modern computer technology into Turkey's public education systems. The main beneficiaries were the primary section (Turkish: Ilkogretim Okulu) where education and teaching would cover 8 years to children between the age of 6-14. It is mandatory for all boys and girls who are citizens and it's provided free of charge in public schools. One takes 8 years of primary education and at the end he/she receives a primary education Diploma.

In March 2012, the Turkish assembly passed a new law on primary and secondary education duped "4+4+4" which meant four years in lower primary, four years in upper primary and then four years in secondary. Among the grand proposed changes to the education systems was the provision of one child per computer in public primary school by the year 2013 and by extent strengthen the Fatih project at a cost of $19 billion. However, this project faced several challenges that forced the integration, appropriation and implementation of ICT projects in schools fully be extended in a five year spread period. Some of the challenges that slow down the implementation of the project are: limited financial resources from the central government, the cultural beliefs owing to the fact that the country is a Muslim empire, low level of expertise from both the teachers and other stakeholders, poor ICT infrastructure and many more (Almekhlafi, A. G. and Almeqdadi, F. A.,(2010).

Like majority of other states around the globe, the South African government conserves an buoyant stand towards ICT execution in schools. ICT is viewed as a solution to diverse educational, social and economic challenges. Once the President Thabo Mbeki said that South Africans must carry on to fight for liberation against indigence, defamation, underration and

information and communication technology since this is a serious tool in that struggle (Awouters, V. and Jans, S., (2009)).

To address digital divide, the South Africa government responded by establishing the presidential International Advisory Council on Information Society and Development by the 2001. One of the council's main objectives was ICT in education in the digital divide (DoE, 2004). Additionally, several different policy strategies were put in place to allow the assimilation of ICT in teaching and learning (Bradley, T., (2012). They were taken care of by several other documents gazetted in the government of South Africa, in addition the "Draft White Paper on e-Education(DoE, 2003), the Revised National Curriculum Statement documents for Grade R- 9 for the General Education and Training band (DoE, 2001), the Draft National Curriculum Statement for Grades 10 -12 (schools): Computing (Computer Applications Technology) (DoE, 2002a) and the Draft National Curriculum Statement for Grades 10 -12 (schools): Computer Studies/Information Technology/Computer Science) (DoE, 2002b)" Hodgkinson - Williams, (2005; 2010).

Diverse outstanding projects launched in South Africa for the assimilation of ICT in education with special emphasis being laid on the primary system. A good example is the Khanya Project of the West Cape Department of Education. Some of the main goals of the Khanya project were to establish that curriculum is implemented, new technology to be set up in classrooms and training sessions for teachers to be provided (Khanya technology in education, n.d). Another mega project that entailed computer application was the Blue IQ which was a multi-

billion initiative by the Gauteng Provincial Government whose aim is to develop economic infrastructure for smart industries.

In South Africa, majority of the institutes possessing computer laboratories are in the Western Cape (56.8%), Gauteng (45.4%) and the Northern Cape (43.3%). In Eastern Cape, which is one of the most humble regions in South Africa, has the least number of computers in schools (4.4%). The White Paper on e-Education declares that many institutes purchased computers for curriculum application between 1999 – 2009. The numbers of computers increased from 26.5% to 51.3% (DoE, 2010). However the South African government has greatly reported a number of hurdles that hinder the implementation of ICT by its educational stakeholders in the past 10 years. Some of the greatly citied issues include the rate at which teachers accepted and infused ICT in their teaching and examining procedures. Teachers especially those who operate in the slum areas around Soweto were found to be slow in integrating ICT projects in their teaching and learning process because a good number of them feared the future changes and impacts that could be seen on the ghetto children once exposed to them, some school managers had little expertise on modern technology and their impact, some schools had regular power blackouts, the cultural view that saw the computers and modern technology as a white man's affair, who had greatly exploited them through apartheid and many more Haverila, M., (2011).

Across East Africa, several researchers have been carried out to find out the factors influencing the implementation of ICT projects in schools by the tutors and diverse results found. Mugisha (2007) cited by Hutchison, A. and Reinking, D., (2011) for example did a survey on challenges associated with ICT execution in the education system of Core Primary Teachers in Kabale

District in Uganda in 2007. The isolated challenges in the research were teachers' attitude towards ICT, use of ICT by teachers in classroom and the accessibility of ICT facilities. Most of the research challenges in the research contemplated on the challenges associated to ICT application, the target studied entailed of only lecturers in Primary Teachers' colleges and therefore allotting some chasm for completion during this research bearing in mind the community in other colleges in Kabale District, teachers and pupils from various schools in the district too.

Akankwasa (2008), researched on tutors' mindsets, skills and behaviors associated to ICT operation at Christian Primary School at Mukono. In his findings, 57% of the problems that hindered ICT implementation in primary schools were caused by poor teachers" perception and attitude, 51% by poor experience on modern technology, 44% poor administration practices from school heads and 50% by lack of sufficient finances. Munyantware (2006), cited by Temba, John, ed. (2013) researched on problems affecting teachers' adoption in integration of ICT in Kisoro District. During the research, Munyantware discovered that tutors' knowledge of ICT was crucial for auspicious ICT application in the class. This was later done in Northern parts primary schools of Kampala and factors like teachers' attitude, level of knowledge and financial scarcity were afore.

In Kenya, the idea of Economic Stimulus Programme (ESP) was brought to light in the public domain during the 2009/10 financial allocation speech in the National Assembly. The government of Kenya set aside a comprehensive allocation of Ksh. 22 billion with the intention of boosting the economic growth that made the economy of Kenya getting out of a depression

situation that came by economic slowdown. Some of the main reasons of having an Economic Stimulus Programme entailed revamping infrastructure and the quality of health care and education, boosting economic activity and enhancing employment opportunities. ICT implementation in education sector was seen as the central adoptions that the government could impress in order to improve the academic performance in schools. For instance, ICT in education will enhance the memory retention of the pupils as pictures could easily be used in teaching, teachers will be able to explain difficult instructions and confirm student understands, they could also come up with communal classes and change the lessons more fun which could enhance pupils participation and attendance. Therefore, the advantages of introducing ICT in schools in the year 2006 through 2009 were four folds: Modernization of technology, Internationalization of Information and Economy, Economy Knowledge Base and Society and Increase in demand for Education. This ICT assimilation manual was established by Ministry of Education (MoE) to assure supplies were distributed to allocated schools. The schools that were assisted under this category were known to as "pocket poverty" Temba, (2013).

The main reason of venturing into the project in these areas were categorized as poverty stricken and marginalized was majorly to expunge poverty by educating people, coping with job uncertainty, and advancement. Later on, ICT integration has been seen as a chore driving force in education ideas dissemination, instructional materials development has gone to the extent of being used by school administrators like the schools heads, schools clerks and matrons/patrons in keeping records. According to Shazia Muntaz, (2010), besides facilitation in class, ICT is an authoritative tool for tutors and administrators. Tutors participate in class regulatory duties such as keeping students' record, planning of lessons, preparing hand class

outs, guidance and presentation slides, exam papers preparations, terming of papers and documenting results, analyzing results and etcetera. The study also explains that management is also involved in diverse tasks that need automation like the computing of school achievement for a suggested time, record-keeping of the staff and preparing school budget. Technology has proved to be a very convenient tool in taking care of several managerial duties for both tutors and managers as well as application in classroom teaching.

Despite the fact that most of the schools across the country have greatly benefited from the Computer for School Programme coupled with the EP, there still exists hindrance factors in successful integration and adoption of these ICT projects. For example, a study carried out by Nchunge at el. (2012) in Kangundo, Thika and Central Mombasa 2009 on ICT projects implementation in secondary schools showed that 57% of the schools that were supplied with computers could not adopt and adopt the ICT readily because of factors that came from both the central government through the ministry of education, the teachers, the students and other stakeholders like the religious organizations. Those that touched on the teachers included: lack of ICT knowledge and skills, poor teachers' attitude and perception towards their students and ICT projects at large, poor administration practices in schools and many more. This study indicated that despite the county and central governments trying to implement the ICT projects in schools, the rate of teachers adoption and integration has continued to slow down each day due to factors such as inadequate ICT training, lack of ample time due to fully packed schedules, poor administrators support of ICT and many more. However, the studies have not touched on areas like Mombasa and coastal margins of the country, leaving a gap that is to be researched by many researchers in coastal schools.

1.2 Statement of the problem

According to Markus, (1987) cited by Cassim, K. M. and Obono S. D, (2011) assimilation of ICT by institutions need to be well handled in order to efficiently equip for future ICT utilization. Even though schools have had computers for almost twenty years and some with ICT projects underway, how to use and implement them has evolved slowly and patchily. Technological revolution in schools has been best by theoretical inadequacies that have kept educational technology at the margins of the established educational system. According to Oloo (2009), research findings across the country have revealed the presence of ICT infrastructure in primary schools. A report by Kenya Education Sector Support Program (2009) revealed that, projects involving ICT use and integration in Kenya secondary schools have both internal and external challenging factors leading to weak implementation of these ICT projects.

In areas like Kisumu, Garissa, Kajiado and Nairobi slums of Kibera and Mathare areas, studies have shown computers have been adopting for teaching and learning as early as lower primary levels. These computers acted as pool factors that attracted most parents/guardians and their pupils to these. In 42 schools sampled in Kibera slums, 30 of them were found to have at least four computers in the school and pupils were allowed to access them during free times as one of the ways of entertaining and retaining them in schools. According to Sulunga, M. et al. (2011) tutor related issues impacting the assimilation of information technology in the instruction of mathematics in schools in Kenya indicated improvements in Kenya students' retention and participation which was rated at 31.5%. This means that most of the ICT compliant teachers/tutors greatly captured the attention of their pupils besides making their lessons enjoyable and interesting. On the other hand, the studies indicated that despite the high rates of

most institutions running towards integrating, adopting and implementing ICT projects, they have faced several challenges that greatly originated from the internal and external environments. This included: teachers' perceptions, attitudes and negative beliefs about ICT introduction in schools, teachers' low levels of ICT knowledge, inadequate financial resources, poor internet connectivity and poor connections in schools.

Due to these factors that have helped the country in determining the introduction, adoption and integrating of ICT in tutoring in learning institutes, most research have been done by many schools to try and unfold the various issues in the country and beyond. However, little research has been done in Kenya's coast region especially in the old Mombasa town on factors influencing ICT project implementation. The problem that the research sought to investigate is the influence of teachers' attitude and beliefs towards information and communication technology (ICT) projects integration in public primary schools; a case study of primary schools in Mombasa County, Kenya.

1.3 Purpose of the Study

The main purpose of the study was to check out factors influencing integration of information and communication technology (ICT) projects in public primary schools in Mombasa Sub-District of Mombasa County, Kenya.

1.4 Objectives of the Study

This study had the following objectives to accoplish:

- To investigate the impact of the cost on ICT learning materials in the integration of ICT projects in public primary schools in Mombasa County, Kenya.
- To investigate the influence of administrative support on ICT projects integration in Primary schools in Mombasa County, Kenya.
- To investigate the effect of skills development in ICT projects integration in public Primary schools in Mombasa County, Kenya.
- To investigate the influence of ICT infrastructural capacity for teaching and learning in the Integration of ICT projects in public primary schools in Mombasa County, Kenya.

1.5 Research Questions

The research was piloted by the following research questions:

- To what extent does the cost of ICT facilities impact on the integration of ICT projects in public primary schools in Mombasa County, Kenya?
- How does administrative support on ICT projects influence their integration in the public Primary schools in Mombasa County, Kenya?
- To what extent does skills development influence the integration of ICT projects in public Primary schools in Mombasa County, Kenya?
- To what extent does ICT infrastructural capacity for teaching and learning affect the integration in public primary schools in Mombasa County, Kenya?

1.6 Significance of the Study

The research will bring out the importance of information to school administrations besides the policy experts in education as to how ICT will contribute to the knowledge acquiring process. Mind set and perception by immediate expertise are crucial to how effective an innovation is implemented. Understanding how teachers perceive this innovation and its efficacy as a tool for enhancing teaching and learning. This study will hopefully contribute to the growing knowledge-based with regards to the use of ICT in education in Kenya. The existence of ICT projects in primary schools, secondary and higher institutions of learning increases the sustainable socio-economic development. This study will be essential in examining whether the integration of these ICTs in the Kenyan elementary schools will be beneficial to the learners, teachers and other educational stakeholders thus complementing the government in the execution of one of its projects involving ICT.

1.7 Basic Assumption of the Study

The study based on the assumption that ICT integration is on-going in all primary schools. It also assumed that the sample covered represents the same conditions faced by teachers in other primary schools.

1.8 Limitations of the study

One major hurdle experienced by the researcher was the time factor that was set to cover the sample population and get the required feedback. Some of the respondents were not willing to disclose some information required or not even willing to give full cooperation during the survey. Lack of data from relevant sources on ICT integration within the Kenyan context was evident.

1.9 Delimitation of the study

Although the study was restricted to primary schools within one county that is in Mombasa County, transferability of findings to similar situation and context was possible. A part from this research the researcher also had to gain and seek acceptance or rejection in order to carry out the study. The respondent participated voluntarily.

1.10 Definition of Significant Terms

Information Communication and Technology: Refers to the diverse set of technological tools and resources used to communicate and create, disseminate, store and manage information. These technologies include computer, internet and broadcasting.

ICT integration: Is the use of technology in communication, data processing and data storage to impact the knowledge on learners.

Pedagogy: the best practices in teaching learners.

1.11 Organization of the Study

.The accompanying is a brief framework of how the resulting parts of the examination are sorted out. Brief summations of the momentum look into finding on the impacts of ICT coordination on educating and learning and in addition a brief examination of the elements that influence innovation use in the classroom is exhibited in section two. Part three gives a far reaching layout of the strategies that are utilized to gather and examine the information. The examination of the information and the talk of discoveries will be exhibited in part four and the last outline and conclusion and in addition the suggestion will be introduced in section five.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In the past few decades, research studies have depicted that computer technology is an best way forward for promulgating educational opportunities but unfortunately, most teachers neither use technology as an instructional delivery mode nor integrate technology into their curriculum. Even though investment have been made on ICT infrastructure equipment and professional development to improve education across the world, effective integration Information Communication and technology into classroom practices poses a hurdle to teachers and administrators. However the success of the implementation of ICT is not dependent on either the availability or absence of one individual factor; However it is determined through a dynamic process involving a set of inter related factors. Therefore this chapter will focuse on analysis of relevant literature on factors that influence teachers' decision to integrate ICT in the classroom in which teachers and as well as school level factors are discussed.

2.2 Cost of Information Communication and Technology Training Materials in ICT Projects Integration in Schools

Cost is the expenditure incurred during the purchase of goods or services. Therefore, operation of ICT in this case denotes the usage of ICT in education and societies. The expenditure made on ICT training materials has been sited as one of the challenges that could adversely affect the integration of ICT in primary schools in Mombasa County and Kenya at large. According to Ajayi, (2009) the more expensive the cost of computers, the less computers that can be bought

with the limited resources. According to Akaslan and Law (2010), the price of a desktop computers linked to the internet is very high for majority of institutes of learning in the third world countries like Kenya, and for the high class in the society, normal schedules like consistent repairs, updating of anti-virus together with cleaning, was a difficult challenge to overcome by the students who are having first hand at using computers. According to Oliver,(2002); Al-Bataineh et al. (2010) when evaluation is made to conventional forms of off-campus learning, expertise used in facilitating learning has demonstrated to be quite costly in all capacities of attention, set-up, progress and development.

Research studies done on the correlation connecting the price of ICT instructional material together with ICT enactment are numerous. Makau (1986) cited by Ayere Odera and Agak (2010) deduced that the capital invested was the main element to the effective and carrying out infusion of ICT in secondary curriculum system in the country. BECTA (2009) also outlined limited resources in schools as a great factor discouraging increase of ICT and lack of technology use in the classrooms also hinder what tutors are competent enough to do with ICT. Zziwa (2001) cited by Bordbar, F. (2010) sited the key hindrance to using computers in schools is the great price of computer devices. Albirini, A. (2010) established that the extremely pricey gadgets of computers is the main obstacle that hinder the assimilation of technology infusion in schools in Nigeria, whereas a different research by Tusubira and Mulira, (2004) narrowed down to focus on encounters pertinent to incorporating technology initiatives where fiscal means to purchase computers and gadgets related to the supposed profits, of Makerere‘s involvement is a lesser deliberation.

Emergent nations have suggestively lesser degree of flow and use of ICT in their institutes and office administration than advanced countries. A study by Ajayi, L. (2009) on the distribution of ICT in particular secondary schools in Ghana, exposes the ultimate setback fronting infusion of technology in institutions is the dear prices of gadgets and absence of computer laboratories. Nevertheless, Ensafi et al. (2009) stated that the leading hindrance in the advancement of ICT assimilation in schools, administration segments and advanced bodies of education in Iran is not the great expense of computers but non- committal of administrations to budget for equipping campuses, colleges and schools with new technology gadgets. Providing machines to colleges is comparatively manageable task but servicing and controlling the machines is a bigger task.

This study goes ahead to indicate that in most upcoming countries like Kenya, Lesotho, Rwanda and Pakistan, laboratory coordinators in most learning institutes are not equipped with enough knowledge to resolve practical challenges. Andiko (2009), indicates that some African countries still remain underprivileged, that where technology has been initiated the proficiency to manipulate it is very minimal since ability to empower tutors is restricted financial constraints. There seems to be a certainty pointing to the effective application of technology in schools showing that it is being hindered by expense of ICT tools. In advanced countries, the expense of computer gadgets continues to drop but in most developing nations, like Uganda and Kenya, the price of computers and accessories in numerous instants is more costly due to elevated ranks of scarceness and insufficient finance support (Sife et al, 2009).

To support the report above, it takes less than a month's wages to be able to acquire a desktop computer but this is different if you go developing countries where a six months wages are needed

to buy one. Besides that, computer accessories such as printers, projectors, modems, external hard drives, speakers, monitors etcetera could be beyond the reach of most schools in most developing countries that greatly depended on funding from the central government. According to Chigona, A. and Chigona, W. (2010) the handling of technology is greatly average in huge organizations and mostly the ones held by expatriates. On the other hand, emerging organizations especially the ones owned by locals have minimal manipulation due to high cost of required financing, incompetence and very costly charges.

In developing countries, schools were categorized as small firms since they had limited capacities. The findings proposed that there is necessity in propagating the ICT instruction services for the local financers as well as learning institutions in order to take benefit of the chances that come intertwined with addition of ICT; and to reduce the cost of Internet facilities besides other ICT gadgets thus to drop the cost of purchase. This research additionally depicts that public value the impact made by ICT to the operation of their organizations, institutions and non-formal sectors but the various hurdles like high costs of software, hardware, qualified ICT professionals and internet are some of the hindrance to their progress.

Besides that, an individual should go through thorough guidance so as to be a person literate in computer even though the extreme expense on ICT instructional materials may hinder this activity. Most researchers utilize computers in management activities besides them being used in teaching and learning. However, there exist many challenges that transpire to initiate the full use of technology and the modern ICT facilities. To concur with the statement above, Demirci, A. (2009) tries to point out that the use of technology interferes with training institutions and

fund of resources. If the prices on ICT tools would significantly reduce then the implementation of technology would be beneficial on addition inventions.

Corresponding to Namukangula (2010), educational institutions in Uganda and Kenya, most departments and institutions of learning have involved the procurement of more machines, the placing up of LAN, practical help and coaching of manpower in their tactical procedures. Nevertheless, all the effort that has been put in schools and other educational establishments, ICT application has not taken a steady groundwork within the staff and pupils. This could be as a consequence of great expenditures in acquiring desktops and connected gadgets as well as pessimistic stance of tutors concerning the use of technology in pedagogy. It shows that when the pricing of technical training resources is high, ICT realization in learning systems decline and vice versa. Exorbitant value of ICT instructional resources could be anticipated as a barrier to integrating ICT in primary schools in Mombasa and other counties in the countries. Though, this theory remains a theoretical thought until verified and hence the necessity to find out the level to which cost of ICT training material really impact on ICT integration in primary schools in Mombasa County.

Many reports examined above illustrate that the real expenditure of ICT training materials pose a great obstacle to the integration of ICT, Ensafi et al, (2009) seems to take an unusual approach of perception regarding the price of technology as a minor weighty factor. With regards to Demirci, A. (2009), the pricing of ICT training materials is not a key obstacle of ICT enactment in learning institutes. He considered tutors/teachers consciousness and optimistic opinion towards ICT as a requirement for effective ICT realization. He urges that

higher learning institutions, primary schools and other informal educational institutions in Kenya should approve freeware and open source software for consumption in schools.

While a lot of muse seems to be apprehensive with the high prices of ICT training materials, the populace studied was unlike the previous ones. For example, certain reports raised concern on high school tutors while some considered TTC tutors as Malcom and Godwill (2009) concerning high school and Namakungula (2009) towards TTC tutors. Besides such reports were in line with additional organizations of higher learning such as Mount Kenya University and secondary schools like Alliance high school respectively and none was related to any primary school in Mombasa County. In order to have a cessation, this report is aiming at finding out effects in cost effectiveness of ICT training material in primary schools in Mombasa and Kenya at large.

2.3 Administrative Support and ICT Projects Integration in Primary Schools

Albirini, A. (2010) traces regulatory support as 'a demonstration of giving out or applying something in an association/organization.' 'Managerial support with regards to ICT alludes to the nearness of empowering ICT - utilizing good examples, for example, the key, PC instructors and the nearness of motivating force for educators to utilize innovation (Priscilla et al., 2009)'. This report demonstrates that help and rules gave by directors like school heads help in the preparation of PCs furthermore in coordinating of ICT into the educational modules. Cassim, K. M. what's more, Obono S. D (2011) express that leader of foundation's support is significant for the implantation of ICT in educating and figuring out how to succeed. One may guarantee that administration may offer favorable environment required like setting in position an ICT

methodology, inspirations and assets. In this manner, we may assert facilitate that, for the acknowledgment of ICT to be viable and practical, directors themselves must be skillful in the utilization of the innovation and they should have an expansive comprehension of the specialized, academic, managerial, money related and social measurements of ICTs in instruction. For any establishment to adjust new advancements, there must be a reinforcement from chairmen (school heads)." Dynarski, M .et al (2009) proposed that 'direction from a head of office like sciences/specialized division is imperative in empowering the improvement of electronic lesson materials to support PC use for the particular subject in the educating learning environment. The study discovered that the achievement of incorporating ICT into the educating learning connection among teachers relies on upon the support gave by the foremost of the school."

Past analysts have thought about ICT usage and managerial support . For example, Hennessy Sara et al, (2010) found that "absence of regulatory support as a boundary to selection of advancement in the Nigerian instruction frameworks." They set up that "absence of managerial, specialized and budgetary support as issues that keep instructors from educating while school executives offered almost no support and motivation to their educators to successfully actualize ICT in the classroom. Because of that, educators draw in themselves in communitarian ventures and productive instructional method since managerial bolster gave to them in reference to ICT is insufficient." "When instructors' utilization of PCs all the more frequently for their educating learning process, that is seen as a sufficient support from the school organization" states Kariuki (2004). Guides that get adequate ICT consolation from the executives coordinate ICT in their educating while the greater part of those in the opposite are less excited in the utilization of PCs. Accordingly, ample opportunity has already past that chairmen in schools, for example, the principals ought to go about

as middle people with a specific end goal to guarantee full reconciliation of ICT into the training educational modules through rousing, helping and persuading them to inject ICT in their instructional exercises.

The support given by heads of learning organizations, supporter's instructors' status to inject ICT while educating, more as a medium to convey guideline. Consequently, this position of a head of organization is essential in conveying the energy, help and great air to enhance the innovation in coaching. Despite the fact that inspiration by the leader of the organization is fundamental to ICT mixture in grade schools in Mombasa County, little has been done and still stays insignificant accordingly we have to question the direction of managerial support. Innovation bolster positively affects how to absorb ICT in teaching method. Down to earth help was noted to improve the empowering conditions fit for invigorating ICT imbuement. As per Kipsoi et al (2012) they pronounced that 'nonappearance of down to earth consolation as one of the key hindrances that followed in innovation being underutilized in the lessons. Instructors don't utilize innovation in their lessons when they are not sure where to turn for support on the off chance that something turns out badly.' Afshari et al (2009) recommended that 'organizations must endeavor and influence ICT faculty on methods for implanting ICT in their lessons.' Therefore Education docket in the Country ought to store schools to acquire incredibly tried and true PCs, enhanced structures that can build up and hold ICT inside research centers. It must be conceivable if new methodologies (counting staff preparing) is incubated so as to ensure outrageous quick reactions when breakdowns happen.

Amid a study on little firms registering, Aradom Berhane Tedla (2012) found that where there are no research facility experts to help mentors regularly debilitates improvement of mechanical aptitudes. PC help can be offered to coaches through engaging them with specialized know-how in taking care of equipment and programming innovation issues. Afshari et al (2009), proposed that with ICT help, guides access establishment's neighborhood, WAN and PC adornments, for example, advanced cameras, printers, scanner, camcorder and information projectors. As new learners of innovation apply, mentors require preparing backing and specialized abilities to help them in their lessons when they confront challenges while for experienced coaches, they're energetic to share their aptitudes and offer specialized help to their partners. Along these lines nonattendances of specialized know-how of overhauling the PCs, ruins guides from acclimatizing innovation inside their lessons. Many difficulties connected with implantation of innovation happen to mentors in light of lacking preparing on the usefulness of the PCs. With everything taken into account, nonappearance of administration inspiration bars the use of innovation.

Inside a course of three year innovation inquire about study, Haverila, M. (2011) found that guides were all the more as often as possible confused by pragmatic structures while imbuing ICT in instructing. The examination discovered that, difficulties like power intrusions in ICT research facilities and lacking quick support prompted to less time in class. Subsequently, coaches who need help and don't have any specialized know-how to unravel the specialized issues, experience difficulties and blocks in keeping up ICT offices.

After the exploration was done, conclusion was made that ICT help has noteworthy impact on coaches' utilization of ICT offices since it could help the improvement of the utilization of

innovation among mentors in higher learning foundations and thus it upgraded the likelihood of ICT implantation and connection. Mentors dependably require ability bolster together with instructional help like direction on selecting fitting programming and absorbing them in lesson arranges. Coaches additionally require direction on how innovation might be coordinated to satisfy objectives, together with the idea on classroom association to grasp add up to use of only few machines. This could be as a consequence of the confused and contradiction of innovation and subsequently influencing ICT execution contrarily in elementary schools in Mombasa County.

The nonattendance of arrangement of help by heads of organizations could be considered as a principle obstruction towards use of PCs in classrooms. Namukangula, J. K. (2010) contends that 'effective utilization of innovation can just happen when administration offer guides with the required help and bearing. Other than the administration thinking of an approach to lead the use of innovation, guides can help with mechanical expert improvement through starting reasonable timetables so mentors may practice what they have learnt, persuading and giving coordinated effort and companion drilling and empowering coaches to pay each other a bring in their instructing surroundings to witness the usage of innovation and masterminding regular social events among coaches rehearsing innovation to arrange and assess guideline. Johnson, M. et al (2010) amid an examination on guides' feelings on use of ICT in the science classroom in Taiwan, it turned out that despite the fact that few mentors have a similar personality that ICT may improve exchange of information and that innovation utilize is valued, they were not prepared to incorporate ICT because of absence of help and supports designated to foundations.

Baek, Y. Jung (2010) for a situation learn at Curtin University of Technology that University delineates that educators who get bolster from overseers had a high duty to the appropriation of ICT for instructing and learning. Information in the study proposed that the reception of ICT in instructing and learning would be advanced by more noteworthy support of the change at the administration level of the college.

A noteworthy component that adds to the advancement of development is the accessibility of framework assets: equipment, as far as the quantity of PCs in the school accessible for understudies and educators, for instructive purposes and the quality and working of hardware (speed of processors, peripherals and access to the web) and also accessible programming. Be that as it may, the accessibility of ICT alone is not adequate but rather should be joined by specialized know how and in addition academic support. Bingimals, K. (2009) additionally noticed that the accessibility of PC equipment and programming ought to be went with preparing of the clients and consistent specialized support. Without this, despite the fact that fantastic equipment and programming are accessible, they could be squandered or remain underutilized by the clients. This could propose the insignificant ICT combination/usage reported in different instructive organizations in the Kenya and past and accordingly, the requirement for this study to research the degree to which managerial bolster impacts ICT ventures execution in elementary schools in Mombasa County.

2.4 Skilled Development in ICT and ICT Projects Integration in Primary Schools

Hornby (2006) refered to by Ensafi et al (2009) characterizes aptitudes to be the capacity to accomplish something great. Aptitudes improvement in this study will allude to unique capacity (or mastery) empowering one to play out an action by utilizing a PC productivity and its related peripherals in either instructing or learning. Dalton (1998) likewise inspired that preparation is coordinated at changing people groups' information, experience, aptitudes and mentality. The shortage of sufficient prepared and experienced examiners, programming specialists, frameworks and system administrators, controls ICT advancement in Uganda.

There are different looks into that reported the connection of incorporation of aptitudes in ICT improvement. A decent case is of Almekhlafi and Almeqdadi (2010) where they demonstrated that absence of preparing abilities as a snag to ICT use in establishments of higher and center level learning in Tanzania, while Namukangula (2010) found that absence of aptitudes as one of the issues clarifying underutilization of Makerere University Library electronic data asset by scholarly staff. Farrell (2007) finished up is support on the point that, however the personnel of registering and Information Technology at Makerere University trains staff in e-learning and bolster e-learning in the entire college, similarly couple of instructors have aptitudes to make academic utilization of ICT for educating over the educational modules. This could be because of deficient ICT preparing aptitudes, absence of time and negative disposition towards ICT execution. Eslaminejad et al (2009) built up that ineptitude in ICT abilities was the central obstacle in imbuing ICT execution in Australia. Albirini (2010) abridged in his report that most coaches in the third world have fear of PCs and consequently grade to the simple philosophy.

Furthermore , Chigona and Chigona (2010) through their examination that outfitted on investigating utilization of innovation and its congruity in secondary schools in Netherlands, they found that coaches' capability together with lightness in addition to capacities were among key angles to control educators availability to implant innovation in their showing learning process. They proclaimed that guide's absence of learning is a stern constraint to join ICT into optional schools. Educator must achieve and maintain a guaranteed level of mechanical capability to make instructional methodologies more present.' This is strengthened by Albirini (2006) who determined that 'innovation fitness includes innovation learning as well as the abilities and experience basic to place them into utilization.

Gadget bent empowers the mentors to transform into most capable identities while managing every day errands, for example, to comparing with the students and guardians, keep documents and to do examination in their inclination domain and to arrange shows. PC mastery can along these lines be found in relations to instructors' certainty with respect as far as anyone is concerned, fundamental abilities and experience of executing indispensable errands utilizing the PC.

As indicated by Albirini (2006), PC fitness alludes to instructor's thought regarding their mechanical know-how both programming and equipment. Innovation is an imperative part in any occupation and organizations require every one of its representatives to be engaged with ICT know-how. In spite of others may utilized, representing some innovation implanted instruction, numerous work force require preparing or retraining so that to be present with new PC equipment and programming (Ajayi, 2009).

Afshari et al (2009) proclaimed that innovation preparing must not be compelled to mentors who addresses processing but rather likewise to everybody on the utilization of innovation. The necessity for innovation preparing is portrayed and in certainty dominant part of the utilized get less or no preparation at all amid their typical training exclusively because of the utilization of PC in instructing. It might be an indication of a necessity to overhaul mentors' innovation know-how in the globe of fast evolving ICT. Showing all mentors on the instructive significance of innovation will altogether procure most while thinking on imbuing innovation in the normal educational programs. Coaches require knowing on the best way to utilize innovation at first before they can apply in the course. It would bring about making ICT advancement simple to execute and implant while disclosures in accordance with the most cutting-edge clients' objectives.

Krysa (1998) refered to by Afshari et al., (2010) contends that instructive redesigning and tutoring is a response to innovation joining in learning organizations. As to Schaffer and Richardson (2004) refered to by Afshari et al (2009) when innovation is brought into instructors training programs, the accentuation is frequently on educating about innovation as opposed to instructing with innovation. Subsequently lacking readiness to utilize innovation is one reason that instructors don't efficiently utilize PCs in their classes.

Most guides are seen as incompetent with regards to innovation they in this manner require satisfactory time to prepare utilizing innovation amid their as a part of administration school preparing to rehearse the genuine functional way innovation is implanted in their instructing and learning (Afshari et al, 2009). Mentors tend to grasp and mix innovation in their educational programs while instructive educating on the use of innovation gives them attractive time to practice with the expertise and accordingly to be sure study, convey and associate with colleagues. The announcements recommend that instructing of coaches so as to reestablish their capacities will help in the mixing innovation in educating and learning exercises. To enhance ICT absorption in schools, head instructors need to utilize arrangements consolidate innovation to be an integral part of the ordinary general works of guides. Ways may constitute utilization of email being an instrument of cooperating among staff, downloading information from the web and use of word processors (like Ms Word) to complete lesson arranges before submitting. Insofar as innovation is demanded, insignificant innovation joining in all the Mombasa County open elementary schools has for long and inquiries may emerge with respect to what is the fundamental reason bringing about that. Making of information and exchange of innovation learning and abilities will be advantageous to the nation. These mechanical abilities are truly necessary for learning with a specific end goal to spread the significance and improvement of chances by method for new ICT information and aptitudes. Preparing ought to be equipped to completely through educating out studies and self advancement.

In most creating nations establishments like colleges, polytechnics, tertiary universities, schools, preparing focuses and inquire about focuses are influenced around there of study. Akaslan and Law (2010) found that low levels of abilities and the need to prepare clients impacted ICT usage. Barolli (2010) accentuated the significance of preparing for the selection and dispersion of PCs in schools. Malcolm and Godwyl (2008) talked about that absence of expert advancement programs for educators to redesign their abilities on rising innovations is a block to ICT execution. Fitting usage of innovation by guides depends on their mentalities and the instructing they have gotten (Afshari et al, 2009). Consequently educators' capability would require the accompanying: positive state of mind towards ICT, sufficient misgiving of instructive possibilities of innovation productivity in the program and methods for overseeing ICT use in class.

Castro Sanchez and Aleman (2011) closed their examination by expressing that in spite of the fact that educators were having adequate aptitudes, were imaginative and effortlessly conquered snags; they didn't incorporate innovation reliably both as an instructing and learning device. Reasons of being out dated in equipment, absence of suitable programming, specialized troubles and understudy aptitudes levels. The study found that expert improvement impacts how well ICT is grasped in the classroom. This suggests educators training system is basically equipped on principal learning and little on the acclimatizing innovation in instructing. Despite the fact that numerous choices have been finished up on the most proficient method to use innovation in schools, guides get small honing in their educational programs.

As indicated by an UNESCO (2010) review, around 35% of the effectively prepared instructors in auxiliary schools in Europe, Asia and Africa have essential abilities in ICT, which leaves 65% of the showing workforce on the three landmass still needing PC aptitudes. The report additionally demonstrate that instructors, educators, specialized and regulatory staff must be given preparing that empowers them to coordinate new data and correspondence advancements into their educating programs. The absence of specialized abilities of keeping up the usefulness of PCs confounded instructors to incorporate ICT in the classroom. Various issues identified with ICT imbuement happen among the educators due to the 'absence of specialized aptitudes and information of keeping up the usefulness of the PCs'.

As indicated by Pelgrum (2001), refered to in Afshari et al, (2009), the accomplishment of instructive advancements depends to a great extent on abilities and learning of educators. The study reported that instructors absence of learning and aptitudes is among the restraining deterrents to the utilization of PCs in schools. So also, in the United States, Castro Sanchez and Aleman (2011) reported that "teachers with more elevated amounts of abilities, information and instruments would show more elevated amounts of innovation in the classroom. Berner (2003), refered to Afshari et al, (2010) for a situation think about on the relationship between PC use in the classroom and two autonomous factors: convictions about PC fitness and authoritative support. He found that the personnel's conviction not PC skill was the best indicator of their utilization to PCs in the classroom. Consequently, instructors ought to build up their capability in ICT aptitudes through preparing in view of the instructive objectives they need to fulfill so as to utilize PCs in educating.

2.5 ICT Infrastructural Capacity for Teaching and Learning in the Integration of ICT Projects

According to the World Bank Institute report of 2009, the backbone of ICT projects in education ties itself to infrastructural facilities that range from hard infrastructure like computer laboratories, computers and electricity and computer hardware, to software infrastructure like local internet connection and computer software. UNESCO (2010) carried a survey report about ICT projects education in most countries in Africa while Irving and Manroth (2009) reported that most countries surveyed in LDCs have or are in the process of liberalizing their telecommunication policies to enable more competition and diversity of service providers in the industry. While this is the effect of lowering the cost of access to information and telecommunication infrastructure, the cost of connectivity remains unaffordable for most education institutions.

Additionally, there exist huge gaps between urban and rural areas with regards to success of ICT infrastructure. The access to a reliable supply of electricity has been a general problem but is particularly severe in rural areas is because of the difficulty of connecting electrical grids. Therefore, there is a general insufficiency of human resource to provide ICT training and equipment maintenance and therefore a lag exists between the availability of ICT infrastructure and the ability of agrarian societies to integrate it to benefit national development. From this report, ICT projects in schools are majorly depended on three infrastructural facilities that include electricity or power supply, computer laboratories and computers.

2.5.1 The Role of Electricity in ICT Projects Integration by Teachers in Primary Schools

Andiko (2009) reports that it is common knowledge that computers, phones, radios, projectors, televisions and even video players cannot work without power that is in the form of electricity. As stated in the National ICT in education strategy of 2006, about 32% of schools by the end of 2006 in Kenya had some computers but only a small fraction were equipped with basic ICT infrastructure necessary for teaching and learning. The same document estimated that there are about 120-160 students per computer sharing; an abnormal ration as per the World Bank. The situation was further aggravated by the fact that most schools were reported to use less than 40% of the available ICT infrastructure and furthermore, very few schools were using ICT as an alternative method for the delivery of the education curriculum. Bingimlas, K. (2009) suggested that the parameters to be looked into when accessing the ICT readiness for an institution include: infrastructural availability like electricity, access to infrastructure, manpower availability, policy and regulatory framework. In addition, Kenya has one of the major cited hindrances to ICT integration in schools and that's the lack of electricity power (Kenya Data Profile, 2010).

A report by the World Bank (2010) shows that about 57% of schools in Kenya up to date are still not yet connected to electricity. According to UNESCO (2010), the public sector has not been immune to this since most offices have limited access to electricity, about 30% of the Kenyans are able to access computers with only 9% coming from rural and remote areas that are greatly and adversely affected by no electricity supply. According to Hamilton and Paul (2010), frequent electricity interruption has been a hindrance factor in ICT projects in Nigeria and

Sub-Sahara Africa where Kenya is included. Regular blackouts are very common in Africa especially in areas where electricity grids are either from a neighboring country or where power is given on rationing terms. A study by "The Connect To Learn Program" (2013) pointed out that as much as electricity grids were laid in most schools in Kenya and Uganda, there was this issue of unreliability whereby power blackouts were very common thus making it difficult for administrators to rely on ICT.

Persistence of failure in accessing electricity has greatly hindered ICT projects implementation and use in Nigeria, Ghana, Uganda and Kenya among other developing countries (BECTA, 2009). Few schools with ICT facilities are unable to use them regularly as expected. Ayere Mildred et al (2010) noted that one of the biggest factors hindering ICT growth in general is the lack of electricity within an indicated figure of about 75% of both primary and secondary schools in Kenya having an alternative source of electrical power that could be from the grid lines or from generators (that are much expensive to acquire and maintain) and 25% of the primary schools have access to electrical power. Noting that most of the schools are located in rural areas, the Kenyan government attaches situation as a constraint to ICT growth. For example, the Kenyan government in its efforts to nutrilise the challenges in Northern Kenya and other Arid lands in the country, allocated Ksh. 200 million for the installation of solar panels at secondary schools in 2009/2010. A series of studies have been done by scholars like Cassim, K. M. and Obono S. D (2011) on factors influencing ICT implementation in educational institutions in most parts of the country but not so much has been done in regions like Mombasa County and the Kenya Coastal at large, leaving a gap for this research.

According to Ayere, Odare and Agak (2010), schools in Kenya have tried to adopt the integration of ICT in both classrooms and administrative avenues but have a major challenge lying on a special space for these ICT lessons and computers installation. In their study, only 10 schools out of the 50 primary schools studied in the eastern, central and rift valley regions of Kenya has separate equipped computer laboratories. 6 out of 10 schools fully equipped with a computer laboratory came from private schools. This was found to discourage most of the teachers in adopting ICT in their lessons since they were greatly discouraged in carrying out their lessons in squeezed or low ventilated rooms. These have therefore left a gap that needed to be worked on by this research. According to Miima Florence, Samson Ondigi and Rose Mavisi (2013), there is a lot that has been researched on, on the role of computer laboratory in any ICT organization especially in the education sector in the marginalized regions including Garrissa, Kwale and Turkana and by extension the Kenyan coastal regions of Tana River and its environs.

2.6 Theoretical Framework

A hypothesis is characterized as a gathering of suppositions, recommendations, or acknowledged actualities that attempt to offer a conceivable or sound clarification of circumstances and end results (causal) connections among a gathering of watched wonder. Then again, a hypothetical system is a gathering of related thoughts that gives direction to an examination venture or business try. In this segment, center is around different speculations under which the study is supported. It particularly concentrates on Cognitivism and Constructivism speculations.

2.6.1 Integrating ICT utilizing a Cognitivism hypothesis

Cognitivism is a learning procedure that spotlights on the securing of information and aptitudes through mental or levelheaded procedures. This involves making of mental representations of physical items and occasions, and different types of data handling. This approach expects to empower the understudies to learn by perusing, tuning in, touching, or by viewing and a while later preparing and reviewing that data. The best illustration would be the point at which a coach is instructing in a lower essential class who then demands the understudies to touch and distinguish different PC segments, for example, PC screen, console, mouse, CPU, speakers etcetera. By this sort of a movement, the understudies will touch, listen to the educator keeping in mind in the meantime have the experience of learning independent from anyone else and afterward that learning continues to handling and recollecting the data. At the point when understudies work with the devices accessible it stirs their interest and in this manner co-ordinate their feeling of seeing, hearing and touching. Wherefore, it is vital to note that in a classroom setup, this approach delineates the instructor as the substance supplier and leads the learning while the learner is portrayed as having the commitment for interiorizing the data exhibited by the educator. Also, for this way to deal with be successful, accessibility of "right" materials is an absolute necessity for the understudies to prevail in instruction.

2.6.2 Integrating ICT utilizing Constructivism hypothesis

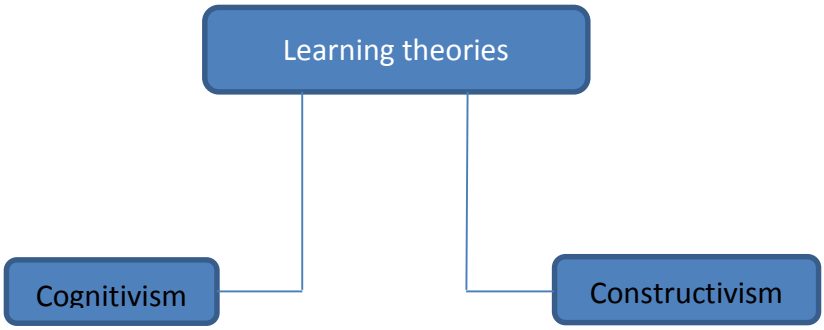
Constructivism is a hypothesis that says individuals create cognizance and learning of the universe by experiencing with things and thinking about these experiences. When we encounter something new, we need to contrast with it with our past musings and experiences, most likely by adjusting what we accept or possibly dismissing the new data. For this to

happen, we should bring up issues, investigate and assess what we know. In a class setup, that propels the understudies to utilize dynamic strategies like trials, certifiable critical thinking in the formation of more learning and after that to pondering it then discussing what they are doing and how their comprehension is evolving. The instructor ensures that she grasps the understudies' pre-considered thoughts, and afterward manages the action to arrangement and expand on them.

In coordinating data and correspondence innovations (ICT) in essential instruction, PCs and media transmission systems might be utilized as devices for creating thinking abilities. For example, PC applications have been adjusted or created to encourage basic intuition and higher-arrange learning. These devices empower learners to speak to and express what they know. In doing as such, understudies work as architects of curios. They develop information bases, master frameworks and interactive media presentations that speak to by and by applicable and significant information, drawing in them in higher-arrange, careful thinking and learning (Salomon and Globerson, 1987). At the point when understudies utilize advancements, a scholarly organization between the understudy and the PC is set up where the PC opens up the understudy's reasoning. Intellectual apparatuses are intended to make learners contemplate the topic being considered while creating musings that would be incomprehensible without the instrument. These psychological apparatuses are unintelligent devices that depend on the learners to give the knowledge. This implies the reasoning and self-control of learning ought to be the obligation of the learner, not the PC (Derry and LaJoie, 1993). Understudies can't be accurately utilizing intellectual instruments without being taking part in higher request thinking abilities (Jonassen, 1996). Rather than utilizing just dialect to

think and speak to thoughts, subjective apparatuses ought to be utilized to give formalisms to understudies to speak to what they know in ways that are all the more exceptionally organized and visual. Educators ought to choose the formalism that is best to analyze and considering area learning instead of continually depending on verbal records to reflect understanding. At the point when learners utilize PCs as accomplices, they off-load a portion of the ineffective retaining undertakings to the PC, while the product requires the learners to utilize better approaches to consider what they are concentrating on.

Figure 2.1 Interrelationships of Learning Theories



2.7 Conceptual Framework

Government enterprises and civil actors around the world have long started to set up proactive policy and strategy gender aimed at exploiting the benefits of ICT for economic, social, and political development. In the meantime and despite all these tangible activities on the ground scholars are still struggling to come up with a coherent conceptual framework that embraces all relevant aspects of this multi-disciplinary endeavor Heeks, (2006). In this framework, it entails the variables as dependent, independent and intervening variables. This will be significant in comprehending the relationship between the given variables.

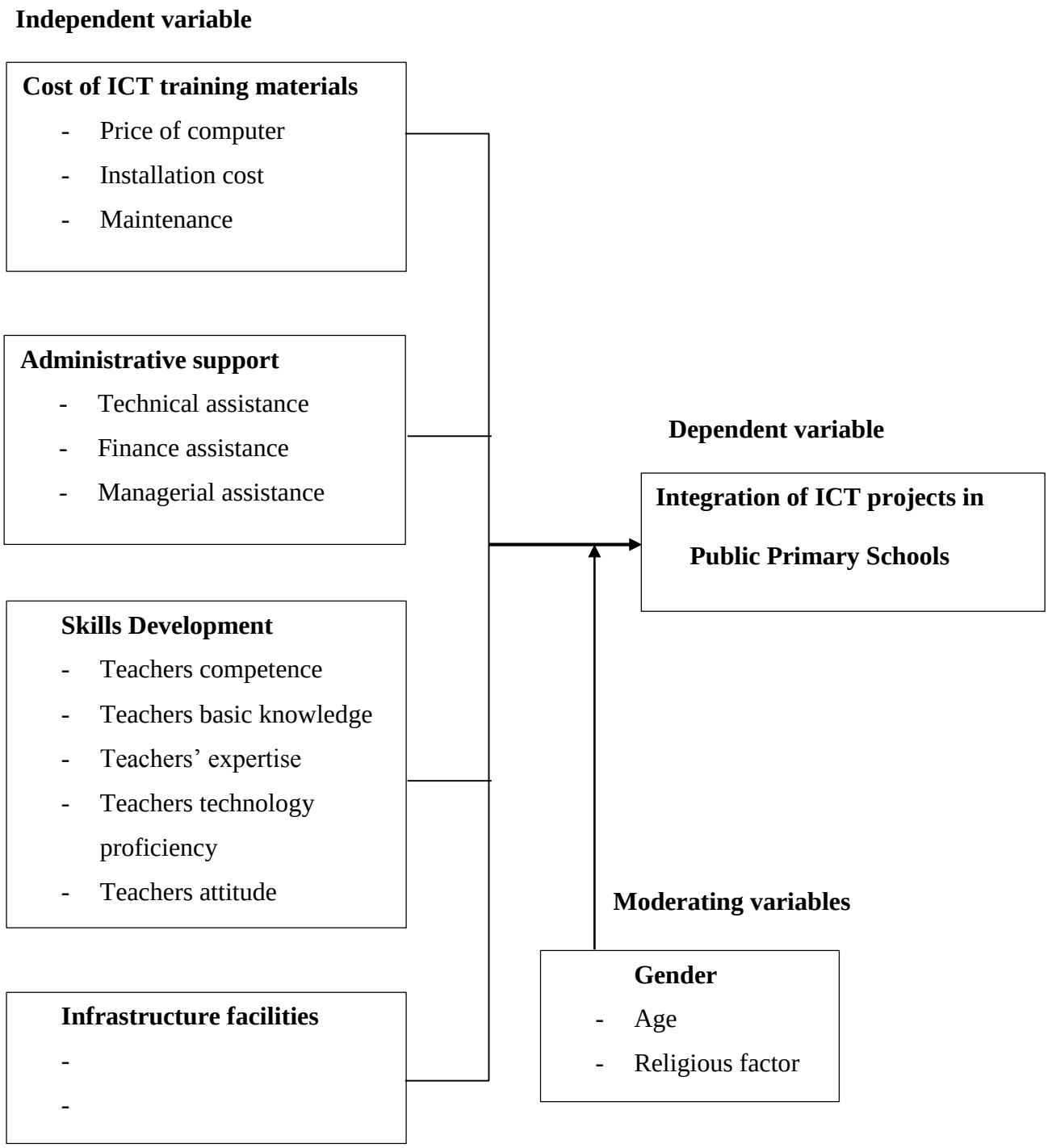


Figure 2.2: Conceptual framework

In the above conceptual framework, the study will be focused on the interaction between the variables that influence the interaction of ICT projects in primary schools in Mombasa County.

The independent variable is conceptualized as four problems namely: cost of ICT training materials, administrative support, skill development in ICT and ICT infrastructures. The factors interact to manipulate the dependent variables.

ICT projects integration in public primary schools in Mombasa County. From the figure above, it is hypothesized that factors like the cost of price in computers, installation cost and maintenance fee have a great influence in the rate at which teachers accept and integrate ICT in the daily classroom operations. Administrative support that ranges from technical assistance, financial assistance and managerial assistance has a profound influence in the integration and adoption of ICT by teachers in the 21st century classroom environment.

Other factors cited to be in the central level of ICT projects integration in schools includes: Skills Development and Infrastructure facilities. In skills development factors like teacher's competence, teachers" basic knowledge, teachers" expertise, teachers" proficiency and teachers" attitude are interacting greatly to bring a greater influence in the implementation of ICT projects in schools. Also development or under development of ICT enabling infrastructures like electricity and well equipped computer laboratories influence ICT projects implementation in schools.

2. 8 Summary of Literature Review

Necessity is the mother of invention. Technology has no advanced the life a man on the planet earth. All sectors have witnessed this rise in the technology. Teaching-learning process has been affected both positively and largely finding ways of integrating and incorporating technology into classroom practices is one major challenge that is faced in 21st century. There is a multi-dimensional relationship between the factors that influence ICT use in teaching.

Accessibility to resources as a factor is closely related to other key issues which can themselves is considered as factors influencing teachers' using ICT in teaching.

In some schools where these resources are available, other factors come in like lack of time, lack of enough skills in the field of ICT and also lack of exposure to the outside world. In some it is difficult to supply these ICT materials due to lack of electricity connection. This majorly affects schools in rural areas. Teachers need to be taught to be competent to be using ICT. Similarly, competence is linked to other factors such as professional development, leadership, time and technical support. Some schools allow the staffs to acquire and develop their skills in ICT thus becoming more competent than their colleagues in the other side of the world.

Teachers should therefore be assisted to acquire these precious skills to update themselves as time goes. Availability of ICT resources, ability to use ICT and having the basic skills to operate computers may increase teachers' satisfaction in using the modern technologies thus implement ICT in teaching. However thorough training, adequate etime and technical support are the main key. Access to ICT is only possible with sufficient time, effective training and technical and school support.

Researcher findings are very essential in adopting and integration of ICT in the classroom. ICT has largely grown. This study therefore seeks to fill this gap by entering on a number of internal teacher variables in play with social factors to explain ICT classroom integration. Also the study seeks to give perspective on the issue.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research design and methodology adopted in conducting this study. It gives a detailed analysis of the research design, population, sample size and sampling procedure, research instruments and data analysis method that were never adopted.

3.2 Research design

Research design simply means the procedures that are selected by a researcher for studying a particular set of questions or hypothesis. This includes the researcher's choice of quantitative and qualitative methodology whereby the combination of the two research approaches is the most appropriate. This research has used a descriptive research approach. This is because it will give the detailed description, explanation and views of the respondents.

3.3 Target population

According to Bony and Gall (1989) target population refers to a group of people or objects a researcher may want to use in generalizing his/her results. The target population in this study constituted all primary schools teachers in central division of Mombasa County. According to Mombasa County ministry of education there are 32 public primary schools in central. The study targeted one ICT teacher, deputy head teacher and the head teacher from each individual school making a total target population of 96 as shown in the table below.

Table 3.1: Target Population

Teacher type	Population (N)	Percentage
Head teachers	32	33.33
Deputy head teachers	32	33.33
Teachers	32	33.34
Total	**96**	**100**

(Source: Education County Director, Mombasa)

3.4 Sample size and Sample procedure

The sample size had a far reaching implication on this study. Probability of getting a representation of the target population was of great significance. Participation to the study included key informant whom the researcher believed provided the needed data. The sample included teachers that possessed characteristics relevant to the study. Given that the target population is heterogeneous due to the nature of the factors related to the ICT projects in the region, stratified random sampling was used to allow full participation of the target population. The sample population of the study was determined by using Krejcie and Morgan (1970) table in appendix iii. The sample size determined was 76 and therefore the study targeted 76 teachers in the three categories.

Table 3.2: Sample of Respondents

Teacher type	Population (N)	Percentage
Head teachers	32	25
Deputy head teachers	32	25
Teachers	32	26
Total	**96**	**100**

3.5 Research instruments

The questionnaires are the main instruments of data collection that was used. The questionnaire helped the researcher to collect data on knowledge, opinion as well as attitude of respondents towards integration if ICT projects in classroom learning/teaching. The questionnaire was suited for this study because it is practical and is used to collect data from a large number of people within a short time and in a relatively cost effective manner. The questionnaire was used to collect data from the school heads, teachers and pupils who are directly affected of ICT in schools.

3.6 Validity and Reliability of Research Instruments

Validity simply refers to the extent or level of accuracy, correctness and meaningfulness of a research instrument while reliability refers to the degree to which research instruments yield consistent results after repeated trials.

3.6.1 Validity of Research Instruments

Norland (1999) refers to validity as the quality that procedure or instrument or a tool used in research is accurate, correct, true and meaningful. The research used content validity as a measure of the degree to which the data collected using the questionnaire represents the objectives of the study. The instruments were verified by the supervisor and other two senior lecturers in the University of Nairobi, Mombasa campus.

3.6.2 Reliability of the Research Instrument

Mugenda (2003) says that reliability is concerned with estimates of the degree to which a research instrument yield consistent result repeated trials. In this study, reliability was determined by a test–retested administered to 20 subjects not included in the sample. Input from invaluable sources was obtained during the study that is useful in modifying the questionnaire before a final set of questions will be produced.

3.7 Data Collection Procedure

A questionnaire was used since it was the best tool for this study aimed at establishing the factors influencing teacher's attitudes and beliefs in ICT projects integration in primary schools in Mombasa County, Kenya. The questionnaire was prepared on the basis of a review of literature on managing of the project funds. Data collection tools were piloted and suggestion and equally referred to the existing secondary data. The researcher got a permit from the graduate school and county director of education to undertake research. The researcher visited the sample public primary schools, use enumerators to access some other people in far schools and e-mail a questionnaire to some teachers who could be committed for one on one filling. Appointment to

be the sampled teachers, schools and school heads were arranged prior to the visits to avoid inconveniences to the respondents. The researcher emphasized that the information given will specifically be used for the study and it was to be private and confidential and that names were not be necessary.

3.8 Data Analysis

Quantitative data obtained from the open ended questions was coded to facilitate quantitative analysis. The coded data will be analyzed by use of descriptive statistics comprising of frequent tables. Data analysis will be done by use of SPSS 17.0.

3.9 Ethical Consideration

All government and county authorized were informed prior to the study to avoid suspicion and resistance from the teachers /deputy/school heads. Consent was sought from the respondents whose participation in the study was voluntary. The information they provided was to be treated with utmost confidentiality. Privacy and dignity of the respondent was considered during the research. Names of the respondents were not exposed and codes were used instead. The respondents were assured that a feedback session were to be organized to disseminate the research findings to the Ministry of Education and other interested stakeholders.

3.10 Operational Definition of Variables

Table 3.3 Operationalization Table

Objectives	Variables	Indicators	Measurement scale	Types of analysis
To investigate the influence of the cost materials on the integration of ICT projects in public primary schools in Mombasa County, Kenya	Cost of ICT training materials	Price of computers Installation cost Maintenance fee	Nominal Scale	Descriptive
To find out the influence of administrative support on ICT projects in Mombasa County, Kenya	Administrative support	Technical assistance Financial assistance Managerial assistance	Nominal Scale	Descriptive
To find out the influence of skills integration in public primary schools in Mombasa County, Kenya	Skill development	Teachers competence Teachers basic knowledge Teachers expertise Teachers technology proficiency Teachers attitude	Nominal Scale	Descriptive
To assess the influence of ICT infrastructure capacity for learning and teaching in the integration of ICT projects in public primary schools in Mombasa County, Kenya	Infrastructure facilities	Electricity structures	Nominal Scale	Descriptive

CHAPTER FOUR

DATA PRESENTATION AND INTERPRETATION

4.1 Introduction

The data collected was keyed and analyzed by simple descriptive analysis using Statistical Package for Social Scientists (SPSS). The data was then presented through frequency tables and narrative analysis.

4.2 Response from the Field

Seventy six (76) questionnaires were administered to 76 respondents in the various three categories i.e. teachers, deputy heads and head teachers. From the responses gotten in the field, 70 questionnaires were returned, fully filled meaning that they were suitable for the study while the non-returned ones were 6. This made 92.1% positive return rate while the remaining 7.9% didn't have the relevant Information.

4.3 Bio-Data.

The information concerning the gender of the respondents, ages, working experience were sought for and information below reached at as shown in a series of tables below:

Table 4.1 Gender of the Respondents

Gender	Frequency	Percentage
Female	10	14.3
Male	60	85.7
Total	**70**	**100**

From the responses gotten in the field, 10 respondents were women who represented 20% while the remaining 40 respondents who represented 80 percent were male. This could be a true indication in the ground whereby a great number of engineering projects like the roads are dominated by male engineers.

Table 4.2 Ages of Respondents

The researcher sought to know the ages of the respondents and the figures were as shown below.

Age brackets in years	**Frequency**	**Percentage**
18 – 24	14	20
25 – 34	21	30
35 plus	35	50
Total	**70**	**100**

From the table, ages between 18-24 attracted 14 who made 20% respondents, 25-34 attracted 21 respondents who made 30%, over 35 respondents who made 50% were over age 35.

Table 4.3 Academic Qualification

Respondents were asked to indicate their levels of education and results below reached.

Education level	**Frequency**	**Percentage**
Certificate	21	30
Diploma	14	20
Bachelor's degree	14	20
Masters and above	7	10
Total	**70**	**100**

From the responses, diploma training attracted 14 respondents, who made 20%, certificate made 30% of the respondents who were 21, bachelors attracted 14 respondents who made 20%, and masters attracted 7 respondents who made 10%.

Table 4.4 Work experience

The respondents gave the following figures when a question that sought to establish their period of service was tossed to them.

Work experience in years	Frequency	Percentage
Below 2 years	7	10
2 – 5 years	7	10
6 – 10 years	14	20
11 – 20 years	14	20
Over 20 years	28	40
Total	**70**	**100**

10% of the respondents were of less than 2 years' experience, 10% were for between 2-5 years, 20% were of 6-10 years, 20% went for 11-20 years while the remaining 28 who represented 40% had over 20 years' experience. This is attributed to the promotion criteria of TSC for example on the side of principals and their deputies.

4.4 Cost of ICT training materials and their Responses

Two categories of questions were asked to show if there is any relationship between ICT training materials' cost and the integration of ICT by teachers and the results below were arrived at.

Table.4.5 Rating of Influence of Funds on a scale

Respondents were asked to rate how costly they found the following aspects of computers using a scale where 1= strongly disagree; 2= Disagree; 3= Not sure; 4=Agree; 5= strongly agree, and whether this influenced the ICT integration among teachers. The results below were reached at:

Statement	**1**	**2**	**3**	**4**	**5**
Purchase price of ICT has been and is still high	4	2	4	35	28
Installation cost is high as far as ICT integration	2	3	4	25	36
Maintenance fee for computers and both hardware and software are high	3	4	10	27	26
The government lays high and unnecessary tax on ICT equipment	5	7	13	23	22

From the responses, in relation to the first statement that read, purchase price of ICT has been and is still high, responses were as follows: 4 respondents strongly disagreed, 2 disagreed, 4 were not sure, 35 agreed, while the remaining 25 strongly agreed. In relation to the second statement that touched on installation cost, 2 respondents strongly disagreed, 3 disagreed, 4 were not sure, 25 agreed, while the remaining 36 strongly agreed. The statement that said, maintenance fee for computers and both hardware and software is high attracted different responses whereby, 3 respondents strongly disagreed, 4 disagreed, 10 were not sure, 27 agreed, while the remaining 26 strongly agreed. Finally, the idea that the government lays high and unnecessary tax on ICT equipment attracted 5 respondents who strongly disagreed, 7 disagreed, 13 were not sure, 32 agreed, while the remaining 22 strongly agreed.

When asked to briefly give reasons supporting their response in above, over 90% of the teachers argued that the government allocates little money to the schools, it pays the teachers meagre salaries and therefore having one thing of investing in computers could be a dream for the rich.

4.5 Administrative support on ICT Integration

Respondents were asked whether they imagined that organization's support impacted teachers‟ disposition and utilization of ICT and their reactions were as demonstrated as follows:

Table 4.6 Response on school organization and funds

Respondents were asked whether the school organization gives the required ICT ventures joining and execution funds frequently and adequately and the reactions underneath were come to .

From the reactions, 70% of the respondents who were 49 firmly said no to class organization give the required ICT ventures combination and usage funds consistently and adequately, yes reaction had nobody, 7 respondents were for the possibility this was done once in a while, while the rest of the 14 were not certain.

Response	**Frequency**	**Percentage**
No	49	70
Yes	0	0
Occasionally	7	10
Not sure	14	20
Total	**70**	**100**

Table 4.7 Agreement with Training

Respondents were asked whether they concurred with the announcement that school organization gives significant support in ICT preparing with sufficiently applicable assets and the reactions underneath were touched base at.

Response	Frequency	Percentage
Yes	7	10
No	56	80
At times	7	10
Total	**70**	**100**

From the table above, respondents were required to show how the preparation assets that empower ICT joining have been benefited by school directors however shockingly, 56 respondents contended that the legislature had not gave the preparation assets and empowering influences, 7 contended this has been done now and again while the rest of the 7 emphatically said no.

Table 4.8 Rating of organization and assets provision

Respondents were requested that rate how managers help in ICT preparing under the accompanying parts of bolster utilizing a scale :(1) Very true (2) True (3) At times (4) No beyond any doubt (5) Not genuine

Statement	1	2	3	4	5
Technical support is offered by the administrators	7	9	10	28	16
ICT teachers receives timely managerial support from the school administration	2	3	6	38	21

Management propose increased funding to improve efficiency in ICT projects	1	3	14	30	22

On a rating as appeared by the table over, various reactions were pulled in by various explanations. For instance, the announcement that read, specialized support is offered by the chairmen at whatever point required pulled in 16 respondents who said it is not valid, 28 went for not certain, 10 went for on occasion, 9 gets went for genuine while the rest of the 7 went for genuine. Respondents contended that it is not genuine that ICT instructors convenient administrative support from the school organization, 21 went for not in the least, 38 went for not certain, 6 went for on occasion, 3 went for genuine while the rest of the 2 went for genuine. On the possibility that said, administration propose expanded financing to enhance proficiency in ICT ventures, 22 respondents were not in the least in concurrence with the announcement, 30 were not certain, 14 went for now and again, 3 went for genuine while the rest of the 1 went for genuine.

4.6 Items on Skills Development in ICT Projects Integration

Respondents were requested that give their perspectives in connection to aptitudes improvement and general ICT incorporation handle by educators and results in the tables beneath came to at.

Table 4. 9 Rating of ICT Skills

Respondents addressed a question that read, how would you rate ICT abilities improvement by the instructors in your school? Utilize a scale where 1= Poor; 2= Fair; 3=Good; 4= Very Good; 5=Excellent, and the reactions underneath were touched base at.

Statement	1	2	3	4	5
Teachers ICT basic knowledge and competence	23	21	19	5	2
Teachers expertise and ICT experience	40	10	10	5	5
Teachers technology proficiency and familiarization	45	15	3	4	3

On a rating on the ICT advancement and mix by educators, various issues got to be distinctly clear in connection to the announcements. For instance, on the possibility of Teachers' ICT fundamental learning and fitness, 23 respondents contended that, it was poor, 21 said that it was reasonable, 19 said that it was great, 5 contended that it is great while the rest of the 2 went for incredible. On the possibility of Teachers' ability and ICT encounter, 40 respondents went for poor, 10 went for reasonable, and 10 went for good, 5 went for good while the rest 5 went for superb. At long last, on the thought on, educators' innovation capability and acquaintance, 45 respondents went for poor, 15 went for reasonable, 3 went for good, 4 went for good while there 5 went for amazing.

Table 4.10 Response in Regard to Attitude

Respondents were asked to either contend by yes or no in connection to the possibility that, all instructors have an uplifting state of mind and a positive view towards ICT ventures incorporation

Response	Frequency	Percentage
Yes	7	10
No	56	80
At times	7	10
Total	**70**	**100**

Just 7 respondents who speak to 10% contended that instructors have an uplifting disposition, while the rest of the 56 who made 80% contended that in significant schools claimed by the administration, educators have an absolutely negative state of mind towards ICT joining.

4.7 Infrastructural facilities

Respondents were asked a number of questions in relation to role of ICT infrastructure and how it influenced the integration of ICT in schools and the results below were arrived at as shown in the tables:

Table 4.11 Responses on computer in schools

Respondents were asked whether their schools have computers and the responses were as shown below.

Response	Frequency	Percentage
Yes	49	70
No	21	30
Total	70	100

In relation to whether respondents had computers in schools, 49 of them who represented 70% argued that they had computers in the schools while the remaining 21 who represented 30% argued that their schools had no computers. In a second statement that required the respondents with yes answer to give the bracket of computers they had, from those 49 respondents who said yes, 19 said that their schools had between 0-5 computers, 15 said that there schools had between 5-10 and the remaining 15 supported the bracket of 10 - 15 computers. This means that there is no school in central that has the number of computers going beyond the minimum threshold put by the ministry of education.

Table 4.12 Location of Computers

When the respondents were asked to explain where their computers were placed in the schools and results in the table below arrived at;

Response	Frequency	Percentage
Computer laboratory	3	4.28
Office	42	60
Converted classes	7	10
Staff room	10	14.28
Other places	8	11.44
Total	**70**	**100**

In relation to the location of their computers, 3 respondents argued that theirs were place in the computer laboratory, 42 argued that they were placed in the office, 7 argued that they placed in converted classes, 10 argued that they were laced in the staffroom, while the remaining 8 argued that they were placed in other places like the stores, bursar's office etc.

When asked to give reasons for the above, almost 90% of the respondents argued that their schools had a deficit of classrooms, laboratories and many more due to limited funds for constructing and to another extent, limited building infrastructure due to increased enrolments due to free primary education. On a simple rating scale of power supply and its influence ICT diffusion in the school 3 respondents said it was very good , 4 said it was good , 11 said it was average , 30 said it was bad while the remaining 22 said that it was very bad .On a mean calculation which allocated very good a value scale of 1, good 2, average 3,bad 4 and very bad 5, a mean value of approximately 4 was arrived at; meaning that power supply was bad in almost all the schools.

CHAPTER FIVE

SUMMARY, DISCUSSIONS CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This part introduces the rundown of the study discoveries, examinations and suggestion of the exploration. The section likewise contains recommendations of related studies that might be completed later on.

5.2 Summary of Findings

The reason for the study was to look at the impact of educators' state of mind and convictions towards data correspondence innovation (ICT) ventures incorporation in broad daylight elementary schools in Mombasa County, Kenya. From an investigation of the reactions in section four and the explored writing in part two, various issues got to be distinctly clear.

From target one that tried to explore the impact of cost of ICT preparing materials on the incorporation of ICT undertakings out in the open elementary schools in Mombasa County, comes about acquired were as per the following: in connection to the primary explanation that read, price tag of ICT has been is still high, 4 respondents emphatically deviated, 2 dissented, 4 were not certain, 35 concurred, while the rest of the 25 unequivocally concurred. In connection to the second articulation that addressed establishment cost, 2 respondents unequivocally dissented, 3 deviated, and 4 were not certain, 25 concurred, while the rest of the 36 firmly concurred.

The announcement that said, support charge for PCs and both equipment and programming is high pulled in various reactions whereby, 3 respondents emphatically deviated, 4 dissented, 10 were not certain, 27 concurred, while the rest of the 26 firmly concurred. At long last, the possibility that the legislature lays high and pointless assessment on ICT gear pulled in 5 respondents who emphatically dissented, deviated, 13 were not certain, 32 concurred, while the rest of the 22 unequivocally concurred. In connection to the second target which tried to discover the impact of authoritative support on ICT ventures joining in broad daylight grade schools in Mombasa County, 70% of the respondents who were 49 unequivocally said no to class organization giving the required ICT ventures combination and usage funds consistently and adequately, yes reaction had nobody, 7 respondents were for the possibility this was done sporadically, while the rest of the 14 were not certain.

On the possibility that, school organization gives significant support in ICT preparing with sufficiently applicable assets, 56 respondents contended that the administration had not gave the preparation assets and empowering agents, 7 contended this has been done now and again while the rest of the 7 unequivocally said no. In addition, on a rating, the announcement that read, specialized support is offered by the executives at whatever point required pulled in 16 respondents who said it is not valid, 28 went for not certain, 10 went for at 42 times, 9 went for genuine while the rest of the 7 went for genuine. Respondents contended that it is not genuine that ICT educators gets convenient administrative support from the school organization, 21 went for not in any way, 38 went for not certain, 6 went for now and again, 3 went for genuine while the rest of the 2 went for genuine.

On the third target that looked to discover the impact of abilities advancement in ICT ventures mix out in the open grade schools in Mombasa County, the accompanying were the reactions. On the possibility of educators' ICT fundamental learning and ability, 23 respondents contended that, it was poor, 21 said that it was reasonable, 19 said that it was great, 5 contended that it is great while the rest of the 2 went for phenomenal. On the possibility of instructors' ability and ICT encounter, 40 respondents went for poor, 10 went for reasonable, 10 went for good, and 5 went for good while the rest 5 went for phenomenal. The possibility that, all educators have an inspirational state of mind and a positive view towards ICT ventures combination .Only 7 respondents who speak to 10% contended that instructors have an uplifting disposition, while the rest of the 56 who made 80% contended that in real schools claimed by the administration, educators have an absolutely negative mentality towards ICT joining.

In connection to the fourth target that tried to evaluate the impact of ICT infrastructural limit with regards to educating and learning in the mix of ICT tasks out in the open elementary schools in Mombasa County, 49 of the respondents who spoke to 70% contended that they had PCs in their schools for instance while the rest of the 21 who spoke to 30% contended that their schools had no PCs. In a moment proclamation that required the respondents with yes reply to give the section of PCs they had, from those 49 respondents who said yes, 19 said that their schools had between 0-5 PCs, 15 said that there schools had between 5-10 and the rest of the 15 upheld the section of 10 - 15 PCs. In connection to the area of their PCs, 3 respondents contended that theirs were place in the PC research facility, 42 contended that they were put in the workplace, 7 contended that they put in changed over classes, 10 contended that they

were bound in the staffroom, while the rest of the 8 contended that they were put in different spots like the stores, treasurer's office and so on. Additionally, on a straightforward rating size of force supply and its impact ICT dissemination in the school 3 respondents said it was great , 4 said it was great , 11 said it was normal , 30 said it was terrible while the rest of the 22 said that it was awful.

5.3 Discussion of Findings

Results from the findings gotten in the field have indicated that there is a relationship between the teachers' attitudes, beliefs and success of ICT integration in the schools. This could be tied to the perceptions from administration, infrastructure, resources and many more. As per the first objective for example, that sought to investigate the influence of cost of ICT training materials on the integration of ICT projects in public primary schools in Mombasa County, results obtained were as follows: in relation to the first statement that read, purchase price of ICT has been and is still high, 4 respondents strongly disagreed, 2 disagreed, 4 were not sure, 35 agreed, while the remaining 25 strongly agreed. In relation to the second statement that touched on installation cost, 2 respondents strongly disagreed, 3 disagreed, 4 were not sure, 25 agreed, while the remaining 36 strongly agreed. In agreement to the above is Ajayi (2009) who argues that, the cost of ICT training materials has been considered to be among the problems that could negatively affect the integration of ICT in primary schools in Mombasa County and Kenya at large. The higher the cost of computers and their accessories, the fewer computers one can buy with the limited resources.

According to Akaslan and Law (2010), the cost of a Desktop computer connected to the internet is often prohibitive for most people in developing countries - Kenya included-and for those who can afford a PC, routine maintenance, virus protection and servicing, is yet another problem that is not easily manageable by the first generation computer users. In the same note, Oliver (2002) argues that compared to traditional forms of off-campus learning, technology facilitated has proven to be quite expensive in all areas of consideration, infrastructure, course development and course delivery.

In relation to the second objective which focused on administrative support on ICT project s integration in public primary schools, 70% of the respondents who were 49 strongly said no to the idea of school administration providing the required ICT projects integration and implementation finances regularly and sufficiently, yes response had no one, 7 respondents were for the idea that this was done occasionally, while the remaining 14 were not sure. On the idea that, school administration gives relevant support in ICT training with relevant enough resources, 56 respondents argued that the government had not provided the training resources and enablers, 7 argued that this has been done at times while the remaining 7 strongly said no. Moreover, on a rating, the statement that read, technical support is offered by the administrators whenever needed attracted 16 respondents who said it is not true, 28 went for not sure, 10 went for at times, 9 went for true while the remaining 7 went for very true. Respondents argued that it is not true that ICT teachers receives timely managerial support from the school administration, 21 went for not at all, 38 went for not sure, 6 went for at times, 3 went for true while the remaining 2 went for very true.

In agreement to this are a number of scholars. For example, Cassim and Obono (2011) reported that administrative support is crucial to the successful integration of ICTs into teaching and learning processes. It can be argued that administrators can provide the conditions that are needed such as putting in place an ICT policy, incentives and resources. Therefore, for the adoption of ICTs to be effective and sustainable, administrators themselves must be competent in the use of the technology and they must have a broad understanding of the technical, pedagogical, administrative, financial and social dimensions of ICTs in education. For any institution to adapt new innovations there must be a backup from administrators (school heads). Besides the above scholars, Dynarski et al (2009) also stated that guidance from a head of department like sciences/technical department is very important in encouraging the development of electronic lesson materials to encourage computer use for the specific subject in the teaching-learning environment.

On the third objective that on skills development in ICT projects integration, the following were the responses. On the idea of teachers' ICT basic knowledge and competence, 23 respondents argued that, it was poor, 21 said that it was fair, 19 said that it was good, 5 argued that it is very good while the remaining 2 went for excellent. On the idea of teachers‟ expertise and ICT experience, 40 respondents went for poor, 10 went for fair, 10 went for good, 5 went for very good while the rest 5 went for excellent. The idea that, all teachers have a positive attitude and a positive view towards ICT projects integration. According to Pelgrum (2001) cited by Afshari et al. (2009), the success of educational innovations depends largely on skills and knowledge of teachers. Berner (2003) reported that teachers‟ lack of knowledge and skills is among the inhibiting obstacles to the use of computers in schools. Similarly, in the United States, Castro

Sanchez and Aleman (2011) reported that educators with higher levels of skills, knowledge and tools would exhibit higher levels of technology in the classroom. Berner (2003) in a case study on the relationship between computer use in the classroom and two independent variables: beliefs about computer competence and administrative support, found that the faculty's belief not computer competence was the greatest predictor of their use to computers in the classroom. Therefore, teachers should develop their competence in ICT skills through training based on the educational goals they want to accomplish in order to use computers in teaching.

In relation to the fourth objective that focused on the influence of ICT infrastructural capacity, 49 of the respondents who represented 70% argued that they had computers in their schools for while the remaining 21 who represented 30% argued that their schools had no computers. In a second statement 19 said that their schools had between 0-5 computers, 15 said that their schools had between 5-10 and the remaining 15 supported the bracket of 10 - 15 computers. In relation to the location of their computers, 3 respondents argued that theirs were place in the computer laboratory, 42 argued that they were placed in the office, 7 argued that they placed in converted classes, 10 argued that they were laced in the staffroom, while the remaining 8 argued that they were placed in other places like the stores, bursar's office etc. Also, on a simple rating scale of power supply and its influence ICT diffusion in the school 3 respondents said it was very good , 4 said it was good , 11 said it was average , 30 said it was bad while the remaining 22 said that it was very bad.

From the literature reviewed, the National ICT in education strategy of 2006 shows that about 32% of schools by the end of 2006 in Kenya had some computers but only a small fraction were equipped with basic ICT infrastructure necessary for teaching and learning. The same document estimated that there are about 120-160 students per computer sharing; an abnormal ration as per the World Bank. The situation was further aggravated by the fact that most schools were reported to use less than 40% of the available ICT infrastructure and furthermore, very few schools were using ICT as an alternative method for the delivery of the education curriculum. Also, while focusing on similar infrastructural activities, Bingimlas (2009) suggested that the parameters to be looked into when accessing the ICT readiness for an institution include: infrastructural availability like electricity, available infrastructure, workforce availability, policy and regulatory framework availability. In Kenya, one of the major cited hindrances to ICT integration and use in schools is lack of electricity power for example. (Kenya Data Profile, 2010).

5.4 Conclusions

From a progression of discoveries as achieved by the data gotten from the respondents the scientist presumes that Cost of ICT preparing materials like PCs are high in Kenya and this has restricted the rate at which instructors acknowledge and incorporate the ICT innovation in their work.

In relationship to the second goal the specialist infers that an organization has not done what's necessary in assigning assets, changing mentality and encouraging ICT mix among the educators in Mombasa focal.

The scientist likewise infers that Skills Development among the educators and administration are low a component that has added to high number of instructors not promptly purchasing the ICT incorporation technique in their educating procedure.

At long last the analyst infers that ICT framework like power, PCs and so on has not been given adequately, a component that has been ascribed to low dispersion of ICT among the instructors in Mombasa focal.

5.5 Recommendations

In view of the discoveries of the study that has originated from the respondents in the field and the writing survey, the analyst prescribes that the for the educators to have an uplifting state of mind and genuinely grasp ICT in their instructing, the major ICT reconciliation empowering agent (monetary assets) ought to be benefited. The wellsprings of ICT financing ought to be distinguished, the cost of PCs, cost of web and numerous more should be directed in that it supports the instructors and the usage of ICT in schools.

In connection to the second goal, the scientist suggests that the organization ought to begin by grasping ICT in either administration or observing and assessment. It ought to present motivating forces for better ICT execution in schools, allot applicable assets and offer the required pertinent preparing for general state of mind change by the educator.

The study keeps on prescribing that, for ICT to be an essential part in instructing and taking in, the educators and administration ought to be created and their constant information be upgraded with

the goal that they can have an inspirational state of mind towards ICT. This should be possible by top-base activities of base top conspiring in classes.

At long last, the scientist prescribes that ICT foundation in a spine of ICT state of mind, observations and mix. There ought to be very much stipulated ways and arrangements of thinking of ICT labs that are all around fitted with applicable furniture, ventilation, associated with convenient power, and, the quantity of PCs ought to be expanded to no less than 50 in each individual school.

- Suggestions for Further Research
- This study was completed in one sub-County in the bigger Mombasa County. Along these lines a comparable research should be possible on the other sub-provinces and by expansion in different regions.
- Another research should be possible concentrating on the social and social determinants of ICT undertakings incorporation in elementary schools in Mombasa Central sub-County.

5.6 Suggestions for Further Research

i. This study was carried out in one sub- County in the larger Mombasa County. Therefore a similar research can be done on the other sub-counties and by extension in other counties.

ii. Another research can be done focusing on the social and cultural determinants of ICT projects integration in primary schools in Mombasa Central sub-County.

REFERENCES

Abubakar K, Wong S. and Alfashir (2010) *Barriers to the successful implementation of ICT in the teaching and learning environments*; Erasia journal of mathematics, science and technology Education 5, 11

Abwago,O.(2010) *Role of ICT in higher Institutions of learning in Kenya*, Kenyatta University school of Education.

Afshari, M., Abubakar, K., Wong, S. L. (2010) *Principal's level of computer use and some contributing factors.* International Journal of Educational and Information Technologies 2 (4).

Afshari, M., Bakar, K. A and Luan, W. S. (2009). *Factors affecting teachers' use on information and communication technology, International Journal of Instruction January 2009* Vol. 2, No. IISSN: 1694-609X.www, e-iji.net

Ajayi, L. (2009). *An exploration of pre-service teachers' perceptions of learning to teach while using asynchronous discussion board*. Educational Technology & Society, Vol. 12, No. 2, pp 86 -100.

Akankwas, P. (2008). *Problems affecting the level of computers use for instructional purposes by technology teachers in government schools in Uganda*. Unpublished Bachelors "research, Uganda Christian University, Mukono, Uganda.

Akaslan, D. and Law, E.L-C. (2010). *Measuring Teachers' Readiness for E-learning in Higher Education Institutions Associated with the Subject of Electricity in Turkey*. Paper presented at the 2011 IEEE Global Engineering Conference (EDUCON) – 'Learning Environments and Ecosystems in Engineering Education', Amman, Jordan.

Albirini, A. (2010). *The crisis of Educational technology and the prospect of reinventing*

education. Education Technology & Society, 10 (1), 227-236.

Almekhlafi, A. G and Almeqdadi, F. A., 2010. *Teachers' perception of technology integration in the United Arab Emirates school classrooms*. Educational Technology and Society, Vol. 12 pp.165.

Al-Ruz, J A. and khasawneh, S., (2011). *Jordanian pre-service teachers and technology integration: A human resource development approach*. Educational Technology and Society, Vol. 14 pp.77-87.

Andiko (2009) *"Assessment to ways of eradicating of barriers of technology advancement* in the third world countries" Hollaman Publishers Nairobi Kenya.

Aradom Berhane Tedla (2012), *Understanding the importance, impacts and barriers of ICT on Teaching", International Journal for e-learning security* (IJeLS) Learning in East African Countries

Awuoters, V and Jans, S. (2009). *E-learning competencies for teachers in secondary and higher education*. An International Journal of Emerging Technologies in Learning (i JET), 4(2), (pp 58-60).

Ayere, M.A, Odera, F. Y. and Agak, J. (2010). *E-learning in Secondary Schools in Kenya:* A Case of the NEPAD E-schools. In Education Research and Reviews, 5(5), (pp. 218-223).

Baek, Y, Jung, J., & Kim, B. (2010). *What Makes Teachers Use Technology in the Classroom*? Exploring the Factors Affecting Facilitations of Technology with a Korean Sample. Computer & Education, 50, 1, 224-234.

Barolli, E., Gorishti, A. Karamani, B., Haveri, A.: *Didactic challenges 2012" ICT in teaching and learning*: Combining theory with experience in Albanian

Universities" International Scientific Conference. Faculty of Education. University of Osjiek, Josipa, Jurja Strossmyera, Slavonski Broad. May 24-25, 2012 Croatia.

Becta (2008). *Harnessing Technology*: Schools Survey 2008. Retrieved April 30, 2014 from http://emergingtechnologies. becta.org.uk/uploaddir/ downloads/page documents/research /ht_schools_survey08_analysis.pdf Berner (2008) Relationship between computer use and administration support

Becta.2009. Becta Schools- Leadership and Management. Retrieved April 1st 2014, from http://schools.becta.org.uk,http://schools.becta.org.uk/index. php?section=1v&rid=469

Bingimlas, K. (2009). *Barriers to the successful integration of ICT in teaching and learning environment*: A Review of Literature. Eurasia Journal of Mathematics, Science and Technology Education 5(3) 235-245

Bordbar, F. (2010). *English teachers" attitude toward computer-assisted language learning.* International Journal Studies, vol.4, No.3, pp. 27-54 "Application of ICT in Nigerian Secondary Schools, "Dr. Esharenana E. Adomi.

Broadley, T. (2012). *Enhancing Professional Learning for Rural Educators by Rethinking Connectedness.* In Australian and International Journal of Rural Education, 22(1), (pp. 85-105).

Campuzano, L., Dynarski M. Agodini R. Rall, K. (2009), "Effectiveness *of reading and mathematics software products*: Findings from two student cohorts (=NCEE 2009-4041).

Cassim, K. M. and Obono S. D (2011), "*Factors affecting the adoption of ICT in the teaching of word problems*" Proceeding of the World Congress on

Engineering and Computer Science Vol. I

Castro Sanchez, J. J. and Aleman, E. C., 2011. *"Teachers opinion survey on the use of ICT tools to support attendance-based teaching*". Journal Computers and Education, Vol. 56, pp.911-915.

Chen, R. J. (2010). *Investigating models for pre-service teachers'* use of technology to support student-centered learning, Computer and Education in Press.

Chigona, A., & Chigona, W. (2010). *An investigation of factors affecting the use of ICT for teaching in the Western Cape Schools*, 18th European Conference on Information Systems.

DC International labor organization (2008; 2012) *Women Entrepreneurs* in Kenya. Geneva; Switzerland.

Demirci, A. (2009). *How do Teachers Approach New Technologies: Geography Teachers' Attitude towards Geographic Information Systems (GIS).* European Journal of Educational Studies, Vol. 1

DoE, (2010). The White Paper on e-Education Retrived Nov 12, 2013 from www.org.nz/ template/ict.

Dynarski, M., Agodini R. Heaviside S. Novak T. Carey N. Campuzano (2009), Effectiveness *of reading and mathematics software products*": Findings from the first student cohort. National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, p. 14

Ensafi, R., Zamiri, A., and Kahani, M. (2009*). ICT challenges in education*. Reflections from a developing country: Iran with reference to the statistics from computers science students. The 2nd international conference on Virtual Learning, Ferdowsi University,

Mashhad, Iran.

Eslaminejad, T, Masood, M. and Ngah, N. A. (2009). *Identifying instructors' readiness factors on e-learning for the continuing medical education programs in Iran*. Paper presented at the World Conference on E-learning in corporate.

Government of Kenya, (2007; 2009; 2010). *A globally competitive and prosperous Kenya*. Vision 2030.

Government, Healthcare and Higher Education (ELEARN), (2009). Vancouver, Canada.

Hennessy Sara, David Harrison and Leonard Wamakote (2010), "*Teacher factors influencing classroom use of ICT in Sub-Sahara Africa*", Master project,

Hodgkinson-Williams, C. A. (2005-2010). *Dust on the keyboards: Policy gaps in the integration of ICT into the South African curriculum*. Proceeding of the 8th IFIP World Conference on Computers in Education 4-7 July, University of Stellenbosch.

Hsin-Kai et al (2007). *Identifying effective design features of technology Haverila*, M. (2011). Prior e-learning experience and perceived learning outcomes in an Undergraduate e-learning course. In MERLOT Journal of Online Learning and Teaching, 7(2), (pp.607-619).

Hutchison, A. and Reinking, D. (2011). *Exploring the use of the ipad for literacy learning.* Johnson, M., Calvert, E., & Raggert, N. (2010). ICT in schools Final report. Retrieved Nov 12, 2013 from http://www.2020.org.nz/template/ict_09_-_online_final_pdf

Itapale Online Journal of African Studies, English Department. Proceedings of 1st JKUAT - SHRD Research Conference 12th and 13th September 2013.

Kariuki, M. (2004). *Factors influencing pre-service teachers' use of laptops for teaching*

/learning purposes during practicum. European Journal of Social Science 7, (1) (2008)

Kipsoi, Emmy J., John K. Chang'ach and Hellen C. Sang (2012), "*Challenges facing adoption of information communication technology* (ICT) in Education management in schools in Kenya", Journal of Sociological Research 3 No. 1.

Matu, Jagero Juliet Akinyi Maina (2011), *"Challenges that face Kiswahili usage in ICT in NEPAD Secondary schools in Kenya*", International Journal of Academic Research in Business and Social Sciences I no. 3, 10.

Mugenda, O. M. and Mugenda, A. G. (1999). *Research Methods. Qualitative and Quantitative Approaches*. Nairobi: acts press

Mulira , (2004) "*Effective utilization of information technology in Secondary Schools in Sub-Saharan Africa.*" Dominion Publishers Lagos.

Namukangula, J. K. (2010). R*elationship between Desktop characteristics and adoption to ICT* in learning in selecting universities in Uganda. Unpublished Masters Dissertation (MEIT), Makerere University, Kampala, Uganda.

National Center for Education Evaluation and Regional Assistance, Institute of Education Science, U.S Department of Education p.14.

Nchunge, David Mbabu, Maurice Sakwa and Waweru Mwangi (2012), *'Users perception on ICT adoption for education support in schools*: A survey of Secondary School teachers in Thika District Kenya', International Journal of Humanities and Socials Science 2, 13.

Oloo, L. M. (2009) *Baseline survey report for ICT in Secondary schools in the selected* part of Kenya. Draft Report, Maseno University May 2009.

Omwenga, N.(2007) . *ICT Integration in public schools in Nyamira District*. Master's Thesis

Unpublished.

Orodho, J. A. (2009). *Essentials of Education of Social sciences research methods*, 2nd Ed. Kanezja Publisher, Maseno, Kenya.

Priscillah, M, Nida, M., Khambari, M. And Wong S. L. (2009). *Factors that could possibly influence the use of laptops among educators*. European Journal of Sciences, 7 (1), 114.

Shazia Muntaz (2010), *'Factors Affecting Teachers use of information and communications Technology*', Journal of Information Technology for Teacher Education, 9, 24.

Sife et al(2009) . *School leadership for ICT and Teacher's use of Digital tools*.

Temba, John ed. (2013*), 'ICT policy and framework, four volumes, Ministry of Education, Science and Technology*': ICT Vision.

UNESCO (2009; 2010; 2012), *Global e-schools and communities initiativ*e; last accessed 8th September 2013,

World Bank (2009; 2010; 2013). *Voices of Women Entrepreneurs in Kenya*. Washington

APPENDICES

APPENDIX I: LETTER OF INTERMITTENT

Akinyi Grace
P.O. Box 90533 - 80100
MOMBASA

Tel: 0721 611 775

To the Respondents

Dear Respondent

My name is Akinyi Grace and I am a student undertaking Master of Arts Degree in Project Planning and Management at the University of Nairobi, Mombasa Campus. To fulfil the completion of this course, I am carrying out a study on the factors influencing integration of information communication technology projects in public primary Schools in Mombasa County. Since the matter affects the whole community, I am inviting you to participate in this research study by completing the attached questionnaire.

If you choose to participate in this research, please answer all questions as honestly as possible. Participation is strictly voluntarily and you may decline to participate at any time. In order to ensure that all the information will remain confidential, you do not have to include your name.

The data collected will be for academic purposes only.

Thank you in advance.

Yours faithfully

Akinyi Grace

APPENDIX II: RESEARCH QUESTIONNAIRE

A. Bio data – Use tick (√)

1. Your gender

   [ ] Male

   [ ] Female

2. Your age (in years)

   [ ] Between 18 – 24

   [ ] Between 25 – 34

   [ ] Above 35

3. Level of education

   [ ] Certificate

   [ ] Diploma

   [ ] Bachelor's degree

   [ ] Master's degree and above

4. Working experience

   [ ] Below two years

   [ ] 2 – 5 years

   [ ] 6 – 10 years

   [ ] 11 – 20 years

   [ ] Over 20 years

SECTION B: Cost of ICT training materials.

5. Training ICT helps teacher to use computer in their teaching. However the cost of ICT training material may be a hindrance to computer use. Please rate how costly you find the following aspects of computers using a scale where 1= strongly disagree; 2= Disagree; 3= Not sure; 4=Agree; 5=strongly agree.

Statement	**1**	**2**	**3**	**4**	**5**	**6**
Purchase price of ICT has been and is still high						
Installation cost is high as far as ICT integration						
Maintenance fee for computers and both hardware and Software is high						
The government lays high and unnecessary tax on ICT equipment						

6. Briefly give reasons supporting your response in 5 above.

i.....

ii.....

iii.....

iv.....

v.....

SECTION C: Administrative support on ICT Integration

7. School administration provides the required ICT projects integration and implementation finances regularly and sufficiently.

[ ] Yes

[ ] No

[ ] Occasionally

[ ] Not sure

8. Do you agree with the statement that school administration gives relevant support in ICT training with relevant enough resources?

[ ] Yes

[ ] No

[ ] At times

9. Please rate how administrators help in ICT training under the following aspects of support using a scale (5) Very true (4) True (3) At times (2) No sure (1) Not true

Factor 1	**1**	**2**	**3**	**4**	**5**	**6**
Technical support is offered by the administrators whenever needed						
ICT teachers receives timely managerial support from the school administration						
Management propose increased funding to improve efficiency in ICT projects						

SECTIION D: Skills Development in ICT Projects Integration

10. How do you rate ICT skills development by the teachers in your school? Use a scale where 1= Poor; 2= Fair; 3=Good; 4= Very Good; 5=Excellent

Factor 1	**1**	**2**	**3**	**4**	**5**	**6**
Teachers ICT basic knowledge and competence						
Teachers expertise and ICT experience						
Teachers technology proficiency and familiarization						

11. All teachers have a positive attitude and a positive view towards ICT projects integration

[ ] Yes

[ ] No

SECTION E: Infrastructural facilities

12. Does your school have computers?

[ ] Yes

[ ] No

13. If yes in 12 above, approximately name how many?

[ ] 0-5

[ ] 5-10

[ ] 10 – 15

[ ] 15 - 20

[ ] Above 20

14. Where are computers located in your school?

[ ] Computer laboratory [ ] Office

[ ] Converted classes [ ] Staff

[ ] Other places

15. Why do you think the answer you have given in 10 above is the most appropriate?

_____

16. What is the main source of electricity /power in your school?

[ ] Electricity [ ] Electricity & Generator

[ ] Generator [ ] Solar

[ ] No power supply

17. How do you rate power supply and its influence ICT diffusion in the school?

[ ] Very Good [ ] Good

[ ] Average [ ] Bad

[ ] Very bad

APPENDIX III: KREJCIE FORMULA

Table for Determining Sample Size for a Given Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	246
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	351
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	181	1200	291	6000	361
45	40	180	118	400	196	1300	297	7000	364
50	44	190	123	420	201	1400	302	8000	367
55	48	200	127	440	205	1500	306	9000	368
60	52	210	132	460	210	1600	310	10000	373
65	56	220	136	480	214	1700	313	15000	375
70	59	230	140	500	217	1800	317	20000	377
75	63	240	144	550	225	1900	320	30000	379
80	66	250	148	600	234	2000	322	40000	380
85	70	260	152	650	242	2200	327	50000	381
90	73	270	155	700	248	2400	331	75000	382
95	76	270	159	750	256	2600	335	100000	384

Note: "N" is population size
"S" is sample size.

Source: Krejcie & Morgan, 1970