FACTORS INFLUENCING USE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN PARASTATALS: A CASE OF NATIONAL WATER CONSERVATION AND PIPELINE CORPORATION IN KENYA

BY

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A Research Project Report Submitted in Partial Fulfillment for the Requirements for the Award of a Degree in Masters of Arts in Project Planning and Management at the University of Nairobi

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DECLARATION

I hereby declare that this research project report is my original work and has not been presented to any university or tertiary institution.

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DEDICATION

This research project is dedicated to my brother Tom Marube, for his financial and moral support. My wife, Rebecca Ambasa, my mother Margret Nyaboke, my sisters Bella, Liz, Doris, Grace and Irene, my brothers Eric, Henry, Dennis and Douglas and not forgetting my late Dad for their invaluable contributions, moral support and above all immeasurable love and affection accorded to me as I embarked on my course.

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ABSTRACT

The use of ICT is embraced to meet objectives and targets of an organization in order to achieve beneficial and add value to recipients. This study was required to investigate factors influencing use of Information and Communication Technology in government parastatals with a focus on the National Water Conservation and Pipeline Corporation (NWCPC) offices within Kenya. Objectives that guided this study were; to investigate the influence of staff training on the use of ICT, to assess the influence of ICT funding on the use of ICT, to determine the influence of the availability of ICT facilities on the use of ICT and to assess how staff resistance to change influences the use of ICT at NWCPC. The input variables were categorized into elements for success and output variable were categorized into organizational and technological benefit. This reviewed documented literature from both developed and developing nations and other studies done on local context on e-Government. This study focused on four key factors that influence use of ICT in government parastatals, they include; staff ICT training, ICT funding, availability of ICT facilities and staff resistance to change. The target population for this research was 410 NWCPC staff at their headquarter office. Sampling design was considered in selecting respondents who participated in the study. Descriptive survey was used in collecting data by administering questionnaire. The research used primary sources to collect data and questionnaires were administered randomly to 133 employees of the authority. A total number of 108 respond and this constituted to 81.2% of the sample size. The study adopted stratified sampling technique to sample the respondents for the study while simple random sampling method was used to select employees from 133 respondents. The study targeted Top Management, Technical and Operational staff members of the Authority. Collected data was analyzed and explored using Statistical Package for Social Sciences (SPSS), descriptive analysis, correlation analysis and frequency tables were used in data analysis. The output was represented using frequency tables centered on the study objectives. The study discovered that ICT has not been fully tapped in government parastatals to enable them realize maximum benefits. However, the study recommended that organization management should thoroughly scrutinize an ICT product to establish its suitability in specific geo-cultural contexts and its effectiveness in enhancing job performance at a specific workplace. To this end, the study recommended that; there is need to ensure that all workers are trained on how to use ICT facilities, adequate funds should be set aside by government to facilitate ICT implementation and ICT legislations and regulations should be formulated and integrated in the organization's laws and policies to give it a binding and more authoritative touch.

LIST OF ABBREVIATIONS

NWCPC	-	National Water Conservation and Pipeline Corporation
ICT	-	Information and Communication Technology
IT	-	Information Technology
ISs	-	Information Systems
NES	-	National Environment Secretariat
PPCSCA	-	Permanent Presidential Commission on Soil Conservation and Afforestation
DRSRS	-	Department of Resource Surveys and Remote Sensing
WCED	-	World Commission on Environment and Development
CIPD	-	Computer Industry Development Potential
IFMIS	-	Integrated Financial Management Information System
IPPD	-	Integrated Personnel and Pensions Database
TRA	-	Theory Reasoned Action
TAM	-	Technology Acceptance Model
PU	-	Perceived Usefulness
PEOU	-	Perceived Ease of Use
CBS	-	Computer Based Systems
Labs	-	Laboratories
MIS	-	Management Information Systems
PAYE	-	Pay As You Earn
CCTV	-	Closed Circuit Television
VAT	-	Value Added Tax

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Information and Communication Technology (ICT) is characterized as a different arrangement of instruments and programs used to create, transmit, distribute, store and administer data (Blurton, 2009). ICTs incorporate a scope of rapid developing innovations which incorporate telecom advancements, for example, phone, link, satellite, Television and Radio, PC interceded conferencing and video conferencing and also computerized advances which incorporate PCs, data systems, for example, satellites, smartphones, softwares, World Wide Web, and programming applications (Oyeyinka, 2006). ICT plays a significant part in improving service delivery in many establishments.

Introduction of the web, advanced network, the blast and use of e-trade and model in the private entities are influencing govornment sector to reevaluate various leveled, bureaucratic organization models (Ndou, 2004). The expanding desire of the public and need for a better service delivery from private sector has influenced private organization to respond to this need in a timely manner. To this end, the late decades have encountered the outlook change in the part of government, where the administration part is re-designed as to empower the staff as opposed to serve client, to move from chain of importance to cooperation and investment, to be mission situated and client centered, and to concentrate on counteractive action as opposed to cure (Osborne & Gaebler, 2002). As early as 1980s, the need to bring change to organizations was very talked about all around the world and thus the legislatures of created and creating nations confronted the test of change and the need to modernize managerial practices and administration frameworks (Tapscott, 1996). As such, ICT is seen as an instrument to bolster government institutions operations and offices with the intention of conveying citizen services and deliver facts in a more advantageous and with reduced costs.

1.1.1 ICT in Kenya

Like any other developing nations, Kenyan government has perceived the significance of ICT in

delivering immediate and efficient services to the public through introducing ICT in different public sectors. The government ventured in ICT world in mid 1970s with establishment of IBM computer frameworks to process population census data (Kim et al., 2007). From that point forward, more effort has been made to modernize the public organization to guarantee viable administration system. Some of the recent Kenyan Government successful ICT projects are; iTax by the Kenya Revenue Authority is an online system that enables citizens and corporates in accessing all their necessary tax returns. eCitizen, a Kenyan Government online system that enables its citizens and foreigners to access Government to Citizen services. IFMIS, Integrated Financial Management Information System is an online public financial management system controlled by the government Treasury and used by all Ministries in finance management. GHRIS (Government Human Resource Information System) and eVisa, are other Government of Kenya systems.

Computer Based Systems (CBS) and IT have significantly affected organizations over the previous years. They are seen as method for giving aggressive edge and thus, they are turning out to be part of the organization system. Recent generations of information system frameworks out in the open part bolster electronic conveyance of open administrations to the matters and business ventures by empowering them and making a large portion of their exchanges with the governing body through e-channels (Chisenga, 2005). New brainstormed ideas are created taking into account the above cutting edge capacities, for example, the New Electronic Client Relationship Management Systems (CRM)

In spite of the expansion of CBS softwares in government parastatals, the usage of frameworks is still a huge issue. The use of ICT in government parastatals is sometimes underutilized and does not completely meet intended results. Information system arranging, plan, improvement, operation and execution are in some cases performed in an exceptionally difficult setting and therefore most organizations are regularly troubled with resolute acquisition controls in employing and remunerating methods and work in an unbendable institutional system.

According to Doherty *et al.* (1999) despite the fact that they are once in a while exposed to the difficulties of the bazaar rivalry they are regularly challenged by party-political burdens. Such influences underwrite towards an arrangement of novel, requesting and troublesome subjects in

the usage of ICT. There is need for parastatals to actualize information system considering the end goal of enhancing capacity of a specific information system in accordance with the strategy adopted and advocated by the organization. Improvement in ICT usage keeps on ranking highly among real issues confronting administrators in numerous government organizations in the running of users' focused on ICT in most government entities (Kim et al., 1999). Difficulties of ICT use in parastatals have magnified with time. The methodologies utilized as of now to oversee data frameworks have not generally created acceptable results. Computers based frameworks delays in creating, client subdivisions frequently complain on their disappointment with the worth, rate and convenience of backing and assistance they get from ICT offices, while the dissemination of data frameworks regularly keep running over spending plans. Frameworks are as a rule saw not to convey the advantages on which they were initially as advocated by business (Gottschalk, 2001).

1.1.2 Costs and Benefits of ICT

There are several benefits of using ICT in organizations, some of them are; Data efficiency, data integrity, system automation and lower labour costs, boosts organizational production, saves time, guaranteed ease of communication, easy and fast decision making, eases data entry, storage and retrieval, enables off-site and remote working and easy organizational administration through softwares . ICT comes with drawback as well, some of them being, financial cost, loss of time during system/network breakdown and troubleshooting, resistance to change, technical skills, security, unemployment and reduced personal interaction. Generally, the pros outweigh the cons, and thus ICT improves service delivery to clients i.e. Customers, citizens, donors, and partners (Bakkers, 2009)

1.1.3 ICT at National Water Conservation and Pipeline Corporation (NCPC)

NWCPC is an administration parastatal under MEWNR in Kenya. NWCPC is the key instrument of the administration in the usage of all approaches relating to water sector operations. In such manner, the use of ICT is basic in empowering NWCPC accomplish its vision, mission, mandates, objectives and becoming a world class organization in water infrastructure advancement and administration. NWCPC has introduced use of ICT through Microsoft Dynamic NAV ERP Management System in financial, human asset and procurement management to

deliver services to the public. This helps NWCPC in accomplishing its mandates which includes; to expand water storage capacity limit in Kenya, to expand accessibility and unwavering quality of water supply and water for multi-reason use, to mitigate the dangers (moderate the impacts) of surges and dry spell, to fortify and fabricate the institutional limit of the Corporation, to enhance performance and quality service delivery, to upgrade financial sustainability of the Corporation and finally to standard cross–cutting issues in the Corporation's exercises (NWCPC, 2015).

It is key, in this manner, that the ICT base and frameworks be secure from obliteration, embezzlement, unapproved access and break of privacy whether by accident or deliberately. Every one of NWCPC's representatives and partners are in charge of securing the organizations data (Ngatia, 2005).

1.2 Statement of the Problem

A significant number of Government Parastatals in Kenya, once started, can't accomplish their targets without backing of ICT capacities (Daniels & Associates, 2006). Research demonstrates that a significant number of parastatals need appropriate advancements in information technologies, however, efforts to enhance IT use in public organizations is not successful (Lytras et al., 2008). In Kenya the number of parastatals that have so far demonstrated aggressive investment in relation to their objective is frantically alarming. The circumstance appears to be unpleasantly more terrible when parastatals are put into the spotlight with respect to performance contract regularly approved by parastatals management each budgetary year. Reuben et al., (2005) purported that the overall performance of a parastatal is a key element to determine effective service delivery. This is typically determined by the accomplishment of organizations goals and the sustainability of the same thereafter. The number of parastatals started by government in different government ministries in Kenya forms a commendable spectrum to the interest of researcher. For example, from the office of State Enterprises there are 189 parastatals in Kenya. Regardless that the ICT use is intended to upgrade service delivery in organizations, its presentation has not produced satisfactory results as intended.

1.3 Purpose of Study

To establish factors influencing the use of ICT in government parastatals in Kenya, with a

particular focus on NWCPC.

1.4 Objectives of Study

The following are specific objectives that study aimed to address:-

i. To determine how staff training on ICT influence the use of ICT at NWCPC.

ii. To assess how funding of ICT influence the use of ICT at NWCPC.

iii. To evaluate how the availability of ICT facilities influence the use of ICT NWCPC.

iv. To evaluate how staff resistance to change influence the use of ICT at NWCPC.

1.5 Research Questions

The objective of the study will be answered through the following research questions:-

i. To what extent does training influence the use of ICT at NWCPC?

ii. To what extent does funding influence the use of ICT at NWCPC?

iii. To what extent do facilities influence the use of ICT at NWCPC?

iv. To what extent does staff resistance to change influence the use of ICT at NWCPC?

1.6 Significance of the study

The study was significant because of the rapid use and growth of ICT in service delivery in government parastals. It would assist policy makers in formulation of policies aimed at encouraging usage of ICT and in intervention policies that sought to address the constraints in ICT adoption and use. This Knowledge would also assist the government in planning, budgeting, resource distribution, infrastructure, decision making etc.

This study was quite important to donor agencies as it would assist them channel their support to relevant areas that could put an impact on ICT adoption and consequently respond to dynamic change. It would therefore help in resource mobilization from donors which would assist in implementation of ICT in various aspects within the organization.

Kenya government has embraced ICT in service delivery and given emphasis in government

policy documents such as the ongoing vision 2030. The findings of this study yielded empirical data and information on factors influencing the use of ICT in government parastatals. Recommendations would benefit policy-makers, Chief Executive Officers of government parastatals including NWCPC, Management Information Systems Managers, researchers and the general public. Researchers would be able to carry out further investigation on this field which would assist other stakeholders including government towards successful implementation of ICT in management of information through the application of various information systems.

1.7 Delimitation of study

This study determined the factors influencing the use of ICT in government parastatals in Kenya, focusing NWCPC, Kenya. This research investigated a number of issues pertaining successful implementation of ICT as well as computer-based information systems. Attempts were made to unravel the factors that contributed to various trends/problems and opportunities in the use of ICT.

1.8 Limitations of the Study

The effectiveness on ICT services usage was looked from only one angle and not all objectives of ICT governance were well-thought-out. The study was investigated in one parastatal and thus there was lack of general applicability to other government parastatals. NCWPC staff prejudice and bias towards the study could have contributed negatively to the investigation as well and the constraints of response and attitude. Some interviewees were not willing to be interviewed even if there were assurances of confidentiality. This was because of fear that the information could be used against them on gauging their computer literacy levels and jeopardizes their jobs.

Local studies done includes, Mwai (2015) did a study on Factors Affecting ICT Adoption in Non-Governmental Organizations in, Nduati, Ombui, Kagiri (2015) conducted a study on factors Affecting ICT Implementation in SMEs in Thika town, Kenya while Nchunge (2013) did a study on factors affecting ICT Project in secondary schools in Kenya a survey of Meru district. From the background given above no study has focused on factors influencing use of ICT on government parastatals. It is against this background and realization that the current study aimed to investigate

factors influencing use of ICT in government parastatals with a specific focus on NWCPC.

1.9 Assumptions of the Study

It was assumed that, NWPC employees who were the study respondents were objective, supportive, truthful and honest in their responses to the study tools. Also, sample size used in the study was presumed that it represented the population and the data collection instruments measured the desired constructs. Lastly, it was assumed that respondents responded to the research questions honestly.

1.10 Definitions of significant terms

Information and Communication Technology - is characterized as a different arrangement of instruments and programs used to create, transmit, distribute, store and administer data.

Application of ICT - refers to procedure of using radical know-how to improve guideline and enriched environment to hold every specific representative build up a profundity of understanding and basic considering.

Information Technology - is the study, plan, progress, execution, sustenance or administration of computer-based systems, predominantly software and hardware.

Computer - is a device that admits info in data format and manipulates it for some result based format on a platform or series of commands on how the data how the processing of data will be done.

IT Capacity Building – Is the way toward making or advancement mortal and organization capacities to utilize IT in executing particular assignments in an organization so as to achieve managerial intentions and it depends on the idea of humanoid investment

ICT Infrastructure – These are physical tools of hardware and software that facilitates the operability of an ICT system.

Information Systems – Is a written electronic and automated or graphical way of collaborating information between entities.

Computer Based Systems – These are complex computer structures in which electronic devices play a foremost part.

Technical Support – These are essential expertise to beat specialized issues when ICT are linked or connected. Support services can be given by organized staff or outsourced to external provider.

Computer Literacy - Refers to individual knowledge and ability to use computers and related technology efficiently.

Innovation - Refers to a fresh method of carrying out things. It can be fundamental and developing or new changes in intellectual thoughts, produces, procedures, or establishments.

Training - Procedure of getting a individual to an decided standard of expertise and knowledge by drilling, exercise and/or coaching.

Management - is a science of organizing, planning, controlling and directing organization activities.

Objective - This denotes to the indicators that explains by rating an entity as either being prosperous or failing.

Resources – These are requirements for an entity, essential in running its activities before the association/organization starts. They can be, Human, fiscal, monetary, material etc

Stakeholders - This mentions all that individuals or groups that vest distinct interest and attention in the scheme.

Beneficiaries – These are individuals envisioned to profit from ICT production.

Scope – It's the targeted or the expected outcome of the organization that is, bound of prospects.

Performance – It includes factors that can rate the achievements of an organization.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature review section looks into works linked to research as obtained from different researchers and significant expert diaries. There are numerous exploration reports, articles and books composed on understanding the use of ICT in public organizations. Some of the studies have concentrated on expanding inside managerial point of view while some have given more concentration on understanding effect of ICT in service delivery. Further, numerous studies have been done to investigate the challenges of adoption and usage of ICT public sectors, particularly in developing nations. As such, it is important to conduct a study in both developed and developing nations too. An attempt has been taken to learn applicable literary works in global and the national with the aim of having a clear assessment of the study. The review helped research identify gaps and justify the need to carry out further research. This chapter as well gave a brief insight of the history of computers in ICT world, and gives special attention in Africa.

ICT is a leading strength in recent worldwide civilization. The influx of workstations, mainframes and ICT has stood possibly the solitary immense effort impressing administrations throughout earlier eras. ICT stands a spread form of computer skills and it more than conventional keypunching, file storage, analysis and reporting but as well as facts gathering, transmission and channeling, copying, intellectual policymaking and performance in preferred procedure at preferred department. According to Genister (2005) clarifies how ICT develops all the existing techniques. ICT is altering all landscapes of 18 lifetime and lifestyles. The numerical revolt partakes given manhood the capability to handle data with accuracy, in channeling it at great precision and analyzing it as well. Tom and Kin (2002) purported that mankind brain calculation power is improving exponentially. Computers and transport networks are now an essential parts of each day activities. Actually, there is no department that has a promising future prospective like ICT. Certainly, ICT has been branded a new name as “Convenience”. Furthermore, ICT is known as the productive source to increase the economic growth, productivity and customer satisfaction and employee performance (Limayem, 2006).

2.2 Use of ICT in Governments

ICT is altering how duties are executed in organizational heights. The emergence of the electronic office has transformed the productivity and job content of office workers. Word-processing, for instance has replaced conventional office procedures for the creation of correspondence, documents, reports and memos. Electronic processing speeds computations and retrieval of data while electronic mail speeds inter-office communications. Teleconferencing reduces the need for business travel (Davis, 2009). As well ICT is becoming increasingly used in organizations and policy makers have continued to take increasing interest in the scope of this field, relatively research work is being undertaken which considers aspects of successful implementation of ICT projects (Passey, 2008).

The challenge faced by policy makers in organizations is to find ways to apply the use of ICT to help realize organizational objectives. Most organizations view cost reduction as a top priority; hence managers must select appropriate office automation systems to create integrative office functions. They must also oversee their implementation, integrate the use of the systems in the daily operations of the organization and overcome resistance to innovation by employees. Segars and Grover (1993) noted that to take full preferred standpoint of ICT, managers must understand what computer can and can't do, and should effectively take an interest in the improvement of computer systems for their own unique needs. This last requires not just the capacity to characterize issues, destinations and imperatives in operation terms additionally information of issues that might be experienced in plan, testing and change of new frameworks.

From the worldwide perspective, it gives the idea that there is unsaid existing association between ICT usage and profession augmentation of workers. Rebecca et al., (2001) presents data innovation usage gives noteworthy advantages in work estimation, cost decrease, profitability change and better administrations to clients and customers. Really ICT accessibility makes utilize conceivable and it is its use that makes execution achievable. In this way, the joined impact of accessibility of data and correspondence innovations can upgrade the occupation execution of the authoritative workers. For all created and creating countries of the world, there is a necessity of taking data besides correspondence innovations by way of instruments which guide improvement of occupation execution to the authoritative staff with the use of ICT (Sandore and Siddique,

1997). Without hierarchical legislatures, this can't be accomplished understand how enormous and huge the part data as well as correspondence advancements might help improve powerful administrations. Mphidi (2005) presented how representatives' requisite in building up a vital data and correspondence arrangement could improve the sending of ICT cutting-edge to their associations. ICT sending and request is finished with ICT staffs that remain prepared towards main particular areas within the associations (Rosenberg, 1995).

In Otawa, ICTs usage and occupation execution of staff is logged. A research arranged by the Otawa Research Libraries (ORL) discovered how scholarly staff registered to 437,931 online journals in the year 2001. The similar study, pointed how representatives are pioneers in utilizing innovation to change conventional hierarchical assets and administrations to see the test of the 21st Era.

In China, Beijing, Lee and Yeo (1998) described how an advisory group set up by the poltical power was mandated to scheme an ICT blueprint for the country. The government of China procured inventiveness in guaranteeing every organization particularly learning institutions which were ICT centered. In Qatar, Obrien (1997) did a research on ICT usage in public sector and his outcome disclosed how out of the six associations reviewed, larger part of them had Web and one sort of establishment, Compact disc, websites, telephones and Email administrations. This is now the eleventh year since Obrien did his research. If similar research was to be carried out today; the discoveries would be entirely unexpected.

In Africa organizations hate the same data conveyance strategies like those in created nations aside from those in South Africa Egypt. Bolton (2001) brought up the colossal dissimilarity cutting-edge at the selection and ICTs usage in government parastatals. A study on Kenyan parastatals by Waiganjo (2206) expresses that scholarly parastatals in Kenya endure poor financing, poor correspondence framework and absence of ICT fit staff. Magara (2002) called attention to lack of quality, administration demeanor and poor ICT ability of workers; Adeya (2007, 2002) written work from Ghana expresses how deficient automation, insufficient framework with insufficient mankind limit as the significant difficulties in the direction of ICT usage. Rosemary (2005) escapes the difficulties to ICT usage to absence of hierarchical programming institutionalization.

2.3 Benefits of ICT in Organizations

Introducing ICT in organizations will have many positive impacts as they attempts to better service delivery to clients. Some of the advantages are;

Productivity: By innovative and advanced ICT know-how, production will be improved as several processes will be sped up.

Quality and accuracy: ICT technologies and systems have the capacity of generating equal standard and class of a product repeatedly. This diminishes human inaccuracy and consequently decreasing wastage. No Machine or system that can get tired or bored or have any kind of emotion at whatsoever.

Cut labour costs: ICT replaces majority of human responsibilities, with time this makes some departments and staff redundant thus saving organizations from remunerating lots of labour pays.

With ICT upgrades, innovations, for example, email and video-conferencing, interchanges will be enhanced inside associations furthermore to outside customers. Between branch Communication or even between nations will be made strides. ICT and all the specialized gadgets it permits individuals everywhere throughout the world to stay in contact regardless of area or time zone. This is the pith of the worldwide market and the every minute of every day world we live in.

Keeping up business records: ICT can help associations keep redesigned records on representatives, providers and different customers. With frameworks, it's simpler and quicker to do information passage, store and recovery. Through ICT's Server-Client frameworks, it's presently simpler to share information inside, remotely and even universally.

Basic leadership: ICT helps basic leadership in that a frequently cited saying is 'learning is power' so by having key data in the hands of directors and chiefs they can settle on educated choices and vagueness is decreased.

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Better administration conveyance: ICT makes it less demanding for individuals to impart inside an association, utilizing email, phone, site and content informing. There are lessened missed arrangements by utilizing content informing to affirm times and remind customers. ICT offices, for example, portable PCs and other versatile hardware can be set up at group focuses to give PC and web access to bolster group exercises.

Better access to data for chiefs: ICT frameworks help in gathering, overseeing and reporting execution data to run your association better, plan data for checking and answer to funders Identify patterns, issues and conceivable arrangements. Client records are essential across all organizations, keeping them in ICT systems like databases are prudent. Databases can be shared across the network, inside an organization as well as with partners, donors and other outside body. With ICT contraption like PCs, tablets, cell phones and the web, association data can be gotten to by customers 24/7. Virtual data can bolster group battles, for example, getting to government measurements to support your situation or following the polling data of your nearby MP on an important subject. Web based learning courses can be an adaptable, ease method for enhancing capacities and information inside your systems.

Remote and off-site working: With ICT, one needs not to be within the organizational premise to work. Remote tools and networks provide remote access to data and files hosted in servers at the offices. Teamviewer, Ammyy admin, Microsoft Remote Desktop and Chrome Remote Desktop are example of remote tools. Teleconferencing softwares like Skype, Teamviewer allow managers to have meetings from all over the globe.

Better management with softwares: Accounting, payroll, procurement, time and attendance, security and access control, et al. softwares process all organizational records from income to expenditures, aids takes care of value added tax, tax and pay as you earn, as well as handling of security matters.

Redundancy, time saving and lessens work: ICT and machines can do many assignments or exercises that representatives can do, and they can work every minute of every day without requiring a pause. This in turn saves time and helps organization in carrying out more duties within short periods.

Decentralization: Improved innovation offers firms the chance to move basic leadership from base camp to nearby offices, which typically brings about being more responsive and having the capacity to provide food for neighborhood needs. This is particularly vital for multinationals working in various nations with various traditions, customs and societies.

Security: ICT diminishes security questions, e.g. Encryption procedures can watch data from unpermitted people, either while it is being secured or while it is being sent by electronic means. This is fundamental for reasons, for instance, data protection order or business secret. ICT enables physical security systems, for instance, one of a kind stamp, iris or facial affirmation. CCTV systems overhaul introduce security with camera observation.

Efficiency and Integrity: ICT systems have minimal error when compared to human beings. With heightened security, optimum data integrity is achieved using systems.

2.4 Staff Training on ICT and the Use of ICT

Preparing is a procedure of working up certainty of representatives at work environment as far as better execution. Preparing assumes a vital part in human asset advancement to accomplish destinations in the association (McClelland, 2002). ICT systems need training for better staff acquaintance. Lack of good training and support from the ICT department can be detrimental towards organizational goals. Systems are meant to give results with respect to user data entered. An untrained user is bound to entering wrong data into a system due to lack of proper training, thus wrong results will be given. It's prudent for managers to issue adequate training to system users as well as provide relevant support that may arise (Bramley, (2003).

As indicated by Harrison, (2005) expressed that learning depends on the preparation procedure. Any learning movement that is formally outlined so as to accomplish determined learning goals. Bramley (2003) says that preparation is a procedure which is wanted to support acknowledging with the objective that people can end up being all the more capable in finishing parts of their work.

Associations could create and enhance the nature of the present workers by giving complete preparing bundle (Bartel, 1994). Concentrate on demonstrates that putting resources into

preparing representatives about critical thinking, basic leadership, cooperation, and interpersonal relations result in gainful associations level results (Barak, Maymon, and Harel, 1999).

A large portion of the directors around the globe are making and advancing their parts in giving broad preparing the reason for accomplishing characterized objectives of the association (Jia-Fang, 2010). Presently, more powerful and underlined on preparing aptitudes are required by each business element with the attention on relentless learning in innovation. It can expect a section in building an anticipated and element learning environment. Also, it can make the unavoidable troubles like a hot cake for more arranged people (Wayne, 2006).

Preparing is a substance based action that goes for changing individual conduct or disposition (Mullins, 2010); then again, others likewise do consider it to be an essential representative helper (Barret& O'Connell, 2001). Preparing from an organization's point of view adds to human capital furthermore a method for securing working environment duty and devotion. Subsequently, the hypothetical recommendation is that preparation is probably going to prompt to support representatives' execution to the association by learning and obtaining the new advances.

2.4.1 Importance of Staff Training

Training could be seen as an apparatus to help associations pick up an upper hand and edge. As specified by Krishna (1997), irrespective of how much time and exertion a man would spend to deliberately screen the occupation candidates, a hole will stay between what the worker does know and what they ought to know. In like manner, there is will always be an indispensable obligation aimed at associations to formulate their human strength to have the ability to study while remembering end objective to obtain more skills and facts to compete with challenges.

Likewise, preparing is a key component to enhance hierarchical execution through the expanding level of individual capabilities. At the end of the day, get ready will help laborers to pro learning, aptitudes, works on, sentiment self-regard and assurance at which point they will have the capacity to perform effectively to enhance their execution and in addition the association.

In addition, preparing can likewise wipe out or diminish hazards in associations because of the way that the prepared staff will be productive, along these lines will have the capacity to improve

utilization of the association property consequently lessening and evading waste. Additionally, preparing will comprehend security which will bring about anticipation of work turnover. As per Cole (2002) preparing can accomplish bring down cost of generation, lower turnover and change administration. Planning additionally engages an affiliation preference pardon new dimensions its personnel acquires, thinking on capacities to discourse the problems of its present and future operations. Staff planning achieves better customer advantage, better work security practices and proficiency redesigns. This helps an affiliation show to its workforce that it values them enough to place assets into them, upgrading constancy and staff upkeep. Hence, upkeep will be a saving to the affiliation (Diamond & Kesar, 2012).

2.4.2 ICT Support Department

At the point when examining issues with an ICT framework, it is not generally the framework that is to blame. Bradley (2012) examinations uncovered that ICT specialists have found through point by point ICT framework examinations that most issues come from ill-advised execution by the usage group, poor preparing from the framework mentors to clients or off base methods are trailed by the framework clients.

Thus staff can create mistaken or unseemly information and reports. Tragically, Bradley specialists saw these examples that brought about a breakdown of key association customer base relationship (Bradley and Thomas, 2012)

Settling ICT framework issues can spare hierarchical time and cash while enhancing its organizations proficiency and client customer base connections. Be that as it may, most associations are as of now completely possessed with their center office needs and do not have the experience and assets expected to effectively audit and enhance their ICT frameworks. An accomplished ICT office or specialist is important to completely audit hierarchical frameworks, distinguish issues and make pragmatic proposals including suggesting elective frameworks. This will guarantee authoritative ICT frameworks are working effectively and productively (Anderson and Feder, 2007).

2.5 ICT Funding In Government Parastatals and the Use of ICT

The usage of ICT undertakings in government parastatals is in accordance with the administration's dedication to display ICT in its. As showed by the light wind legislation the organization shall outfit parastatals with ICT wealth in kind of PC gear, programming and ICT staff (Kavagi, 2001).

It has been seen that mistake by parastatals to get a handle on ICT headway has been as a delayed consequence of lacking sponsoring by the organization (Richard 2003). Without monetary support of the administration and help from advancement accomplices' presentation, ICT in parastatals will keep on remaining a costly wander regardless of the way that the cost of equipment and programming has been descending throughout the years (Moesta, 2005).

Kenyan government began some project towards setting up and foundation of ICT establishment in its administrations and their vital parastatals. Financing for these theories is proficient through relationship between the governing body and change associates. The remote financing portion constitutes the greatest rate of this enthusiasm with respect to advancement. The organization duty is normally specific and with support staff and workplaces including structures. Along these lines, the Regime IT Investment Framework has related all administrations executions over the Internet under an executive administered network (Limoli, 2005). The organization has in like manner related the administrations to run fused information structures, instance of the Integrated Financial Management Information System (IFMIS). Whereas making nations might posses equivalent qualities, our setting present’s cash related challenges that impact the productive execution of ICT endeavors.

The World Bank (2010) reports that the normal IT spending plan has the accompanying breakdown: 31% – staff costs (inside) 29% – programming costs (outer/buying class) 26% - equipment costs (outside/obtaining classification) 14% – expenses of outer administration suppliers (outer/services).The late reports in this way show both the created and creating nations are vigorously putting resources into ICT as the major monetary main impetus (World Bank, 2010).

Above World Bank figures clearly indicates how expensive ICT project are. Inadequate funding leads to incomplete implementation of ICT projects which in turn will create more issues than

solving them. Proper Project finance preparations should be done before start of the project. Project manager should ensure that there are enough funds before project kick-off. NWCPC acquired the Microsoft NAV dynamics system, a multi-million ERP system that can only work in its full capacity when successfully deployed correctly. The successful implementation of the Microsoft NAV Dynamic system was due to the availability of funds from the government, proper planning by NWCPC management, having the right technical vendor to install the system and corporation from the NWCPC staff (NWCP, 2015).

2.5.1 Government of Kenya ICT Policies

Jones and Kozma as cited in Hennessy (2010), National ICT approaches can serve a few critical capacities. ICT arrangements give a method of reasoning, an arrangement of objectives, and a dream of how the administration functions if ICT is presented in all parastatals, and it can profit organization in a given nation.

As indicated by Nduati and Bowman, cited in Hennessy (2010), the soonest endeavor at ICT arrangement detailing in Kenya goes back to the 1980s, however the procedure stayed inadequate by 2000. Following quite a while of exertion, Kenya proclaimed a national ICT arrangement in January 2006 that intends to' enhance the vocations of Kenyans' by guaranteeing the accessibility of available, effective, solid and moderate ICT administrations. The national strategy has a few areas, including data innovation, broadcasting, media communications and postal administrations. Be that as it may, it is the segment on data innovation that sets out the destinations methodologies relating to ICT use in government. The pertinent focus here communicates that the governing body will bolster the utilization of ICT in associations in the country keeping in mind the end goal to upgrade the way of organization transport (Farrell, 2007)

2.5.2 e-Government Initiatives

The idea of open qualities, as portrayed by Karkin (2004) in the electronic government setting, incorporates bearing in mind occupants as consumers that ought to be aided and no more decreased possible cost. As per Cordella and Bonina (2012) one of the essential disputes put forth by individuals out in the open qualities worldview is that residents who are the aggregate demanders and clients of open administrations should be the ones to pick what is critical as open product or

administrations, rather than the people who truly convey it. In like manner, in endeavoring towards grasping the forerunners of e-administration achievement, clients are not viewed as similarly by means of an finale customer intended for IS assisting e-administration however as an ordinary consumer. In this way, the typical apprehension variables recycled to portray the accomplishment of client linked intentions of an entity. The last specified, we must propose to remain wrapped in the possibility of user fortifying.

As showed by Odedra (1991) managements everywhere in the domain require to be involved with the path toward executing an extensive Electronic Diary of e-Administrator ICT presentations. Republics were requested by the United Nations as indicated by their Computer Industry Development Potential (CIPD) as bleeding edge Magaya (1999). In all republics, usage of ICTs for public rehash is reaching out in principle furthermore far as perceptible quality with various obvious activities having been pushed amidst the 1990s. As appeared at a journal done by Heeks (2000), this reexamination has happened particularly in the moved nations. Western nations are initiated that the data humanity shall accomplish financial and societal central focuses (Auden, 2000). Relationship for Economic Cooperation and Development (OECD), saw that data structures are required to fortify money related change, increment adequacy, make occupations, and overhaul the individual satisfaction. Heeks (2002) watched that there is a critical separation between ICT utilize and use among made and making nations. In any case, Westup (2002) pointed that closeness can moreover be ordinary. These resemblances join resources that are not once tasteful, affiliation and client needs. The refinement is the manner by which issues are tended to in various nations. It can be battled that, with their sufficient assets and affected progression, the Western nations have a less asking for system for finishing ICT meanders than making nations. Most making nations are delineated by bound PC applications in the general open division, insufficient base and nonattendance of gifted work (Odedra 1993). Odedra (1993) watches that "this circumstance exists as a consequence of nonattendance of budgetary assets, and in addition rather, taking all things into account, in perspective of nonappearance of synchronization at changed heights in constructing viable custom of the improvement". This bulky endeavors can just achieve replication if every division understands its own particular ICT meanders without due respect to closeness inside the organization.

Correspondence ICT advances have altered the techniques, processes and arrangements of open

portions in equally made and making states (Al-Dmour 2011; Rana, 2015). The utilization of ICT to management is seen as a viable course of action that upgrades correspondence amid management associations in addition to their residents through offering right to use of facts and officialdoms on the web (Kumar 2013). Majority of taxpayer supported organizations are presently settled automatically, reaching out from allow enrollment and restoration, evaluate reporting and portion to web voting. Consequently, managements in dissimilar states ensure actualized helpful electronic rule activities (electronic taxpayer driven organization), and others are adhering to this same example to enable their subjects to get to organizations and facts over and done with the Web (Karkin, 2014).

Commonly discourse, three sorts of e-administration frameworks and administrations exist: Government to Government (G2G), Government to Citizens (G2C), and Government to Business (G2B). Management structures and organizations, open approach data, work and business openings, voting, assessment form, permit enlistment or recharging, fine installments thus on belong in the arrangement of G2C administrations (Liao 2008). At hand has stood a late move of emphasis on making an extra inhabitant driven e-administration stage (Janssen 2014), that gives benefits in accordance with residents' requirements and agreements more conspicuous user-friendliness. In any case, such attempt can't be certain until e-administartion activities are grasped and operated by occupants (Alshibly, 2011). Along these lines, nationals' e-administration needs have been considers as a vital component in government basic leadership powers.

These associations are generally captivated by giving incredible organizations and things so they can get a high ground, and thus pull in more customers (Al-Haddad *et al*. 2011). Something else, clients would swing to contenders and pick the individuals who give better administrations and items (Srinivasan, 2002). Consequently, consumer loyalty is an essential pointer of the achievement of an e-business application (DeLone & McLean, 2004). Despite what might be expected, in the e-government setting, government offices don't rival each other, as each has its own strength. They offer an assortment of free open administrations focusing on a greater and more heterogeneous populace (i.e., having distinctive qualities, similar to proficiency, sexual orientation, salary, and so forth.) than that of e-business (Al-Haddad, 2011). Furthermore, every organization association gives a collection of organizations to the all-inclusive community. Along these lines, the explanation behind which occupants use e-government applications changes for the

most part after that of an electronic exchange system. Along these lines, that one is basic to freely reflect the issues that choose the achievement of an electronic dministration system.

Electronic administration associations in addition to workplaces intend towards offering solace to locals furthermore to protect their spell and sweat (Johnson and Kuar 2008). In that limit, electronic administration accomplishment would be dignified in perspective of the regard made over affirmative focal points practiced by an occupant spending an electronic administarion system. "Net preferred standpoint" accomplishment quota (Peter, 2003) for e-citizen bolstered associations gives a speculative framework inside which the wide estimations of advance can be conceptualized. This measure is seen as perfect since it viably gets to modify both helpful and undesirable impressions of the scheme on the customer. While showing the connected association of remaining favorable circumstances, McLean (2003) suggested that the going with three issues be considered: anything considers advantage, the discrete or affiliation that preferred standpoint and the side by side of examination wherever it is seen as accommodating.

Reinforcing client is a clients' subjective affair that they have more imperative limit than beforehand to deliberately convey expected results then frustrate unwanted clients, and then clients are benefitting after the extended limit (Hunters, 2008). It is a constructive and particular condition, that occurs as a result of a psychological examination of a client's skills (or feelings which are ought to a limit) regarding existing or past limits. In this way, it is only the impression of extending control that brings out fortifying, and reinforcing may be experienced paying little regard to whether control truly augments or not. This conviction has been gave off an impression of being a basic consider forming solitary satisfaction (Fuchs et al. 2010). As needs be, this constructive conviction must affect diverse decisions, plus those of electronic departments net focal points. This pushes the supposition connecting client reinforcing to electronic department accomplishment (remaining points of interest).

2.6 ICT Facilities in Government Parastatals and the Use of ICT

According to Orodho et al. (2004) the availability of adequate ICT facilities will ensure smooth operation of parastatals, thus enhancing quality service delivery to citizens. ICT facilities include but not limited to: Hardware, software, databases and networks.

Hardware is the physical piece of PCs, communicate correspondences, and diverse devices. The term rose as a way to deal with perceive the "case" and the electronic equipment and sections of a PC from the program you put in it to make it complete things. Hardware proposes lastingness and ceaseless quality. Gear fuses the PC suitable and also the connections, connectors, control supply units, and periphery contraptions, for instance, the support, mouse, sound speakers, and printers, scanners, organizing gadgets and so forth. Users use hardware to feed in data into software or to extract data from softwares. Use of ICT hardware in organizations is prudent; hardware streamlines many of organizational daily business management and administrative. Recognizing what sorts of devices and hardware an entity need will help association spare cash and boost its financial plan (Ignetius, 2004).

Programming is a bland word for self-possessed accretions of a personal computer facts and rules, normally fragmented into double remarkable classifications: outline software design that stretches the important non-assignment precise foundations of the computer, and application program design which is employed by regulars to fulfill precise undertakings. Any individual who says their business "runs it" most likely owes an extraordinary obligation of appreciation to a little armed force of programming applications and Web benefits that resolutely sustains the machine from off camera. From making and putting away archives and remaining on top of email to keeping the books and getting groups cooperating, it takes a considerable measure of code to maintain a business, or possibly to run it well. In any case, setting up your organization isn't as simple as simply angling applications out of a barrel. You need as well as can be expected get, and at a value that isn't through the rooftop (Christopher, 2008).

Framework software design is in custody of regulatory, organizing, and distributing with the separate apparatus parts of a PC framework so that other programming and the clienteles of the framework consider it to be a practical component deprived of being concerned with the low-level opinions of attention, for instance, swapping facts on or after recall to circle, or rendering gratified onto a show. By and large, framework programming comprises of a working framework and some essential utilities, for example, plate formatters, document supervisors, show directors, word processors, client verification (login) and administration instruments, and systems administration and gadget control programming (Dorward et al., 2004).

Application programming, then again, is utilized to varnish specific projects more than just administrating the PC framework. Software programming comprise of a solitary package, for example, a picture viewer; a little accumulation of projects (frequently called a product bundle) that work firmly together to finish an task, for instance, a spreadsheet or gratified formulating framework; a superior congregation (regularly called a product suite) of associated yet autonomous schemes and packages with a typical UI or communal facts configuration, for example, Microsoft Office, which encompasses of firmly coordinated word processor, spreadsheet, database, and so on.; or a product framework, for example, a database administration framework, which is an accumulation of basic projects that may give some support of an assortment of other free applications (Aker, 2011).

Michael and Clara (1997) implied that product is made with programming dialects and related utilities, which may come in a few of the above structures: single projects like script translators, bundles containing a compiler, linker, and different apparatuses; and huge suites (frequently called Integrated Development Environments) that incorporate editors, debuggers, and different devices for various dialects.

Johnson (2002) characterizes a database (dB) as a buildup of records that is organized out so it can be accessed deprived of plentiful of a section be gotten to, supervised, and restructured. In one view, dBs can be congregated by of constituent: bibliographic, full-content, numeric, and pictures. Computer dBs generally encompass sums of data archives or related materials, for instance, contracts relations, article directories and catalogs, and customer summaries. Customarily, a databank supervisor offers users the capabilities of supervisory read/write get to, influential report era, and examining operation (Bindlish and Evenson, 1997). Cases of datbases are; Microsoft Access, Microsoft SQL, MySQL, Oracle, IBM DB2, SyBAse and so forth.

A PC system is an assembly of computer structures besides other processing devices that are inter-connected and organized over communication networks to inspire communication and ability distribution between an widespread assortment of users. Structures empower clients to trade information locally, broadly and comprehensively. Schemes are habitually ordered in assessment of their qualities, illustration are yet not restricted to; Personal Area Network (PAN), Metropolitan Area Network (MAN), Local Area Network (LAN), Wide Area Network (WAN),

Virtual Private Network (VPN), Home Area Network (HAN), Intranet, Extranet, Internet and so on.

2.7 Staff Resistance to ICT Change and the Use of ICT

Change is a consistent at each association, yet workers have rapidly turned into the main rival of progress. In the 21st century, governments are working towards having all administration organizations execute a general standard that successfully requires the utilization of new data advancements including equipment and programming. Despite the fact that the ordered changes are themselves incremental (i.e. a multi-year arrangement of raising prerequisites), this study decides the necessities as a springboard for considerable streamlining of work procedures e.g. dispensing with numerous section of information, utilizing paperless case following procedures, and utilizing nearby and wide range systems to encourage exchange of information among utilitarian regions. In this manner, government reporting necessities showed up at first to catalyze the since quite a while ago deferred presentation of new data innovation and new work forms into organization operations. Workers' imperviousness to this order, apparently out of extent with the standard hesitance to learn new innovations, indicated issues central to their presumptions about their expert practices and, to be sure, their exceptionally status (Kharlov, 2002).

Kharlov (2002) says that regardless of how all around composed and arranged a change program is, not everybody will sing its gestures of recognition. Representatives oppose change for a wide assortment of reasons, running from a direct learned difference over certainties to profound situated mental partialities.

2.7.1 Reasons for Staff Resistance to Change

A segment of the clarifications behind specialist resistance to change; conviction that the change action is a transient winning design, conviction that related agents or executives are awkward, loss of force or control, loss of status or social standing, nonattendance of trust in their ability to learn new aptitudes, estimation change over-weight (a ton of too soon), nonappearance of trust in or revolution of directors, loss of business solidness, loss of family or individual time, feeling that the affiliation is not met all requirements for the extra effort (Markman, 2007)

Investigation by Wegener and Petty (1999) shows that for a couple people restricting change, there may be various reasons. Adding to this unpredictability is the way that incidentally the communicated reason disguises the certified, more significantly individual reason. You will moreover need to see that people work through a mental change get ready as they surrender the old and come to either handle or reject the new. Conventionally, they may experience a basic repudiation, and subsequently begin to comprehend that the change can't be disregarded. Strong notions may ascend, for instance, fear, shock, lack of protection and disappointment.

2.7.2 Overcoming Staff Resistance to Change

People acknowledges change either contrarily, with sentiments of acquiescence and smugness, or emphatically, with reestablished energy to profit by the progressions. Keep an eye out on workers who get "trapped" in one stage. Extend your provision. Permit space and time for individuals to labor over the periods. Stretch representatives' period to pull breath and pay attention with compassion.

Tarven (2001) battled that delegates should be supported in recognizing what's in it for them to reveal the change. A nice part of the customary impenetrability to change vanishes when specialists are clear about the points of interest the change passes on to them as individuals.

Focal points to the social affair, the workplace, and the affiliation should be engaged, also. In any case, nothing is more basic to an individual agent than to know the constructive outcome to which the change will have in solitude occupation or work.

Additionally, delegates must feel that the time, essentialness, duty, and focus imperative to realize the change are reimbursed likewise by the focal points they will accomplish from revealing the change. Rodgers (1998) battles that more euphoric clients, extended organization movement, an expansion in pay, saved time and steps, positive notoriety, affirmation from the director, more fruitful, useful specialists, and a stimulating new part or wander are instances of courses in which you can help delegates fondle set aside a few minutes, imperativeness, focus, change, and test that any change requires.

Abundant incomprehensibility to transformation may be reserved up a key parting on or after if

fruitful change society is related on the wander since the soonest commencement period. Although confrontation is the run of the grinder mortal answer in periods of advance, awesome modification society can ease a considerable amount of this resistance. Change organization is not just an instrument for directing battle after it transpires; it is greatest as a mechanical assembly to initiate and attracting delegates in a change. Receiving and spending the excitement and optimistic sense as well as a change may regularly retain resistance from running; this is the compel of exploiting self-possessed change association since the initiate of a wander (Rodgers, 1997)

Individuals in Prosci's 2013 benchmarking study commented on the segment of resistance they experienced from laborers and boss that they felt could have been avoided with convincing change organization. Individuals referred to that a huge part of the resistance they encountered could have been avoided if they associated solid change organization practices and norms. The great here is: whether you do change organization right the main event when, you can keep an awesome part of the resistance from relentlessly happening.

Treating the powers against change is a more profitable utilization of assets than basically fortifying the powers for change. Picking the most intense controlling powers, giving time and vitality is a way of weakening these resistances. Distinguish the drivers for change and consider how to apply them to either debilitate or wipe out a contradicting power. Demonstrate the fiercest resisters what's in it for them. Advance to them either as far as individual increase, for example, status, pay reward, acknowledgment, thus on or misfortune stayed away from, for example, budgetary misfortune or employment outplacement forestalled. As per Mathieson (2001), a great director executing change, gets customers, merchants or providers to disclose to change resisters up close and personal how the present circumstance impediments them in solid terms. Put resisters on groups that permit them to have basic leadership influence in the change procedure, however little. Defuse political strategic maneuvers among directors and different representatives by leading wide based gatherings where objectives and strategies are straightforwardly talked about and present procedures that practically rule out individual circumspection. Attempt to take a gander at the world through the eyes of the change resister. Listen straightforwardly and genuinely to what they are attempting to state. Look at your own particular essential convictions

and suspicions. Through drawing in resisters, be set up to change yourself (Wegener & Petty, 1994).

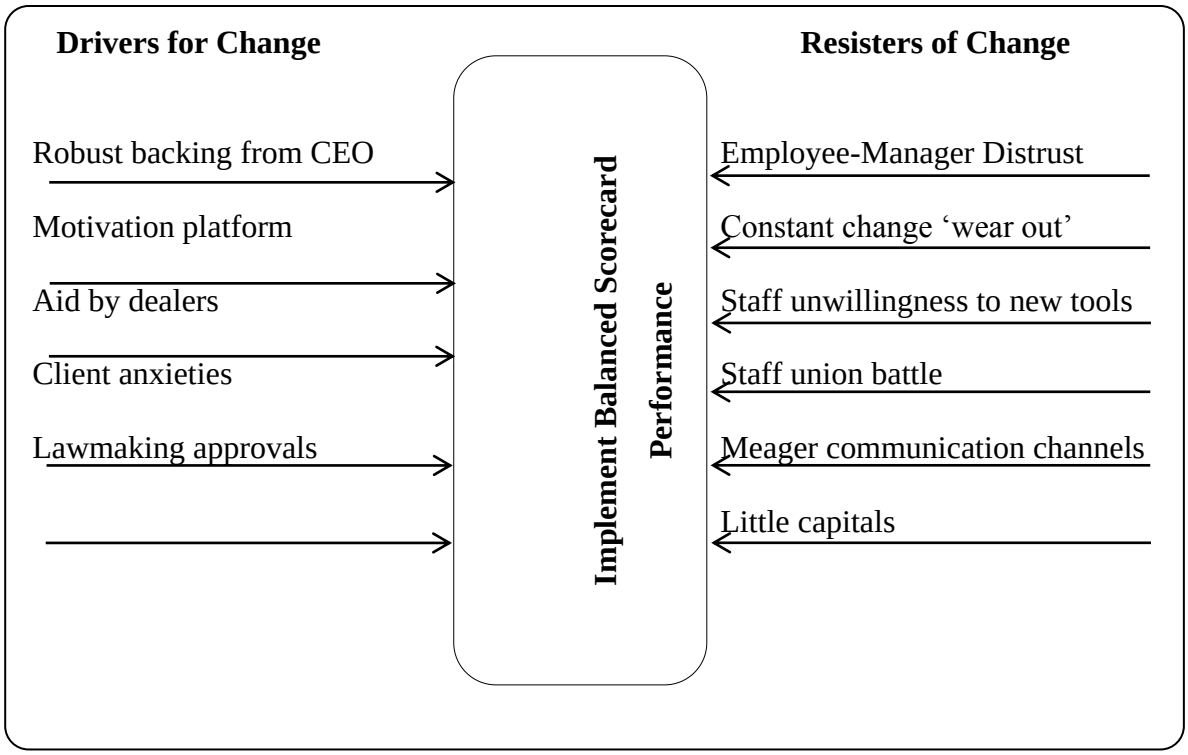

Figure 1: Example of a Force Field analysis diagram

2.8 ICT Implementation in the Government of Kenya

In most recent five years, the Kenyan government has begun some capital wander towards set up and foundation of ICT base. Financing for these endeavors is proficient through associations between the governing body and change accessories. The remote financing part constitutes the greatest rate of this enthusiasm to the extent advancement. The organization duty is when in doubt as specific and support staff and workplaces including structures. All things considered, the Government Information Technology Investment and Management Framework is interfacing all administrations to the Web under the Official System (Limo 2003). The administration is in like manner interfacing the administrations to run composed information structures for example the Integrated Financial Management Information System (IFMIS) and the Integrated Personnel and Pensions Database (IPPD). While making countries may have relative characteristics, the Kenyan association presents distinctive troubles that impact the productive use of ICT undertakings.

Qualities that describe Kenyan ICT environment incorporate; ICT wanders which are at first advocate sponsored, a few gifts are made without earlier counsel or completing a requirements examination by the beneficiary association. Operational/running costs are met by the organization. Financing, for instance, capital and human resource necessities closes with the wander organize. The monetary arrangements for ICT are inadequate yet rising, nonappearance of ICT plans and noteworthy systems to guide dare to the extent that, with a number providers financing ICT, there have been diverse hypotheses for a similar thing due to nonattendance of coordination. There is focus on ICT applications that support traditional administrative and utilitarian trades instead of on convincing information get ready, and transport with and without government divisions and flimsy ICT assets.

2.9 National Water Conservation and Pipeline Corporation ICT Policy (2010)

The use of ICT is very important in empowering NWCPC towards accomplishing its vision of turning into a world class Power that guarantees a clean and wellbeing environment for all. The motivation behind NWCPC ICT strategy is to set up a structure for actualizing security and control over the use of modernized data frameworks and types of gear at NWCPC. Reliance on the information technology to give powerful operation of the business and service delivery in current world is a need. It is key accordingly, that the ICT foundation and frameworks be secure from demolition, defilement, unapproved get to and rupture of privacy whether coincidental or ponder. All types of data should be ensured, paying little respect to the medium utilized for correspondence and capacity. To achieve this, NWCPC approach will build up appropriate shields to shield data from unplanned or purposeful unapproved adjustment, pulverization and revelation. NWCPC ICT strategy in this way builds up base strategies, norms and rules to secure the Power's data resources put away on its dispersed registering stages, and give a structure to the proceeded with advancement of these standards as the handling environment changes (National Water Conservation and Pipeline Corporation [NWCPC], 2015)

2.10 ICT Performance Evaluation

ICT evaluation can be characterized as working up by quantitative and additionally subjective methodologies the estimation of the ICT to the affiliation (Khalifa et al., 2004). Execution can't be

judged as extraordinary or appalling without the compelling utilization of the wander. Surveying ICT exercises can be totally dubious and can now and again they can be extremely subjective and there is no single ICT appraisal procedure that can be associated with all conditions (Banister, Remenyi 2004). Currie (1995) legitimizes this position using diverse logical examinations pulled in from associations' distinctive made countries, while Heeks (2002) watched that evaluation is subjective and can depend on upon conditions including time. Appraisal prompts the confirmation of advance or frustration of an ICT extend.

Crispus (2005) argues that in organizations, ICT performance can be evaluated using the following but not limited to; quality service delivery to citizens by organizations, level of data efficiency as received by citizens, the level of improvement in access to information by citizens, level of information transparency as received by systems, how cheaper, faster and efficient is communication getting to citizens, is there real time processing of citizens issues, is there improved decision making by the management, are there reduced labour costs, is there an improvement in organizational integrity?

2.11 ICT and Information System (IS) success and failure

Writing exhibits that arranging and organization of ICT projects has an incredibly poor record in creating countries (Heeks 2002). Regardless, a mindful overview of clarifications behind dissatisfaction recognizes distinctive factors nearness or nonattendance decides achievement or disappointment of undertakings. Consequently, expert looks yield variables which are the preferences to be refined if the movement succeeds. The purpose behind this is to explain the target of ICT exercises. These goals may outline a key part to the masterminding strategy as delineated beforehand. Achievement of these destinations chooses how to arrange ICT wanders. In addition, perspective of, and purposes behind ICT disillusionment are explored and this perceives possible key variables.

2.12 Theoretical Framework

Theories are defined to clarify, anticipate, and comprehend wonders and, by and large, to challenge and broaden existing information inside the points of confinement of basic bouncing suppositions. The hypothetical system is the structure that can hold or bolster a hypothesis of an exploration concentrate on. The hypothetical structure presents and portrays the hypothesis that clarifies why the exploration issue under study exists (Swanson, 2013). The study received the

Technology Acceptance Model (TAM) in this study.

2.12.1 Technology Acceptance Model (TAM)

Davis (1989) exhibited a hypothetical model meaning to anticipate and clarify ICT use conduct, that is, the thing that causes potential adopters to acknowledge or dismiss the utilization of data innovation. Hypothetically, TAM depends on the Theory of Reasoned Action (TRA). A few scientists have repeated Davis' unique study (Davis 1989) to give observational proof on the connections that exist between convenience, usability and framework utilize (Adams, Nelson and Todd 1992; Davis 1989; Hendrickson, Massey and Cronan 1993). In TAM, two hypothetical builds, saw convenience and saw usability, are the essential determinants of framework utilize, and anticipate mentalities toward the utilization of the framework, that is, the client's eagerness to utilize the framework.

The importance of this theory in this research is that it advocates for believe in basic leadership. Vroom (1964) is the pioneer of the theory which was rather developed by Porter and Lawler (1968). It attests that the apparent relative allure of different choices is identified with people’s group convictions about the outcomes to which each option will lead and their convictions about the attractive quality of these results. People assess the results of the conduct on the inability of the convenience.

Seen helpfulness alludes to "how much a man trusts that utilizing a specific framework would upgrade his or her employment execution", and saw usability alludes to "how much a man trusts that utilizing a specific framework would be free of exertion" (Davis, 1989, 320). In these exploration, TAM will be utilized as a part of three distinctive routes, specifically to discover how the utilization of ICT enhances hierarchical administration conveyance to natives, how staff ICT preparing impacts the utilization of ICT in government parastals, how ICT financing impacts the utilization of ICT in government parastatals and ultimately, how the accessibility of ICT offices impacts the utilization of ICT in government parastatals. Venkatesh and Davis (2000) created and tried a hypothetical expansion of TAM, alluded to as TAM2, which clarifies saw value and utilization aims with the assistance of social impact and psychological instrumental procedures, and Adams et al. (1992) repeated Davis' (1989) examine.

This theory has affected research in acceptance of technology. Robey (1979) while investigating client states of mind and ICT use, conjectured that "a framework that does not play out individuals occupations is not liable to be gotten positively regardless of watchful usage endeavors". Frandis (1980) likewise proposed a hypothesis of client acknowledgment that consolidated a large number of the ideas in hope hypothesis. He however recognized convictions that connected feelings to a demonstration and conviction that connected the demonstration to future outcomes. Chan (1996) in his altered Technology Acceptance Model (TAM) extended the idea of saw convenience to incorporate close term value and long helpfulness.

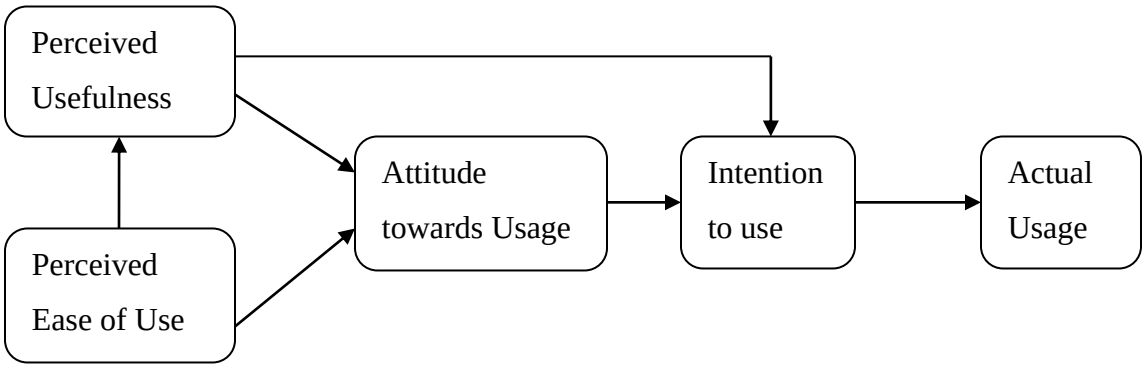

Figure 2: Technology Acceptance Model (TAM) (Davies et al., 1989)

2.13 Conceptual Framework

TAM introduces the relationship between the free and wards factors of the study. In the structure, the autonomous factors are the undertaking ranges where ICT will be utilized as a part of government parastatals. These incorporate impact of staff ICT preparing, impact of ICT financing, impact of the accessibility of ICT offices and staff imperviousness to change towards the utilization of ICT in government parastatals. The framework shows how ICT policy support computer infrastructure and human resources work to influence effective implementation and usage of ICT. This includes a clear and well-targeted policy which details intervention measures and government support for ICT in aspects such as resources and skills. Availability of infrastructure determines the use of ICT. This incorporates offices, for example, PCs, power, web availability; programming and time as an asset which affect representatives' aptitudes to utilize PCs and their state of mind towards the utilization of ICT.

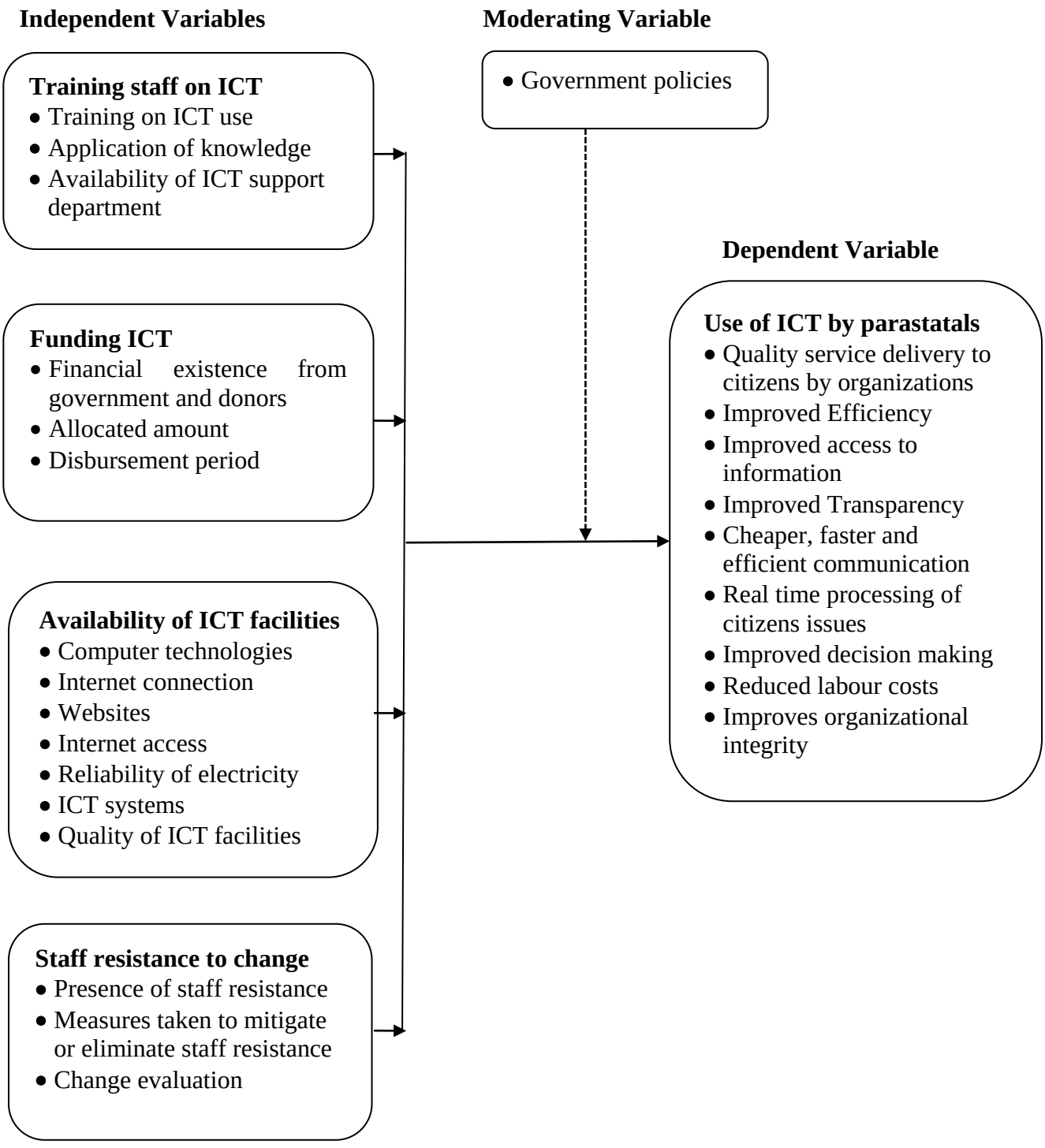

Figure 3: Conceptual Framework of the study

2.14 Summary and Research Gaps

Bagozzi, Davis and Warshaw (2001) noted that technologies advancements, for example, PCs are unpredictable and a component of vulnerability exists in the brains of leaders regarding the fruitful reception of them, individuals shape states of mind and goals toward attempting to figure out how to utilize the new innovation before starting endeavors coordinated at utilizing. Attitudes towards use and desires to utilize may be not very much confined or debilitated in conviction or else may happen basically after preliminary strivings to make sense of how to utilize the development progress. Hence, real use may not be an immediate or quick result of such states of mind and aims (Bagozzi et al., 1992).

Concerning both general and particular writing, relatively few studies have surveyed variables influencing the use of ICT in government parastatals in Kenya. Numerous contentions for ICT arranging demonstrate ICT project execution is a mind boggling activity and more research was expected to distinguish challenges, great practice and answers for fruitful usage. The study looked to augment past research by joining develops in the broadly use of ICT frameworks and exploring the effect of inner and outside variables its use.

Managers in functional areas like finance, administration or production not only utilizes PCs for enhanced basic leadership but as well as oversee information situated in the right departments. Likewise, they are additionally anticipated that would direct their workers in ICT use to give their associations a focused edge. They are the ones who arrange for how to apply data correspondence innovation keeping in mind the end goal to increase the value of items and administrations (Venkatesh et al., 2003).

A study directed as an exploratory research to fathom the activities and feelings of IS and line administrators, concerning the administration of information advancement (IT). Semi-organized meetings were led with 25 administrators in seven firms to understand their present exercises, future vision, and the parts driving change. Managers from three unmistakable positions from each association were met a senior IS executive, an IS application progression boss, and a line administrator. The discoveries showed that there were different exercises in advance with the

most broadly perceived ones being fast prototyping, an accentuation on obtaining bundles, business reengineering, and building IT framework.

Past these couple of shared attributes, different firms were grasping a collection of changes to their IS affiliation structure, working relationship with customers and outside dealers, system change gadgets and methods of insight, and their readiness and other human resource courses of action. Moreover, a broad extent of components were alluded to as driving changes in IT organization practice with these gathering into four imperative courses of action of drivers: business cost weights, business advantage weights, IS organization weights, and advancement push factors. Couple of respondents could express a dream for the IS association without bounds, past portraying their desires for the activities at present in progress. Of those respondents who gave such a fantasy, few depicted the methods required to fulfill the move. These revelations are inspected with respect to an organization framework got from Harold Leavitt (1994) and discussed in light of other late research on IS organization (Gallivam, 1994).

The significance of this research to managers is that it explores factors that enhance acceptance of ICT usage by end users and specifically employees of operational staff. Knowledge of factors that influence the use of personal computers and particularly those that cause individual resistance to information system usage can help them avoid the temptation to simply dump technology on workers in the hope of increased productivity.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section gives detail of the methodology that was used in conducting the study such as research design, target population, sample size, sampling design and procedures, and data collection procedures and data analysis.

3.2 Research Design

The study used descriptive design to determine how the use of ICT influences service delivery in government parastatals. This research design was chosen because it allowed the study to establish the outcomes of the effect of the use of ICT. Orodho (2003) defined descriptive survey as a process of collecting information from the respondents by asking question to them or to specific individuals. This technique is utilized when gathering data about individuals' states of mind, assessments, propensities or any of the assortment of training or social issues (Orodho & Kombo 2002). A case study is important for analyzing information in a systematic way to enable the researcher arrive at some useful conclusions and recommendations (Mugenda & Mugenda, 1999).

3.3 Target Population

Nachmias (1996) defined population as aggregate of all cases that meets some requirement of a given characteristic. The study targeted 410 employees working at NWCPC, Kenya. The study used stratified sampling to choose a sample working in various NWCPC departments at their headquarter offices. The study seeked to get respondents from all cadres of employees ranging from top management level, middle level and operational level (NWCP, 2015)

3.4 Sample Size and Sampling Procedures

Mugenda and Mugenda, (2003) defines a sample as a littler gathering or sub-amass got from the open populace. Testing is a procedure of selecting a specimen from an objective populace from the bigger populace. This subgroup is precisely chosen in order to be illustrative of the entire populace with the significant/comparable attributes. Every individual part or case in the example is alluded to as subject, respondent or interviewees. Testing is the way toward selecting various people for a

study in a manner that it is reasonably a delegate of the substantial gathering from which they were chosen. The reason for testing is to get precise experimental information at a small amount of the cost looking at all conceivable cases. The example picked spoke to staff working in different offices in NWCPC, Nairobi workplaces.

3.4.1 Determination of Sample Size

The sample was stratified on the basis of grades and the sample size comprised of 133 employees where respondents were selected randomly (Table 1 below). A confidence interval of 7% and a confidence level of 95% were used.

Table 1: Sampling Frame

Categories of Population Units	Target population	Sample size
Top Management Staff	60	20
Technical Staff	230	74
Operational Staff	120	39
Total	**410**	**133**

Source: National Water Conservation and Pipeline Corporation (2015)

3.4.2 Sources and Types of Data

The study used primary data, where the original data was collected by the researcher and tailored to meet the exact needs for decision making. The researcher had direct control over data collection process which led to a final decision after the analysis. Advantages of primary data were; firstly, it permitted measurement of actual behaviour of the respondents; secondly, it gave uniformity in data collection as data was collected by the same person; thirdly, the most current and required data was collected; fourthly, collection of primary data entailed the use of personal approach and interview methods, and this was helpful in overcoming the reluctance of sample population; lastly, primary data had a high degree of flexibility in the enquiry as the variable was manipulated to achieve more reliable results.

3.4.3 Sampling Procedure and Techniques

Ogula (2005) defines sampling as a deliberate path in which a little number of people, articles, or occasions will be chosen, examined with a specific end goal to discover something that relate or influences the aggregate populace in which the specimen will be chosen. In this study, stratified irregular examining system was utilized. It included all classifications of components that had some normal trademark in the bigger populace. An example alludes to one component, which implies that all in the study populace had an equivalent and known possibility of being chosen and incorporated into the study with negligible predisposition (Ogula, 2005)

3.5 Data Collection Instruments and Procedures

In order to ensure that data collected included all facts, the research used survey questionnaire for data collection. The survey questionnaire comprised of various parts which focused on personal background information and closed questions that were all pointing to the study objectives. Sub-titles were provided to avoid confusion. The research used questionnaires because they conveniently covered a large number of respondents. The questionnaires were administered through drop and pick method for NWCPC employees within Nairobi. The sequence of the questions was designed to be random in nature to preclude any guessing of the underlying factors being sought. Questions were articulated in such a way that they contained multiple-choices and required respondents to tick choices from the options provided.

3.6 Validity and Reliability

3.6.1 Piloting

Piloting is trying of the surveys by attempting them in the field to improve legitimacy and unwavering quality of the instruments. Steering includes the checking of the appropriateness of the polls and meeting guide. The nature of research instruments decides the result of the study (Alan and Emma, 2011). Mugenda and Mugenda (2003) propose that the steering test ought to be 10% of study test. Guiding aided in uncovering questions that were ambiguous, to take into consideration their audit. The pre-test likewise permitted the analyst to beware of whether the factors gathered could without much of a stretch be prepared and dissected. Hence 10% of the 113 respondents were 12 respondents. The 12 respondents who were used for piloting were picked from the

NWCPC headquarter offices in Nairobi. The comments of the respondents who participated in the pilot study and modifications in the wording of questions were incorporated in the final instrument revisions. Appearance of the survey instrument and general flow of the questionnaire were reviewed accordingly. Finally, the questionnaire, suitably coded, and a covering letter explaining the purpose of the study and guaranteeing confidentiality was presented to respondents sampled for the study.

3.6.2 Validity

Borg (1989) characterized legitimacy as how much a test measures what it implies to quantify. All appraisal of legitimacy is subjective feelings in view of the judgment of the scientist (Wiersma, 1995). Creswell (2009) proposes that, to utilize a current instrument, portray the set up legitimacy and unwavering quality of scores got from past utilization of the instrument. The pilot contemplate helps with enhancing face legitimacy and substance the survey and the meeting instruments.

There are two noteworthy sorts of legitimacy; inner and outer legitimacy. Inside legitimacy alludes to the degree to which the architects of a study have considered option clarifications for any causal connections they investigate. Outer legitimacy alludes to the degree to which the consequences of a study are generalizable or transferable. It is how much research discoveries can be summed up to populaces and situations outside the trial setting. Outside legitimacy needs to do with representativeness of the example concerning the objective populace (Mugenda and Mugenda, 2003). Legitimacy in this study was guaranteed through stratified arbitrary testing which will guarantee that staffs from NWCPC are very much spoken to.

In this study, build legitimacy was utilized to check how the inquiries were expressed to guarantee that they passed on the planned importance. The surveys were given to a few experts to scrutinize it and guarantee legitimacy of the instrument. It guaranteed that the survey stayed engaged, precise and steady with the study targets.

3.6.3 Reliability

Mugenda and Mugenda (1999) characterized reliability quality as a pointer of how much an exploration instrument yields reliable results or information after rehashed trial. Unwavering

quality is the degree to which an exploration instrument reliably measure attributes of enthusiasm after some time. An examination instrument is dependable on the off chance that it has two perspectives: security and comparability (Donald and Delno, 2006). In the event that an instrument precisely evaluates what it should and gives steady results after rehashed estimations of a similar protest, then it is solid. This study utilized inner consistency dependability which is measured by Cronbach alpha: a trial of interior consistency that is as often as possible used to figure the relationship values among the answers on an appraisal apparatus. Creswell (2012) showed that a dependable research instrument ought to have a composite Cronbach alpha, α of no less than 0.8 for all things under study. In this way, unwavering quality coefficient, α, of 0.8 was viewed as worthy.

Therefore the following formulae were used as reported by Creswell (2012).

Assuming: A sum of K components (K-items or test lets) $X=Y_1+Y_2+\ldots\ldots Y_k$. Cronbach's α

$$\alpha = \frac{K}{K-1}\left(1-\frac{\sum_{i=1}^{K}\sigma_{Y_i}^2}{\sigma_X^2}\right)$$

σ_X^2 Is variance of the observed total test scores, $\sigma_{Y_i}^2$ is the variance of component *i*.

3.7 Data Collection Procedures

Data collection is the way by which data is got from the chosen subject of an examination (Mugenda & Mugenda, 2003). After effectively defending the proposition, the researcher got a research conceit from NACOSTI and hand delivered questionnaires to NWCPC staff. Utilization of survey questionnaire was to facilitate the procedure of information gathering as all the chosen respondents were got on time. Amid the dissemination of questionnaires, the research purpose was well enlightened to the respondents.

3.8 Data Analysis

Analysis is the way toward gathering, displaying and changing information with a specific end

goal to highlight valuable data, proposing conclusions and supporting basic leadership (Sharma, 2005). It includes looking at what has been gathered in a study or investigation and settling on choice and deductions. Information examination goes for reporting the data gathered from respondents of this study. Discoveries were introduced, broke down and talked about in conjunction with the goals of the concentrate in order to choose the most precise and quality data from the criticism by the different respondents. Measurable Package for Social Sciences (SPSS) was utilized as a guide to break down information through Microsoft Excel spreadsheets. Both quantitative and subjective methodologies were utilized for information investigation. From there on illustrative insights was utilized to dissect the quantitative information that was gotten through relationship examination.

Correlation coefficient (r) was calculated using the Spearman rank order.

$$\text{Rho } (r) = \frac{1-6\sum d^2}{n(n^2-1)}$$

Where

r = coefficient of correlation

d = difference between ranks of pairs of the variables n =

the number of pairs of observation

Appropriate descriptive statistics such as frequency counts, means and percentages were employed. Finally data interpretation was done using frequency tables, line graphs, pie and bar charts and the frequency of responses to various questions were displayed.

The qualitative information created from open ended questionnaires was ordered in subjects as per research goals and reported in account frame alongside quantitative presentation. The qualitative information was utilized to strengthen the quantitative data.

3.9 Ethics of Research

The researcher ensured that the respondents were guaranteed maximum confidentiality on the information they divulged and that the information given was strictly used for research and academic purposes. The principle of anonymity was applied in order to guarantee privacy to

respondents. The researcher adhered to all the ethical standards set and no respondent was forced to participate in the research. Research conceit was looked for from pertinent Departments before leading the examination by utilizing the introductory letter that clarified the expectation of the study.

3.10 Operational definition of Variables

This is a thorough description of how the study measured its variables. Operational definition is tied to the theoretical constructs under study, hence, controlling the progress of operational definitions that hits the essential variables. Table 2 below shows the variables and how they were measured in the study.

Table 2: Operational definition of the variables

Objectives	Variables	Indicators	Measurement scale	Tools of Analysis	Type of Analysis
	Independent				
Determining influence of staff ICT training on the use of ICT	Staff ICT training	• Staff ICT training • Staff application of knowledge • Availability of ICT support department	Ordinal	Percentages	Descriptive
Assessing how ICT funding influences the use of ICT	ICT funding	• Financial existence from government and donors • Allocated amount • Disbursement period	Ordinal	Percentages	Descriptive
Evaluating how the availability of	Availability of ICT facilities	• Availability of computing hardware • Availability of	Ordinal	Percentages	Descriptive

ICT facilities influences the use of ICT		internet • Availability of websites • Reliability of electricity • Availability of ICT systems • Quality of available ICT facilities			
Evaluating how staff resistance to change influences the use of ICT	Staff resistance to change	• Existence of staff resistance to change • Measures taken to mitigate staff change resistance • Change evaluation	Ordinal	Percentages	Descriptive
	Dependent				
Factors influencing use of ICT	Use of ICT	• Quality of service delivered to citizens • Level of access to information by citizens • Cost of access to information by citizens • Time taken to solve citizen issues • Level of organizational decision making	Ordinal	• Percentages • Regression • Correlation	Descriptive

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSION

4.0 Introduction

This chapter presents the findings, analysis, discussion and presentation of the results of a research carried out to amass information concerning the use of Information and Communication Technology in government parastatals.

4.1 Questionnaire Return Rate

Return rate is the degree to which the final data sets embraces all sample members and is deliberated as the number of respondents who finalized the questionnaires, divided by the total number of respondents in the entire sample including non-respondents. Information concerning the individual characteristics, levels of education and training, the availability and effect of ICT equipment among others was collected through administration of questionnaires to a sample of 133 staff members including senior management, middle and support staff members within the Parastatal. Data was gathered from the population sample and analyzed in order to derive the necessary information. Out of the 133 respondents targeted by the study, 108 responded, giving a response rate of 81.2%.

4.2 Descriptive Statistics

Descriptive statistics such as frequency counts, percentages and means were engaged to analyze data. Data was presented in form of tables, pie charts and graphs. Each objective was presented and interpretation specified to authenticate the research questions.

4.2.1 Staff Gender

The researcher obtained gender distribution within NWCP staff. The reason behind this is because gender is alleged to be among aspects that affect how people hold such advances as those in ICT. It was established out that 59.3% of the interviewed respondents were male and 40.7% were female. This was understandably a sign that the study established a mixed view on the responses for creating unbiased inferences as shown in table 2.

Table 3: Gender Distribution

	Frequency	Percentage	Cumulative Percentage
Male	64	59.3	59.3
Female	44	40.7	100.0
Total	108	100.0	

4.2.2 Staff Age

The researcher sought to ascertain the trend in age at NWCPC. This was to allow the researcher get diverse responses from dissimilar age groups in a bid to understand any association that between age and ICT usage among staff in the parastatal. It was established that 29.6% of the respondents were less than 30 years, 37.1% between 30 and 40 years and 33.3% were above 40 years of age. From the results of the study, it concludes that most of NWCPC employees at their head office fell within the group of 30 years and below. This is shown in Table 4 below.

Table 4: NWCPC Staff Age Bracket as at year 2013

	Frequency	Percentage	Cumulative Percentage
30 and below	32	29.6	29.6
31-40 Years	40	37.1	66.7
Above 40	36	33.3	100.0
Total	108	100.0	

4.2.3 Staff Education Level

Amongst the interviewed staff, the researcher sought to know their education ranks in order to obtain the relation between education levels and the use of ICT in the parastatal. The research found out that; 61.1% had university education, 26.9% had college education, 10.1% had secondary education and 1.9% had primary academic qualification. From the results of the study showed that NWCPC employees were degree holders. Nevertheless, with the majority of the respondents being degree holders, it meant that they were well informed and furnished this study with better information which added value. This is shown in the following table 5 below.

Table 5: Staff Education Levels

	Frequency	Percentage	Cumulative Percentage
University	66	61.1	61.1
College	29	26.9	88.0
Secondary	11	10.1	98.1
Primary	2	1.9	100
Total	108	100.0	

4.2.4 Staff ICT Training

Different staff trainings were also studied in order to find out how training and ownership of such trainings influenced staff adoption and use of ICT. By here, the researcher would obtain the kind of training that should be instructed to staff to enhance their ICT performance. The results showed that only 2.8% of the workers had computer science skills, 204% had GIS training, 7.4% had taken part in ICT training, 4.6% with IT training and 9.3% having skills in Management Information Systems (MIS). However, 42.5% of employees had been trained Financial Management Systems (FMS) and 13% had undergone no training. From the findings, it was noted that majority of staff had no ICT training. This is shown in table 6 below.

Table 6: ICT Training Competencies

	Frequency	Percentage
Computer Science	3	2.8
Geographical Information System	22	20.4
Information and Communication Technology	8	7.4
Information Technology	5	4.6
Management Information System	10	9.3
Financial Management Systems	46	42.5
No Training	14	13.0
Total	108	100.0

4.2.5 Staff Work Experience

The Researcher obtained staff experience based on the number of years worked to make inferential conclusions on working experience and ICT use amid the staff at the NWCPC. The researcher established out that 41.3% of the staff had more than 10 years working experience, 18.3% ranged between six and ten years of experience, 22.1% had between one and 6 years of working experience and 18.3% had less than one year of working experience. This is shown in Table 7 below. From the findings, it can be said that majority of NWCPC staff had more than 10 years of working experience.

Table 7: Staff Work Experience

	Frequency	**Percentage**	**Cumulative Percentage**
<1 Yr	19	18.3	18.3
1-5 Yrs	23	22.1	40.4
6-10 Yrs	19	18.3	58.7
>10 Yrs	43	41.3	100.0
Total	104	100.0	

4.2.6 Staff Level of Operation

The researcher obtained out the staff operation levels which included; senior management (6.7%), middle management (44.2%) and support staff (49%). Based on this data, the researcher linked job level and capacity to use ICT at NWCPC. Table 8 below stipulates the employee operation levels. Therefore, it's eminent from the study that majority of employees operate within support level.

Table 8: Level of Operation

	Frequency	**Percentage**	**Cumulative Percentage**
Management	7	6.7	6.7
Operational	46	44.2	51.0
Technical/Support	51	49.0	100.0
Total	104	100.0	

4.2.7 NWCPC Operational Departments

It was significant for the researcher to identify the departments under which the employees operated. This data was deemed critical because the extent at which employees are likely to use ICT dis subject to the type of work dictated by their departments. It is expected that some departments may need the use of ICT more than others subject of their work nature. As indicated in Table 9 below, great proportions of the interviewed staff were under Finance department with 33.4%, Technical Planning and design recorded 15.7%, Construction and Electromechanical had 25.0%, 14.8% were from the Human Resource and Administration, and 11.1% from the Department of Legal and Corporate. The study established that the Department of Finance and Administration had the largest proportion of employees who required the use of ICT to perform their jobs.

Table 9: NWCPC Operational Departments

Department	Frequency	Percentage
Technical Planning and Design	17	15.7
Construction and Electromechanical	27	25.0
Human Resource and Administration	16	14.8
Legal and Corporate	12	11.1
Finance	36	33.4
Total	108	100.0

4.3 Staff Training on ICT and ICT Use

Computer training study on NWCP staff was as well conducted. This was to ascertain the kind and level of computer training among the staff. This insight was imperative in making any inferences regarding the level and efficiency of ICT use as well as the principal constraints as a result of insufficient training.

Results obtained from the study indicated that; 25% of the employees attained computer training at university level, 3.8% at the vendor training level, 51% at college level, 14.4% of the workers went through in-house computer training and 5.8% of NWCPC staff trained themselves as indicated in figure 4 below. From the study outcomes, it can be said that most of NWCPC staff attained computer training at college level. ICT training provides a rich, adequate and diverse pool of quality service by parastatal employees which is the critical construct focused in this study.

Table 10: Training on Computers

Training	Frequency	Percentage
University Training	27	25
Vendor Training	4	3.8
College Training	55	51
In-House Training	16	14.4
Self Training	6	5.8
Total	108	100

4.3.1 Staff Computer applications competency

Apart from the style of training by which NWCPC employees acquired their computer skills, the researcher sought to know the extent to which the staff understood relevant computer applications necessary for effective use of ICT in the parastatal. The respondents were therefore required to highlight the applications that they were familiar with. This would enable the researcher know the level to which ICT technology is being used in the institution. Moreover, this knowledge was useful as part of the research to find out why some of these basic applications are not in use. From the findings, it was deduced that 104 out of 108 respondents interviewed had training in the Microsoft Office suite. This constituted 96.3% of the respondents. Microsoft Office is therefore the most important popular computer application in the institution. 34.3% of the respondents are competent in page maker applications. Majority of the respondents confirmed not to be competent in Quick books

(68.5%), Sage (72.2%), Pastel (71.3%), AutoCAD (93.5%), Financial Management System (64.8%), ArcGIS (97.2%), Cloud Computing (63.0%), Human Resource Information Systems (58.3%), Microsoft NAV (51.2%), Graphic Design (68.3%), Programming (95.4%), and Desktop Publishing (58.3%). 5.6% of the respondents confessed to have no competence in using the applications. Table 10 below indicates the proportions of the respondents with and without competence in the named computer applications.

Table 11: Staff Computer Application competency

Application		Frequency	Percentage
MS Office	Yes	104	96.3
	No	4	3.7
Quick books	Yes	34	31.5
	No	74	68.5
Sage	Yes	30	27.8
	No	78	72.2
Pastel	Yes	31	28.7
	No	77	6.5
AutoCAD	Yes	7	93.5
	No	101	63.5
IFMIS	Yes	38	35.2
	No	70	64.8
ArcGIS	Yes	3	2.8
	No	105	97.2
Cloud Computing	Yes	40	37.0
	No	68	63.0
HR Information System	Yes	45	41.7
	No	63	58.3
MS NAV	Yes	52	48.1
	No	56	51.9
Graphic Design	Yes	34	31.5
	No	74	68.5
Programming	Yes	5	4.6
	No	103	95.4
Desktop Publishing	Yes	45	41.7
	No	63	58.3
PageMaker	Yes	37	34.3
	No	71	65.7

The results showed that majority of the staff had no competence in most of the named

computer applications except for MS Office and PageMaker.

4.3.2 ICT Usage

In order to attain the objectives of the study, the researcher required the respondents to give personal opinions on some of the activities and steps that have been taken to enhance the usage of ICT in the institution. Varied responses on personal contentions concerning the same were received. All the respondents agreed that at one point or the other, ICT is useful in their job; whether by making work easier or improving efficiency to client service.

In order to determine the effect of training on the use of ICT, the researcher sought to find out the activities that NWCPC undertake in order to enhance or promote the use of ICT through capacity building. 96.2% of the interviewed responded positively to the statement that NWCPC encourages its staff to use ICT in their work; 3.8% employees were not convinced about this. On the same note, it was reported by 65.4% of the interviewed employees said that NWCPC also organizes specialized instructions on the use of ICT while 34.6% disputed this. In addition, it was agreed by 79.8% of the respondents that NWCPC provides guidance in ICT applications, 20.2% of them disagreed. As reported by 73.1% of the respondents, the management of NWCPC influences training for ICT users. 26.9% of them did not agree with this. It was amongst these objectives of the researcher to find out the influence of training and usage on the use of ICT.

The attainment of this objectives necessitated gathering of information concerning staff competency and frequency of use of computers. 88.5% of the respondents confirmed that they find the learning of ICT operation easy. This attributed to the quality of training that NWCPC offers its staff as well as the facilities available for the same. Therefore, 11.5% of the respondents did not find it easy. Moreover, 107 out of the 108 staff interviewed affirmed that the use of ICT could increase flexibility in their job performance. This implies ICT usage improved the efficiency of service delivery in government parastatals. Only one employee disagreed with this. 96.2% of the respondents agreed to the statement that monitoring and evaluation requires the involvement of all concerned stakeholders in the use of ICT while the rest did not agree. While 84.6% of the respondents affirmed that NWCPC had skilled users of ICT, 100% of the interviewed confessed that ICT was useful in their

jobs. However, only 16.3% of them used computers in their duties and the rest (83.7%) do not use it at all. This is indicated in the following table 11 below.

Table 12: ICT Usage

		Frequency	Percentage
ICT is useful in my job	Yes	104	100
NWCPC encourages staff to use ICT	Yes	100	96.2
	No	4	3.8
NWCPC organizes specialized instruction on use of ICT	Yes	68	65.4
	No	36	34.6
Management influences training for ICT users	Yes	76	73.1
	No	28	26.9
I find learning to operate ICT easy	Yes	92	88.5
	No	12	11.5
I use ICT frequently	Yes	98	94.2
	No	6	5.8
NWCPC provides guidance in ICT applications	Yes	83	79.8
	No	21	20.2
The use of ICT can increase flexibility in job performance	Yes	103	99.0
	No	1	1.0
NWCPC has skilled users of ICT	Yes	88	84.6
	No	16	15.4
Monitoring and evaluation requires involvement of all concerned stakeholders in use of ICT	Yes	100	96.2
	No	4	3.8
Use of computers to carry out duties	Yes	17	16.3
	No	87	83.7

4.4 Funding and ICT Usage

NWCPC employees were tasked to select the key factor influencing the use of ICT in their offices amongst funding, technical skills, ICT facilities, staff resistance and technical skills. These would be helpful since the researcher would make various recommendations on how best these factors could be harmonized to better embrace ICT use in parastatals. It was found out that the main factor was inadequate or total lack of funding which was placed at 32.41%, while inadequate technical skills in computer use contributed 15.74%, 28.70% claimed of insufficient ICT facilities, 17.59% of the staff felt staff resistance was the main factor and wrapping up the list

was other factors that contributed 5.56% of the total respondents. The outcome is shown in the following figure 5 below.

Table 12: Funding and ICT use

	Frequency	Percentage
ICT Funding	35	32.41
Technical Skills	17	15.74
ICT Facilities	31	28.70
Staff Resistance	19	17.59
Others	6	5.56
Total	108	100

On the other hand, NWCPC employees were tasked with questions regarding funding and ICT usage in a Likert scale of 1 (Strongly disagree) to 5 (Strongly Agree). Table 12 below represents a summary of their responses.

Table 13: Funding and ICT Usage

	N	Minimum	Maximum	Mean	Std. deviation
Allocation of adequate funds	108	1.00	5.00	2.9256	.76990
Adequate resources for ICT infrastructure upgrade	108	2.00	5.00	3.2142	.55701
All stakeholder involvement in ICT implementation	108	1.00	5.00	3.7445	.53547
ICT unit well-funded with adequate PCs for use	108	2.00	4.00	2.8817	.35745

Well-equipped ICT laboratories	108	1.00	5.00	2.7093	.48182
Fast internet connectivity	108	1.00	5.00	3.9014	.45847
Fast response from ICT support department	108	2.00	5.00	3.0017	.41057
Regular servicing of ICT equipment	108	2.00	5.00	3.1782	.55454
Competent and qualified staff	108	1.00	5.00	4.1843	.32473
Aggregate Score	**108**			**3.30454**	**.49444**

From the findings, respondents had an aggregate mean of 3.3054 which indicated that they generally agreed that funding influences ICT usage in parastatals.

4.5 Availability of ICT Facilities

The study investigated if NWCPC regularly budgeted for ICT facilities. Table 13 shows a summary of the staff responses with respect to the availability of facilities.

Table 14: ICT Facilities

	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
Regular budget allocation on ICT facilities	108	1.00	4.00	2.5876	.84514
Good performance on available ICT equipment	108	2.00	5.00	3.4385	.35817

PC unit allocation per staff	108	2.00	5.00	3.9452	.23547
ICT facility donation from donors	108	2.00	4.00	2.8957	.60846
Management support on ICT facilities	108	1.00	5.00	2.8893	.48182
Regular upgrade of ICT facilities	108	1.00	4.00	2.3004	.59820
Aggregate Score	**108**			**3.00945**	**.52121**

From the summary on table 13 below, it's clearly seen that employees agree with an aggregate mean of 3.00945, thus supporting the study argument on how availability of ICT facilities influences ICT usage on government parastatals.

4.6 Resistance to Change

The study further investigated the influence of staff resistance on ICT usage. Table 14 presents descriptive findings on staff resistance.

Table 14: Staff Resistance to Change

	N	Minimum	Maximum	Mean	Std. Deviation
Resistance is the initial reaction to change	108	1.00	5.00	2.1732	.47851
Correction to a wrongly implemented change/procedure	108	2.00	5.00	3.2894	.39455
Feedback to change with improvement suggestion	108	2.00	5.00	3.9452	.27885

Management failure to keep agreement with staff leads to future change resistance	108	3.00	5.00	3.7910	.34128
Management-Staff communication is key to change	108	3.00	5.00	2.8693	.17364
Anger, negligence, and withdrawal are change resistance symptoms	108	2.00	5.00	2.9841	.38146
Staff change support with their involvement	108	4.00	5.00	4.4031	.10410
Aggregate Score	**108**			**3.35076**	**.307484**

The aggregate mean was found to be 4.1525 from the research respondents. This indicated a strong agreement to the fact that staff resistance to change greatly influences use of ICT in organizations.

4.7 Regression Analysis

The study variables have a curvilinear association thus demanding for the use of the Analysis of Variance (ANOVA) for the development of a predictive model. From the correlation matrix, regression analysis was used to develop a model co-relating influential factors (independent variables) and parastatal ICT usage (dependent variable). The use of the regression analysis was to co-relate the variables and with the aim of coming up with prediction model.

4.7.1 Model Summary for Parastatal ICT Usage

The research further examined regression analysis of the factors influencing use of ICT in government parastatals. From the correlation matrix, a model summary for ICT usage in parastatals was derived, as shown in table 15.

Table 15 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.340	.114	.068	.3957	1.497

From the above model summary, 11.4% of variations in the dependent variable can be clarified by changes in the independent variables.

4.7.2 Analysis of Variance (ANOVA)

This analysis determines if mean scores of the factors influencing use of ICT in government parastatals differ significantly from one to another. It also finds out whether the variables interrelate significantly with one other.

Table 16 ANOVA for Overall ICT usage

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.138	5	.472	2.457	.026
	Residual	14.544	103	.217		
	TOTAL	**16.682**	**108**			

The ANOVA was achieved from the correlation matrix and then calculated by dividing the variations of the group averages by the expected variations. From table 15, the results prove

that the significance of F statistics is 0.026 that is smaller than 0.05 confidence level. Thus, it infers that there is a significant relation between the influential factors and ICT usage in government parastatals. An F ratio of greater than 1 indicates that every factor has an effect on ICT usage. In table 15, F = 2.457 and this indicates that all the factors identified have significant influence on ICT usage.

4.7.3 Regression Coefficients

An approximation of the model coefficients originating from the correlation matrix was computed via a study of the dependent and independent variables. The predictable co-efficient are shown on table 17.

Table 17 Coefficients Matrix

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	Std. Error	Beta		
1	(Constant)	2.501	.446		4.182	.000
X_1	Staff ICT training	.217	.095	3.4444	3.6374	.041
X_2	ICT department funding	.231	.091	3.6135	3.8182	.019
X_3	Availability of ICT facilities	.016	.084	3.7048	3.8008	.791
X_4	Staff resistance to change	.019	.104	3.7970	3.9845	.802

A prediction model for the factors influencing use of ICT use at NWCPC was derived using the correlation matrix coefficients. Therefore the following equation was derived from the regression coefficients in the matrix.

$$Y = 2.501+3.01047X_1+3.30454X_2+3.00945X_3+3.35076X_4$$

The ANOVA helped in finding out if the independent variables have a significant effect on the dependent variable. The ANOVA aided the researcher to develop a predictions model on the factors influencing ICT usage in government parastatals.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

The study sought to discover the factors influencing the use of ICT in government parastatals. The study carried out a survey with NWCPC staff to get reliable, consistent and relevant data that would then support in creating valid and sound conclusions about the study subject.

5.2 Summary of Findings

The study made inference on the research hypotheses that; ICT funding, staff ICT training, availability of ICT facilities and staff resistance to change have no significant influence on ICT use in parastatals. The study had R^2 of 0.114. This means that 11.4% variation of ICT usage is explained/predicted by joint contribution of ICT funding, staff ICT training, availability of ICT facilities and staff resistance to change. From the study findings, it can be concluded that to a larger extent, there is minimal use of ICT in parastatals, as depicted in the NWCPC case study.

ICT is very valuable in executing several organizational tasks most jobs. Think of a day in office without a computer, office applications or any other related office softwares, systems, hardware and applications. Information processing that could take weeks or even months can now be executed with seconds, at the comfort of your phone or laptop. This is a factual and it was conveyed out synonymously by all the survey respondents, who pointed out how ICT can change the way people think, work, the kind of integrity and performance they get, the effectiveness and efficiency of their work among other several aspects. Also, it is reasoned that ICT has the capacity to surge flexibility in work performance among employees in an organization, on an overall scale.

5.2.1 ICT Funding

The study sought to find out the extent to which ICT funding influenced the use of ICT in parastatals, with a case study of NWCPC in Kenya. Research findings revealed that ICT funding has a positive and significant effect on ICT usage with an aggregate mean of 3.30454. From the findings ICT funding influenced the use of ICT at NWCPC.

Inadequate funding is the utmost impediment in the use of ICT in government parastatals. This was sturdily brought out in several occurrences where NWCPC allocates insufficient funds for ICT growth, offers insufficient financial provisions for upgrading the ICT sector in the parastatal or in any other circumstances where by it lacked enough funds to equip its ICT laboratories. It was discovered that provision of sufficient funds for ICT led to an improved ICT usage amid employees in an organization. Equally, funds availability in upgrading ICT infrastructure in an organization was intensely correlated to how employees used ICT in executing their day to day tasks. Any increase in organizational ICT funding would as well lead to an increment in ICT usage as there will be improved, better and upgraded ICT systems and infrastructures. The study also found out that that resource availability in NWCPC affected ICT infrastructural upgrade, positively and negatively.

5.2.2 Staff ICT Training

Improvements in competencies in many fields by the employees have negative impacts on use of ICT in these fields. As people get additional competency in their expertise, they get more disconnected from ICT use and this has led to adverse hindrance in ICT adoption and use. Better-quality training in computer and system use in contrast, was seen to rally NWCPC's determination to tap the intellectual and human resources. In this manner, it was noted that NWCPC emboldens employees to use ICT facilities and even organizes specialized events and instruction to improve ICT usage, where their staff had improved training in computer usage. In the same note, enhanced training in computer usage leads to an increase in likelihoods of ICT usage in offices. Therefore, there is a significant relation between training on computer usage and ICT usage in organizations. Consequently, enhanced training in ICT use increases ICT performance to better levels. In an indifferent event met, training on computer usage doesn't automatically mean that employees would put on such skills in their day to day duty execution. However, this relation was found to be less significant.

5.2.3 Availability of ICT Facilities

The study sought to find out the extent to which the availability of ICT facilities influenced the use of ICT in parastatals, with a case study of NWCPC in Kenya. Research findings revealed that availability of ICT facilities had a positive and significant effect on ICT usage with an

aggregate Mean of 300945. From the findings adequate ICT facilities influenced the use of ICT in parastatals.

Additional reason why NWCPC employees are not entirely using the ICT facilities is because there's a shortage of the ICT facilities themselves within the organization. The factor of ICT facilities in organization laboratories defines employees' level of usage of these facilities in their duties. The inadequacy of ICT facilities at NWCPC has adversely impacted ICT adoption and usage in the parastatal.

5.2.4 Resistance to change

The study sought to find out the influence of staff resistance to change on the use of ICT in government parastatals, with a case study of NWCPC in Kenya. Research findings revealed that indeed staff resistance to change had a positive and significant effect on ICT usage with an aggregate Mean of 3.35076. From these findings, staff resistance to change influenced the use of ICT in parastatals.

Poor mentality towards utilization of ICT facilities among employees significantly impacts ICT usage in government parastatals. Individuals who trust that ICT can enhance adaptability and flexibility in their work execution will probably utilize it, as a method for boosting their job execution. There exists an extremely solid relationship between these two variables and this can give a superior ground to upgrade ICT reception and use in workplaces.

5.3 Discussion of the findings

The study sought to explore the factors influencing use of ICT in government parastatals, with a case study of NCWPC in Kenya. The purpose of this discussion was to look at the findings of the study, compare the findings with what has been found out by other researchers and presented arguments for the findings based on what was discovered during literature review.

5.3.1 ICT Funding and ICT usage

Research findings revealed that ICT funding had a positive and significant effect on ICT usage with an aggregate mean of 3.30454. Weller (2004) asserted that letdown by parastatals to grasp ICT development has been as a consequence of insufficient subsidizing by the legislature (Maya 2007). Without financial support of the government and assistance from

development partners' introduction, ICT in parastatals will continue to remain an expensive venture in spite of the fact that the cost of hardware and software has been coming down over the years (Moesta, 2005).

5.3.2 Staff ICT Training and ICT Usage

The study findings revealed that staff ICT training had a positive and significant effect on ICT usage. Harrison, (2005) stated that learning is based on the training process. Training is a procedure of working up certainty of representatives at working environment as far as better execution. Any learning action that is formally outlined keeping in mind the end goal to accomplish indicated learning destinations. Bradley (2003) says that training is a procedure which is wanted to encourage realizing so individuals can turn out to be more compelling in doing parts of their work.

Associations could create and improve the nature of the present representatives by giving complete preparing bundle (Bartely, 1994). Concentrate on shows that putting resources into preparing representatives about critical thinking, basic leadership, collaboration, and interpersonal relations result in gainful associations level results (Barak, Maymon, and Harel, 1999).

5.3.3 ICT Facilities Adequacy and ICT Usage

Research findings revealed that availability of ICT facilities had a positive and significant effect on ICT usage with an aggregate Mean of 300945. According to Orodho et al. (2004) the availability of adequate ICT facilities will ensure smooth operation of parastatals, thus enhancing quality service delivery to citizens. ICT facilities include but not limited to: Hardware, software, databases and networks.

5.3.4 Staff Resistance to Change and ICT Usage

Research findings revealed that indeed staff resistance to change had a positive and significant effect on ICT usage with an aggregate Mean of 3.35076. Employees' imperviousness to this order, apparently out of extent with the typical hesitance to learn new innovations, indicated issues major to their suppositions about their expert practices and, to be sure, their exceptionally status (Krepton, 2002).

Kharlin (2000) says that regardless of how very much outlined and arranged a change program is, not everybody will sing its gestures of recognition. Workers oppose change for a wide assortment of reasons, extending from a direct learned difference over certainties to profound situated mental biases.

5.4 Conclusion of the Study

The aim of the study was to explore the factors influencing use of ICT in parastatals, with a case study of NWCPC in Kenya. Base on the literature review and research done by past studies, ICT funding, staff ICT training, ICT facilities adequacy and staff resistance to change were expected to have a significant effect on the use of ICT in parastatals.

ICT is a very promising tool in ensuring better professional performance among workers in any organization. As promising and beneficial as it is, it has not been fully tapped in government parastatals in order to realize maximum benefits from it. This arises from many factors ranging from financial, institutional, managerial, individual and mechanical among other factors. Parastatals should therefore develop capacities that ensure that the above challenges are promptly and conclusively dealt with. This will require everyone in the organization to take part as this will elevate programme success due to the perception that the programme is owned by all in that organization.

However, it should be remembered that ICT is a two-edged sword and thus, should be adopted with a lot of care lest it affects the adopters and users in an adverse manner. In any case, it is encouraged that organizations should only take up the beneficial aspects of ICT rather than the whole package. Care should be taken to balance between any perceived negative and positive attributes of this tool in the workplace and anywhere else where it is applicable. In light with the above, the organization management should thoroughly scrutinize an ICT product to establish its suitability in specific geo-cultural contexts and its effectiveness in enhancing job performance at a specific workplace. Considering all aspects and taking all precautions is one way of ensuring a sustainable ICT adoption in an organization.

5.5 Recommendations of the study

Grounded on the above deductions, the study made below subsequent recommendations in a

bid to improve the adoption and use of ICT in government parastatals:-

Government parastatals should come up with forums where they train all workers on how to use ICT facilities either during staffing or through provision of On-the-Job Training among already absorbed employees. This keeps them updated and relevant all the time in terms of handling the many and continuous developments in global technology. As such, the employees are able to handle any technological and/or ICT product that is presented to them. This will in return improve ICT performance as depicted by the research.

Legislations and regulations should be formulated and integrated in the organization's laws and policies to give it a binding and more authoritative touch. This will strengthen the sector and ensure strict and efficient enforcement of ICT programmes in organizations without facing such impediments as lack of cooperation and/or coordination among the staff. Since investing in ICT is a beneficial endeavor, the organization management should ensure that it is fully integrated into many if not all sectors of the organization. These sectors may include human resource, finance, administration, legal sectors among others. Once mainstreamed in all the sectors or departments, ICT will perform better in government offices with the help of the legal enforcements accompanying it.

The government parastatals should as well come up with best mechanisms on how to inform their working staff about the relevance of ICT in job performance and every other aspect of their professional spheres. Through this, they will cut down on numbers of employees with poor or negative attitude about ICT use. This will help them to solve some of the problems associated with poor and negative perceptions in adoption and use of ICT in the parastatals. By these, people knowing the importance of ICT, they will be encouraged to use the facilities in order for them to tap the greatest benefits from the facilities as well as minimize the levels of staff resistance change during implementation of new systems

All stakeholders should be involved in the ICT development programmes in parastatals. As shown by the research, there should be such a platform where every stakeholder is involved in these projects. Stakeholders in the public, non-governmental and private sectors are important to develop and implement ICT in organizations. This is of essence

since some of them will provide technical support, financial assistance while others will ensure effectiveness and efficiency in the programme implementation process. By involving all stakeholders in the society, there are high chances of a boosted accountability among programme personnel. The role of supervision to ensure greater levels of accountability is usually carried out by the civil society, an accountability watchdog in the current world full of unethical and self-centered people.

There is dire need for funding for ICT development and implementation in parastatals. Funding was found to be the main factor influencing ICT use in the parastatal. Therefore, for ICT infrastructure to be developed in the organizations there is a great need to look at how these organizations will access funding for ICT development and usage. Funds are needed to buy ICT facilities, service them, ensure their maintenance, and upgrade them among other services. The same funds need to train new and old staff on how to best embrace and integrate ICT services in their professional careers. The organizations should get more serious with looking for funds from the government, private and international parties in order to secure enough financial and institutional capital for this programme.

ICT is a very beneficial asset in an organization. The organization should therefore ensure that most of it is tapped in its everyday running and execution of roles. By this, the organization should ensure that all computer literate employees are always using their skills in their duties. This will curb such scenarios where ICT trained workers or employees are spotted not using computers or other ICT facilities in the execution of their roles. But how can this happen? The parastatals should lay stringent rules and/or guidelines that ensure such employees use ICT lest they face punitive measures. These guidelines should be comprehensively laid down to the employees and management and integrated in the laws and policy frameworks.

5.6 Suggestions for further research

The study was carried out in focusing NWCPC offices, representing all parastatals in Kenya. The researcher therefore recommends that similar study should be done in other government institutions to establish the factors influencing the use of ICT in the Kenyan parastatals.

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APPENDICES

Appendix 1: Letter to Respondent

Maisiba James Riogi

P.O. Box 29644-00100,

Nairobi.

14th Sep 2016.

To The HR & Admin department,

NWCPC, Nairobi.

Dear Respondent,

RE: MASTER'S (PPM) RESEARCH PROJECT

I am Maisiba James Riogi, a student at the University of Nairobi, pursuing a Master's Degree in Project Planning & Management (PPM). As part of my course work, I am required to undertake an independent primary research project on factors influencing the use of ICT in government parastatals with a particular focus at the National Water Conservation & Pipeline Corporation (NWCPC), Kenya.

The purpose of this letter therefore, is to introduce myself and request to be allowed to undertake research at NWCPC.

I will ensure that all data and information collected from the respondents shall be treated with utmost confidentiality and only used for academic purposes, unless otherwise stated.

Assistance accorded to me will be highly appreciated. Thank you.

Yours faithfully

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Appendix 2: Employees Questionnaire

This questionnaire is intended to collect information on the factors influencing the use of ICT in government parastatals, focusing National Water Conservation and Pipeline Corporation. Kindly provide answers to the following questions as honestly as possible. Responses will be treated with utmost confidentiality.

Section I: Personal information about respondents (Please Tick)

1. Sex: Male [ ] Female [ ]

2. Age

30 yrs and below [ ] 31 yrs - 40 yrs [ ] Above 40 yrs [ ]

3. Highest Education level:

Primary [ ] Secondary [ ] College [ ] University [ ]

4. Professional training acquired

Computer Science	[ ]	Information Technology	[ ]
Geographic Information Systems	[ ]	Management Information Systems	[ ]
Information Communication & Technology	[ ]	Financial Management System	[ ]
No training	[ ]		

Any other (specify) …….

5. Work Experience:

Less than 1 yr [ ] 1 to 5 yrs [ ] 6 to 10 yrs [ ] Above 10 yrs [ ]

6. Which of the following positions or levels do you operate

Senior Management level [ ]

Middle Management level [ ]

Support Staff level [ ]

7. Which department are you working for; (please tick [√])

Technical Planning & Design [ ]

Construction & Electromechanical	[ ]
Human Resource & Administration	[ ]
Legal & Corporate	[ ]
Finance	[ ]

Section II: S t a f f Training & Use of ICT

8. Please express your agreement with the following statements on ICT training and usage

Please indicate the level of training you have on computers by ticking [√]		
University Training	[ ]	[ ]
College courses	[ ]	[ ]
Vendor Training	[ ]	[ ]
In-house Training	[ ]	[ ]
Self-Training	[ ]	[ ]
Indicate whether you are competent in using the following applications by ticking [√]		
Ms. Word	[ ]	[ ]
Ms. PowerPoint	[ ]	[ ]
Ms. Access	[ ]	[ ]
Ms. Excel	[ ]	[ ]
Quick Books	[ ]	[ ]
Sage	[ ]	[ ]
Pastel	[ ]	[ ]
AutoCAD	[ ]	[ ]
Financial Management System	[ ]	[ ]
ArchGIS	[ ]	[ ]
Cloud Computing	[ ]	[ ]
Human Resources Information System	[ ]	[ ]

Microsoft Dynamic NAV	[ ]	[ ]
Graphics Design	[ ]	[ ]
Programming	[ ]	[ ]
Desktop Publishing	[ ]	[ ]
PageMaker	[ ]	[ ]
ICT Usage		
I find ICT useful in my job	[ ]	[ ]
NWCPC encourages Staff to use ICT	[ ]	[ ]
NWCPC organizes specialized instruction on use of ICT	[ ]	[ ]
Management influences training for ICT users	[ ]	[ ]
Learning to operate ICT systems is easy for me	[ ]	[ ]
I use ICT frequently	[ ]	[ ]
NWCPC provides guidance in ICT applications	[ ]	[ ]
The use of ICT can increase flexibility in job performance	[ ]	[ ]
NWCPC has skilled users of ICT	[ ]	[ ]
Monitoring and evaluation requires involvement of all concerned stakeholders in use of ICT	[ ]	[ ]
I do not use computer to carry out my duties	[ ]	[ ]

Section III : Funding & Use of ICT

9. What key factor affects the use of ICT

Funding [ ] Technical skills [ ] ICT facilities [ ] Staff Resistance [ ]

Other (specify)…….

Please indicate the extent you are satisfied with each of the following statements by Please tick [√] **(1) Strongly disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly Agree**					
	1	**2**	**3**	**4**	**5**
NWCPC allocates adequate funds for ICT	[ ]	[ ]	[ ]	[ ]	[ ]

There are enough resources for upgrading ICT infrastructure	[ ]	[ ]	[ ]	[ ]	[ ]
In the implementation of ICT activities, all stakeholders should be involved	[ ]	[ ]	[ ]	[ ]	[ ]

ICT Unit is well funded and there are enough computers for use	[ ]	[ ]	[ ]	[ ]	[ ]
NWCPC ICT laboratories are well furnished	[ ]	[ ]	[ ]	[ ]	[ ]
The response to internet connectivity is excellent	[ ]	[ ]	[ ]	[ ]	[ ]
Response time for fixing problems is instant	[ ]	[ ]	[ ]	[ ]	[ ]
Equipment for use of ICT are serviced regularly	[ ]	[ ]	[ ]	[ ]	[ ]
NWCPC ICT staff are qualified and competent	[ ]	[ ]	[ ]	[ ]	[ ]

Section 1V: ICT Facilities

Please express your agreement with the following statements by ticking [√] **(1) Strongly disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly Agree**					
	1	**2**	**3**	**4**	**5**
NWCPC regularly budgets for ICT facilities	[ ]	[ ]	[ ]	[ ]	[ ]
ICT facilities in NWCPC support office functions and equipment's performance is good.	[ ]	[ ]	[ ]	[ ]	[ ]
You have a computer in your office	[ ]	[ ]	[ ]	[ ]	[ ]
NWCPC receives financial support from donor projects for	[ ]	[ ]	[ ]	[ ]	[ ]
There is organizational support e.g. finances for upgrading	[ ]	[ ]	[ ]	[ ]	[ ]
Your ICT systems are upgraded regularly	[ ]	[ ]	[ ]	[ ]	[ ]

10. Do you have internet access in your office?

Yes [ ] No [ ]

11. Do you have a telephone in your office?

Yes [ ] No [ ]

Section VI: Staff Resistance to change

Please express your agreement with the following statements by ticking [√] **(1) Strongly disagree (2) Disagree (3) Neutral (4) Agree (5) Strongly Agree**					
	1	**2**	**3**	**4**	**5**
When informed of significant change regarding the way things are done in my work area, my initial reaction would be to feel resistant	[ ]	[ ]	[ ]	[ ]	[ ]
If I feel a change/procedure has been implemented incorrectly, I will volunteer a corrective action.	[ ]	[ ]	[ ]	[ ]	[ ]
If asked for feedback regarding a newly implemented change, I am willing to provide feedback with suggestions for improvement if needed.	[ ]	[ ]	[ ]	[ ]	[ ]
Failure to keep an agreement with subordinates will result in a loss of trust between the managers and subordinate and invites resistance to future change.	[ ]	[ ]	[ ]	[ ]	[ ]
In order for change to be successful, it's imperative the line of communication between the employee and management remain free flowing and vibrant.	[ ]	[ ]	[ ]	[ ]	[ ]
Anger, dereliction, withdrawal, and indifference are all symptoms of change resistance. When a major change is planned employee suggestions are solicited.	[ ]	[ ]	[ ]	[ ]	[ ]
I would vigorously support a change in work place procedures if the reason for the change was effectively communicated to me and my advice solicited and implemented into the new procedures.	[ ]	[ ]	[ ]	[ ]	[ ]

Thank you for your cooperation