FACTORS AFFECTING THE ADOPTION OF INFORMATION AND COMMUNICATION TECHNOLOGY BY DEPARTMENT OF REFUGEE AFFAIRS, MINISTRY OF IMMIGRATION AND REGISTRATION OF PERSONS-DADAAB

SAMUEL EVANS A. NYUMBA

A research project submitted in partial fulfillment for the requirement of the degree of masters in project planning and management at the University of Nairobi.

2013

DECLARATION.

This research project report is my original work and has not been presented to any other university for examination.

Signed: …… Date…….

SAMUEL EVANS A. NYUMBA

L50/81326/2012

Supervisor Declaration

The research project report was submitted with my approval as the university supervisor**.**

Signed.……... Date……

DR. DOROTHY N. KYALO

Senior lecturer,

Department Of Extra -Mural studies,

College of Education and External studies

University of Nairobi

DEDICATION

I dedicate this research project to my loving family and friends for their support and unconditional love. I love you all and May God almighty watch over you always.

ACKNOWLEDGEMENT.

I am grateful to my colleagues in the graduate school at University of Nairobi for furnishing me with detailed advice on how to approach my research project. Much appreciation goes to my supervisor for her tireless effort to ensure that this research project is complete and of great help to those who would wish to implement it.

I am grateful to Department Of Refugee affairs employees for the trouble they took in responding to my endless queries and for their insider information on the factors that affects the adoption of ICT by department of refugee affairs.

TABLE OF CONTENTS

DECLARATION ..... **II**

DEDICATION ..... **III**

ACKNOWLEDGEMENT ..... **IV**

TABLE OF CONTENTS ..... **V**

LIST OF FIGURES ..... **VII**

LIST OF TABLES ..... **VIII**

ABBREVIATIONS AND ACRONYMS ..... **IX**

ABSTRACT ..... **X**

CHAPTER ONE: INTRODUCTION **1**

1.1 Background of the study 1
1.1.1 Profile Of Department Of Refugee Affairs 2
1.2 Statement Of The Problem 3
1.3 Purpose Of The Study 4
1.4 Objectives Of The Study 4
1.5 Research Questions/Hypothesis 4
1.6 Significance Of The Study 5
1.7 Delimitation Of The Study 5
1.8 Limitations Of The Study 6
1.9 Assumptions Of The Study 6
1.10 Definitions Of Significant Terms 6
1.11Organization Of The Study 7

CHAPTER TWO: LITERATURE REVIEW…..…… 9

2.1 Introduction. 9
2.2 Formulation Of ICT Policies And Adoption 9
2.3 Leadership Of Adoption Of ICT 10
2.4. I.CT INFRASTRUCTURE AND ITS EFFECTS 12
2.4.1 Service Level Management 14
2.4.2 Financial Management For IT Services 14
2.4.3 Capacity Management And Adoption Of ICT 15
2.4.4 Availability Management 15
2.5 The Conceptual Framework 17

CHAPTER THREE: RESEARCH METHODOLOGY 18

3.0 Introduction 18
3.1 Research Design 18

3.2TARGET POPULATION 19
3.3 SAMPLE SIZE AND SAMPLING PROCEDURE 19
3.4 RESEARCH INSTRUMENTS 19
3.5 VALIDITY OF THE RESEARCH INSTRUMENTS 20
3.5.1 RELIABILITY OF THE RESEARCH INSTRUMENTS ..... ……22
3.6 DATA COLLECTION PROCEDURE 21
3.7DATA ANALYSIS 22
3.8 ETHICAL CONSIDERATIONS 22
3.8.1.PROTECTION OF PARTICIPANTS 23
3.8.2 CONSENT 23

CHAPTER FOUR:DATA ANALYSIS, PRESENTATION AND INTERPRETATION 26

4.0 INTRODUCTION 26
4.1.1 QUESTIONNAIRES RETURN RATE 26
4.1.2 ITEMS ON THE DEMOGRAPHICS OF RESPONDENTS 27
4.1.3 AGE DISTRIBUTION OF RESPONDENTS 28
4.1.4 RESPONDENT'S ACADEMIC QUALIFICATION 28
4.2 FORMULATION OF ICT POLICIES AND ADOPTION OF ICT 30
4.3 ANALYSIS ON ITEMS OF LEADERSHIP AND ITS EFFECTS IN I.C.T 34
4.4 ANALYSIS ON ITEMS AFFECTING I.C.T ADOPTION 37
4.5 I.C.T ADOPTION AND SERVICE DELIVERY 40

CHAPTER FIVE: SUMMARY OF FINDINGS, DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATIONS .....ERROR! BOOKMARK NOT DEFINED.

5.1 INTRODUCTION ..... **ERROR! BOOKMARK NOT DEFINED.**
5.2 SUMMARY OF THE FINDINGS ..... **ERROR! BOOKMARK NOT DEFINED.**
5.3 DISCUSSION OF THE FINDINGS ..... **ERROR! BOOKMARK NOT DEFINED.**
5.4 CONCLUSIONS OF THE STUDY ..... **ERROR! BOOKMARK NOT DEFINED.**
5.5 RECOMMENDATIONS FROM THE STUDY ..... **ERROR! BOOKMARK NOT DEFINED.**
5.6 SUGGESTION FOR FURTHER RESEARCH ..... **ERROR! BOOKMARK NOT DEFINED.**

REFERENCES: 48

APPENDICES:.....56

LIST OF FIGURES

Figure 1 Conceptual framework.....18

LIST OF TABLES

TABLE 3.1: SAMPLE SIZE 19

TABLE 3.2: OPERATIONALIZATION 26

TABLE 4.1: QUESTIONNAIRES RETURN RATE 26

TABLE4.2: DISTRIBUTION OF RESPONDENTS BY GENDER 27

TABLE 4.3: AGE DISTRIBUTION OF RESPONDENTS 28

TABLE 4.4: RESPONDENTS ACADEMIC QUALIFICATION 29

TABLE 4.5: RESPONDENT'S LENGTH OF SERVICE 30

TABLE 4.6 RESPONSE AS TO WHETHER I.C.T WAS IMPORTANT 33

TABLE 4.7 RESPONSE WHETHER THERE WAS I.C.T POLICY 32

TABLE 4.8 RESPONSE WHETHER POLICY WAS RELEVANT 32

TABLE 4.9 RESPONSE WHETHER GOVERNMENT GRANTED EXTRA BUDGET FOR I.C.T 33

TABLE 4.10 RESPONSE AS TO WHETHER THERE WAS COLLECTION OF GRANTS FOR EXPENSES 34

TABLE 4.11 TOP MANAGEMENT SUPPORT ON I.C.T ADOPTION 35

TABLE 4.12 ORGANIZATIONAL STRUCTURE AND DECISION MAKING 36

TABLE 4.13 RESPONSE AS WHETHER THERE WAS I.C.T. VISION OR STRATEGY 36

TABLE 4.14 RESPONSE FOR WWW CONNECTIVITY 37

TABLE 4.15 RESPONSE AS TO WHETHER EMPLOYEES WERE GIVEN AN OPPORTUNITY TO LEARN 37

TABLE 4.16 RESPONSE ON FACTORS LIMITING THE USE OF I.C.T. 38

TABLE 4.17 RESPONSE FOR SOURCE OF POWER 39

TABLE 4.18 RESPONSE FOR BLACKOUT 39

TABLE 4.19 EVIDENCE OF BETTER SERVICE DELIVERY 40

TABLE 4.20 RESPONSE OF INFLUENCE OF I.C.T ON MANAGEMENT 41

ABBREVIATIONS AND ACRONYMS

AFIS- automated finger print system

CTD- conventional travel document

DRA- Department of refugee affairs

EAC- East Africa community

ICT- Information communication and technology

ID – Identity card

NGO – Non Governmental organization

PPP- Public-Private Partnerships

SADC- Southern African Development Community

SMS- short messaging services

SPSS- Statistical Package for the Social Sciences

SLAs -Service Level Agreements

TCIP- Transparency Communication Infrastructure Project

UNHCR- united nation higher commissioner for refugees

ABSTRACT

The focus of the study was to assess the factors affecting the adoption of information and communication technology by the department of refugee affairs. The objectives of the study were to determine the extent to which formulation of ICT policies affects adoption of ICT by the department of refugee Affairs under the ministry of Immigration and registration of persons in Kenya; to determine the extent to which leadership affects adoption of information and communication technology adoption at the department of refugee affairs and lastly to determine the extent to which ICT improves service delivery of DRA. The study used descriptive design while stratified sampling procedure was used. A total of 91 respondent participated to this study. Data was collected using a questionnaire as well as an interview schedule. The data was analyzed with the aid of SPSS- statistical package for social Sciences. The results revealed that Implementation of ICT adoption at DRA was successful with 48 percent of the respondents assessing the change not successful and 62 percent holding the contrary view. The study further revealed that the factors that have affected the adoption of ICT by the department of refugee affairs were lack of awareness of the government policy on ICT adoption by its employees. Coupled with that was the leadership through the organizational structure which was felt by the employee to be inflexible and too bureaucratic

The analysis revealed that the organizational structure is too rigid and inflexible having evolved in the monopoly era and does not allow for decentralization in decision making hence not strategy supportive. The study also concludes that the most limiting factors to use of technology were, infrastructure issues, concerns over security, outdate technology, attitude of staff and cost of the ICT. Lack of a reliable source of power also limited ICT adoption because the whole of the refugee camp is not connected to the national grid and as such depended on generators. Lastly the study agrees that ICT adoption leads to better service delivery in form of time saving, error reduction rate, management decisions, speeds transaction, accurate record keeping, easy communication and makes enquiries faster.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Information and Communication Technology (ICT) is defined as any technology used to support information gathering, processing, and distribution and use (Beckinsale and Ram, 2006). The definition taken in this paper classifies ICT into information technologies, telecommunication technologies and networking technologies (Nicol, 2003). This covers all forms of technologies such as computers, internet, and websites as well as fixed-line telephones, mobile phones and other wireless communication devices, networks, broadband and specialised devices (Manueli, Katu and Koh, 2007). Khalifa (2000) indicates that it is a term that generally covers the harnessing of electronic technology for the information needs of a business at all levels.

From a stream of ICT literature that focuses on the small firm sector, this research takes the ICT adoption approach (Beckinsale and Ranu 2006; Zappala and Gray, 2006; Manueli et al, 2007) to advance the understanding of technology uptake among businesses and government entities in developing nations within East African Community (EAC) and Southern African Development Community (SADC).

More specifically the research identifies the key driving and inhibiting factors, including some barriers of ICT adoption and their contextual significance and implications to natural government policy makers. Countries that have harnessed the potential of information and communication ICTs) have attained significant social and economic development. In addition, they are rapidly transforming into information and knowledge-based economies. The government therefore recognises the role of ICT in the social and economic development of the nation and has

promulgated a national ICT policy based on the economic recovery strategy for Wealth and Employment creation (2003-2007). The Face book internet service provider is driving ICT adoption in Africa. It is amazing to hear that almost everyone has a face book account.

Not only that the computer technicians were seeing a spike in bandwidth usage directly tied to face book. The consensus of group marketing and technical experts at African ICT companies said that face book was creating a demand for their services. The current clients wants faster internet connectivity to download the images and videos sent their way via face book and more technology cameras, videos and image editing software.

With the emergence of information and communication technologies (ICTs), and e-Government, it is possible to improve efficiency and effectiveness of internal administration within government and to re-locate government service from government offices to locations closer to the citizens (Gichoya, 2005). There is a growing consensus that the adoption of ICT in the developed countries has been associated with significant improvements in performance.

Diga (2009) in an article opines that Face book has over 300,000 users in Kenya, it is the most popular site in South Africa and is growing by 20,000 new users per month in Nigeria and Ghana three times the United States growth. Face book is encouraging growth with interfaces in Swahili and Afrikaans with Zulu and Kosa on the way.

1.1.1 Profile of Department of refugee affairs

Kenya being a signatory to the 1951 United Nations Convention, the 1967 Protocol and the 1969 Organization of African Union Convention, continues to offer protection to refugees and asylum seekers. Due to these conventions, Kenya continues to offer protection to refugees and asylum seekers.

In the early 1990's Kenya experienced a sudden influx of refugees fleeing conflicts in the neighboring countries of Sudan, Ethiopia and Somalia. By 1992, there were 420,000 refugees, the majority being from Somalia, Sudan and Ethiopia. Due to this increase UNHCR was requested to take over the process of determining Refugee status.

The enactment of the Refugee Act 2006 transformed the Refugee Secretariat into the Department of Refugee Affairs in the Ministry of State for Immigration and Registration of Persons.

There are two refugee camps in Kenya namely; Kakuma and Dadaab refugee camps. There are about 200,000 and 63,000 refugees living in Dadaab and Kakuma Refugee camps respectively. There are also about 40,000 refugees living in the urban centers to the period before independence, however after independence the government set up a secretariat in the Ministry of Home affairs to handle refugees' documentation, registration and settlement programs after independence.

1.2 Statement of the Problem

Today over 60 services are delivered across 18 government entities serving persons who are citizens, non citizens and establishment (business, NGOs and state corporations).The key challenges with the current state of service delivery include the paper based information. Through that information is gathered through paper forms which brings about inefficient processing steps, limits auditing, analysis and slows time to deliver. Secondly is the disparate aspects where many organizations are designed and operate services separate of other services. Thirdly cash payment procedures are slow (GOK 2007). Coupled with that is the fact that payments are either made in cash at the government offices or require submission of a receipt after payment at the national bank resulting in potential improper activities and inefficient processes. There is also inconsistent identification where valid documents for identification vary

across services and are all paper based. Added to that is the limited access to government offices location and online availability as well as the current laws and policies that do not reflect technology advances. Therefore lack of connections and information sharing leads to duplication and limited understanding of public needs (GOK, 2006). It is due to the above mentioned challenges that this research study intents to investigate the factors affecting the adoption of information and communication technology by the department of refugee affairs.

1.3 Purpose of the study

The purpose of the study was to investigate the factors that affect information and communication technology adoption by department of refugee affairs in Dadaab, Garissa County in an attempt to establish how the same can be implemented in the department of refugee affairs.

1.4 Objectives of the study

1. To determine the extent to which formulation of ICT policies affects adoption of ICT by the department of refugee Affairs under the ministry of Immigration and registration of persons in Kenya.
2. To explore the extent to which leadership affects adoption of information and communication technology adoption at the department of refugee affairs.
3. To examine how infrastructure affects adoption of ICT at the department of refugee affairs
4. To find out the extent to which ICT improves service delivery of DRA .

1.5 Research questions

This study was guided by the research questions below.

1. To what extent does formulation of ICT policies affects adoption of ICT by the department of refugee affairs under the ministry of Immigration and registration of persons in Kenya?

2. To what extent does leadership affect adoption of information and communication technology adoption at the department of refugee affairs?

3. To what extent has ICT improved service delivery of DRA?

1.6 Significance of the study

The main point of departure in this paper will be the examination of services delivered by DRA in managing refugee affairs taking into consideration the current ICT systems utilized or manual steps in the process of rendering their services to the refugees and the concerned users.

The factors influencing ICT adoption in DRA will be captured and how this has led to improvement of service delivery from traditional paper based manual process to ICT aided service delivery that will eventually translate to effective and efficient work performance in the long run.

Many organizations are now adopting ICT based management practices to help their businesses move to the next level. They may therefore find this research helpful as a basis of adopting ICT to management practices and service delivery to their target clients, hence meeting their organizational goals and client needs in the most effective way. Finally, customer satisfaction is achieved and competitive edge is gained in world of competition. Scholars and researchers may use for reference as a basis for further research. The findings of this research can be used to conduct further studies in the area of ICT adoption and formulation practices in organizations.

1.7 Delimitation of the study

This study will be done in Garrissa County and it will limit itself to factors influencing adoption of ICT at the department of refugee affairs in Daadab refugee camp only.

1.8 Limitations of the Study

There has been considerable research conducted on ICT adoption in developed countries but in developing countries there is absence of the literature as far as factors explaining ICT adoption within the countries.

Insecurity which is being experienced currently in the region due to the AMISON Troops being deployed to the war torn Somali to fight against Al Shabaab militants is a major challenge for this study hence the researcher may not get enough information due to fear.

The area covered by the study lies in the North Eastern part of Kenya which is considered to be an arid area lacking tarmacked roads as well as other infrastructure hence the accessibility of the study area may pose a challenge to the researcher.

1.9 Assumptions of the study

This study assumes that the sampled population represented the general population of employees at the department of refugee affairs. It also assumed that information given was correct and free of bias. Another assumption is that ICT has not been adopted by DRA.

Lastly the study assumes that the respondents will be truthful to them-selves and give the correct information.

1.10 Definitions of Significant Terms

Policies: It is a principle or rule to guide decisions and achieve rational outcomes. A policy is a statement of intent, and is implemented as a procedure or protocol. Policies are generally adopted by the Board of or senior governance body within an organization whereas procedures or protocols would be developed and adopted by senior executive officers. Policies can assist in both subjective and objective decision making.

Leadership: A process of social influence in which one person can enlist the aid and support of others in the accomplishment of a common task.

Ushahidi- It is a Swahili word, a crowd sourcing tool that distributes and exchanges information pertaining to social and political crises.

Wide area network – A Computer network that covers a broad area, any network whose communications links cross metropolitan, regional, or national boundaries.

Service delivery: a set of principles, standards, policies and constraints used to guide the design, development, deployment, operation and retirement of services delivered by a service provider with a view to offering a consistent service experience to a specific user community in a specific business context.

Infrastructure: refers to an integrated system of facilities used to provide one or more ICT services.

Internet: means an interconnected system of networks that connects computers via the Transmission Control Protocol Internet Control Protocol (TCP/IP) and includes future versions.

1.11 Organization of the study

This study was organized into five chapters. Chapter one was the introduction of the study and it consisted of the background to the study; statement of the problem, purpose and objectives of the study, research questions/ hypothesis; significance, delimitations, limitations and assumptions of the study and operational definition of terms.

Chapter two was the literature review that supports the study and it comprises of introduction of the chapter's content; then the literature review presented according to the objectives of the study and the theoretical and conceptual frameworks are presented at the end of the chapter.

Chapter three was the research methodology and it consists of research design, target population, sampling procedures and sample size, research instruments with their reliability and validity, data collection procedures and analysis, logistical and ethical considerations in the study.

Chapter four presented data analysis, interpretation and presentation. It starts with the analysis of ICT adoption while the rest of the chapter is arranged according to the objectives of the study. Chapter five was the summary, conclusions, discussions and recommendations of the findings and suggestions for further studies on ICT adoption by other researchers.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction.

This chapter outlines the various factors affecting ICT adoption by department of refugee affairs in Dadaab. The factors discussed are; ICT policies, ICT leadership, ICT infrastructure and importance of ICT service delivery.

2.2 Formulation of ICT policies and adoption

Currently, ICT issues are considered under various legislation including; The Science and Technology Act, Cap. 250 of 1977, the Kenya Broadcasting Corporation Act of 1988 and the Kenya Communications Act of 1998, which are inadequate in dealing with issues of convergence, electronic commerce and e-Government. There is need for a comprehensive policy, legal and regulatory framework to support ICT development, investment and application, promote competition in the industry where appropriate, ensure affordability and access to ICT nationally, address issues of privacy, e-security, ICT legislation, cyber crimes, ethical and moral conduct, copyrights, intellectual property rights and piracy, support research and development in ICT and develop an institutional framework for policy development and review, Creating incentives for service providers to deploy services in rural and under-served areas, Establishing a Universal Service Fund, Creating awareness of benefits of ICT to the public and developing knowledge-sharing networks at grassroots level(Ministry of Information & communication,

2006). At the department of refugee affairs it is important to embrace these policies which govern the rules of ICT in order for department to offer service delivery to the refugees at large.

2.3 Leadership of adoption of ICT

Leadership entails influencing others to do what the leaders wants them to do. It is the art of inspiring subordinates to perform their duties willingly, competently and enthusiastically. Leadership is the process by which an executive imaginatively directs guides and influences goals by mediating between the individuals and the organization in such a manner that both will obtain maximum satisfaction. A leader is one who by example and talent performs a directing role and yields influence over others (Nelson & Aaron, 2005).

A purely permissive leader would not attempt to influence the members of the group. Followers would be encouraged to accomplish the group tasks by using the methods they believe most desirable. Individuals would be allowed to devote their efforts to accomplish individual objectives. This approach can work effectively if group members are highly motivated to achieve group objectives and will assume responsibility for leadership functions. Totally permissive leaders are rarely found, because little leadership is exerted.

The autocratic leader allows group members little or no voice in decision making. Subordinate are expected to follow instructions without arguments. The effectiveness of employees is measured to a large degree by their compliance with the wishes of their leader. Autocratic depends on the formal power of the leader's position and ability to administer rewards and punishment. The leader makes the decision and sets the goals for the group. Keengwe, Kidd and Blankson (2009) support the idea that there has to be a

strong leadership not only to lead primary technology implementation, but also to clearly articulate the mission, vision, and goals of such technology initiatives.

Participation by group members in decision making is usually discouraged. As with other managements styles there a few pure autocrats.

Even most autocrat leaders is usually Influenced by somewhat attitudes and values of group members. In participative leadership the leader shares authority and responsibility with members of the group. Leadership responsibilities allows group members to influence the decision making process and the leaders behaviour. Group members are treated with respect and their opinions are valuable inputs in decision making. A successful change requires manager to actively lead it. They must propagate the mission of the organization, while at the same time examining the need for change. Anyone can lead when decisions are popular and things are going well. It is not easy in hard times or when change is needed. Because leadership is situational, leaders must be adaptable-providing the organization with the kind of leadership it needs as the organization grows and changes. At the department of refugee affairs, there exist authoritarian kind of leadership whereby there is minimal decision making coming from lower staff members, decisions are made by the top most management.

Technology leadership is becoming more important an issue in successful ICT implementation. Leaders play increasing role in leading change, providing vision and objectives, as well as professional development initiatives in using ICT to bring about change (Yee, 2000; Yuen, Law & Wong, 2003; James, 2005). In the past several years,

there was inadequate leadership development and support. Technology infrastructure is important, but ICT leadership is even more necessary (Anderson, 2005).

The success of other goals depends largely on whether leaders are capable of leading, planning, implementing and sustaining changes (including ICT) in school. Some leaders support ICT but do not have a particular vision and strategy of ICT in their organization.

2.4 ICT infrastructure and its effects on its adoption

The Kenya Vision 2030 considers infrastructure development as a key enabler of economic, social and political development of the nation (GOK, 2007). Nevertheless, the government admits that the country lacks adequate ICT infrastructure (GOK, 2006). The country therefore set out to develop a robust infrastructure. This momentum in infrastructural development includes power, road, rail, air and water transport, Internet backbone across all towns and telecommunications installations among others.

The availability of ICT infrastructure is key to accelerated run towards the achievement of an information society status (ITU-WTD, 2003). UNESCO (2004) in agreement states that information and Communication Technology (ICT) plays a key role in promoting economic development of a country. Many of the economic gains in the developed world economies over the past two decades could be to a great extent attributed to the impact of ICT. However, the extent to which a country is able to participate and benefit from the electronic communication technology depends on the country's digital divide as well as availability of e-infrastructure and technical knowhow in the country, (UNESCO, 2004).

The concept of ICT infrastructure denotes all the facilities necessary for ICT adoption. Such facilities include equipment, connectivity and sources of energy. Furthermore, the question of

availability of e-infrastructure needs to be dealt with in order to give a true picture of the specific operational environment. Such infrastructure includes connectivity to various networks (internet, intranet, and mobile-telephone); sources and reliability of energy (UPS, electricity, standby generators); equipment (computers, radios, videos, television, LCD projectors and software, and information storage facilities such as flash disks, CD-ROMs, DVDs (National ICT policy, 2006)

2.4. Importance of ICT service delivery

A service delivery is a set of principles, standards, policies and constraints used to guide the design, development, deployment, operation and retirement of services delivered by a service provider with a view to offering a consistent service experience to a specific user community in a specific business context.

Service Delivery is one of two disciplines that comprise ITIL Service Management. Service Delivery defines the business of IT. Through Service Delivery processes, IT can:

- Clearly define the content of services
- Clearly define the roles and responsibilities of customers (those who pay for the services), users (those who use the services) and Service Providers
- Set expectations of service quality, availability and timeliness

Service Delivery processes assist staff in tailoring services to meet the specific business needs at a price the business can afford. Service Delivery processes help define services so that they may be provisioned with internal staff and resources or via external vendors with equal ease and results. Service Delivery processes assist in defining how to measure service results with meaningful metrics and using the metrics to drive continuous service improvement. Service

Delivery fosters a corporate behavior of responsible use of IT services to maximize corporate profits. Most importantly, Service Delivery fosters true business-IT partnerships to the benefit of the company as a whole. The components of Service Delivery are:

2.4.1 Service Level Management

This is arguably the most important set of processes within the ITIL framework. Service Level Management (SLM) processes provide a framework by which services are defined, levels of service required to support business processes agreed upon, Service Level Agreements (SLAs) and Operational Level Agreements (OLAs) developed to satisfy the agreements, and costs for the service developed. Using SLM processes, you can clearly define IT and business roles and responsibilities and establish clear goals for service delivery so success factors can be established, measured and reported. SLM ensures that the business receives appropriate levels of service at a reasonable cost that satisfies their need (Maciaszek, L.A., 2001).

2.4.2 Financial Management for IT Services

Where Service Level Management defines and manages the services, Financial Management determines the costs of those services and provides financial accounting support to ensure expenditures fall within approved plans and that funds are well-spent. The role of Financial Management varies depending upon the view of IT within the corporation. Some companies view it as an expense center, some as a profit center and some as a cost recovery center, so different best practices are offered for each role.

2.4.3 Capacity Management and adoption of ICT

Capacity Management (CM) is responsible for ensuring that IT infrastructure resources are in place to satisfy planned business needs and that those infrastructure assets are effectively used. CM is responsible for building the annual infrastructure growth plan. CM gets involved very early in the application life cycle to assist in determining the implementation and ongoing support costs of new applications or releases. Activities in this service area are proactive rather than reactive, finding application and infrastructure bottlenecks at future business volumes so that corrective actions can occur before service issues are experienced by the end user.

2.4.4 Availability Management

Availability Management is responsible for ensuring application systems are up and available for use in accordance with the conditions of the respective Service Level Agreements (SLAs). The process reviews business process availability requirements and ensures the most cost effective contingency plans are put in place and tested on a regular basis to ensure business needs are met. Availability Management also provides a lead role in Component Failure Impact Analysis and Service Outage Analysis initiatives (Nelson, K & Aaron, and S 2005).

ITIL has been adopted by thousands of organizations worldwide, such as NASA, the UK National Health Service (NHS), HSBC bank and Disney™. ITIL is also supported by quality services from a wide range of providers including examination institutes, accredited training providers and consultancies, software and tool vendors and well known service providers such as IBM, Telefonica, HP and British telecom (BT).Currently these approach has not been adopted in the Kenyan government only a few corporate institutions like Safaricom,Barclays, standard

charted banks in Kenya, have started to use these approaches in order to deliver services to its clients. This approach can improve performance and efficiency of the department of refugee affairs in Dadaab, Kenya.

2.5 The Conceptual framework

The main variable of the study includes formulation of ICT policies, importance of ICT in improving service delivery and Leadership and ICT infrastructure as the factors effecting ICT adoption by the department of refugee affairs. In this study those were considered as the independent variables while successful change implementation was considered to be the dependent variable.

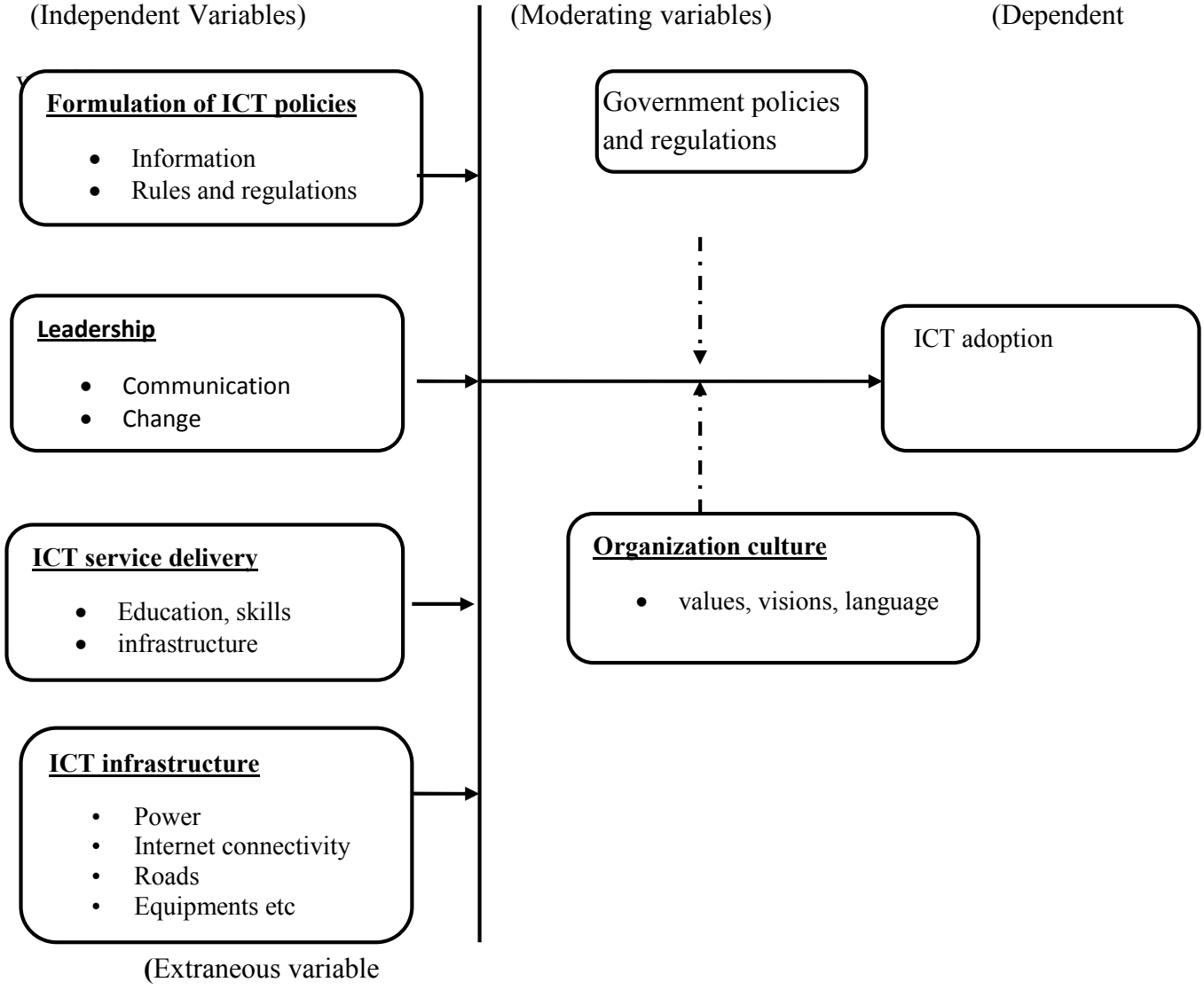

Figure I. Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines the methods employed in the study starting with the research design, target population, data collection procedure, sample and sampling procedure, research instruments, validity and reliability and finally data analysis .

3.1 Research Design

Nachmias and Nachmias (1996) define research design as an investigator's plan of action for answering research questions and to realize the research objectives. The study design used is descriptive analysis. Ng'ang'a, Kosgey and Gathuthi (2009) describe descriptive analysis as a method that involves measuring a variable or a set of variable as they exist naturally. It is suited for this study because it is not concerned with the relationship between variables but rather a description of individual variables. The aim is to describe a single variable or obtain a separate description for each variable when several are involved. The respondents will be asked questions about a particular issue. The study will employ descriptive analysis to establish opinions and knowledge about the factors affecting the adoption of information and communication technology.

3.2 Target population

The research targeted a total of 130 staff members composed of 10 members of top management, 20 in the middle level, and 100 in the lower level working with Department of Refugee Affairs at Dadaab.

3.3 Sample size and sampling procedure

The sampling procedure used was stratified whereby respondents were selected from each strata starting from the management cadre to the lower cadre.The researcher chose to study 70 % of the population which was sufficient according to Mugena and Mugenda (2003) who argued that at least 30% sample size is sufficient.

Table 3.1: Sample size

Cadre	Population	Percentage 70%
Top Management	10	7
Middle	20	14
Lower	100	70
Total	**130**	**91**

3.4 Research instruments

One instrument, a questionnaire (Appendix B) was used for data collection in this study. Document analysis was also used. A questionnaire was suitable as methods of data collection because it allows the researcher to reach a larger sample within limited time. It also ensures

confidentiality and thus gathers more candid and objective replies. In the development of the questionnaire two techniques were used; closed ended and open ended technique.

- Closed ended items were developed for they allow easier and accurate analysis of the data. They also make numerical comparison relatively easy while allowing a high degree of respondents' objectivity. They also reduce the problem of falsification.
- Open ended questions were considered feasible in order to give the respondents a chance to deliver rich information and not to feel the constraints imposed by a fixed choice question.

3.5 Validity of the research instruments

Piloting was conducted to assist in determining accuracy, clarity and suitability of the research instrument. According to Borg and Gall (1989), one can carry pilot study on two or three cases. The purpose of the piloting was to assist the researcher to identity the items which may be inappropriate so as to make necessary corrections, examine responses to determine the level of ambiguity of the questions and determine the percentage of responses.

The questionnaires were given to three lectures from the department of Extra Murals for validation. The responses were also checked to verify whether the questions answered what they were intended to answer in order to ensure instruments validity. Based on the analysis of the lecturers, the researcher was able to make corrections, adjustments and additions to the research instruments.

3.5.1 Instrument reliability

In the study, reliability was assessed through the results of piloting, which was done using test-retest technique. The research instrument was administered to the same group of subjects twice in the pilot study. A two week lapse between the first and the second test was allowed.

The scores from both tests were correlated to get the coefficient of reliability using Pearson's product moment formulae as follows: Pearson's coefficient of correlation

$$rr_{xy} = \frac{N\sum xy - \left(\sum X\right)\left(\sum Y\right)}{\sqrt{\left[N\sum X^2 - \left(\sum X^2\right)\right]\left[N\sum Y^2 - \left(\sum Y^2\right)\right]}}$$

Where

N number of respondents

X scores from the first test

Y scores from the second test

The value of r lies between $\pm$ 1, the closer the value will be to +1 the stronger the congruence.

3.6 Data collection Procedure

After approval of the research by the University supervisor, a research permit which authorizes the researcher to carry out the study was obtained from the National Council of Science and Research at Utalii House, Nairobi. A research permit was also obtained from department of refugee affairs- Dadaab as the researcher paid a courtesy call to the Head of department (Department of refugee affairs) to inform him of the intended study. After authorization, the questionnaires which were drop and pick type were distributed to the sampled respondents, and were given one week to fill them. After one week the questionnaires' were collected. The interviews for the top managers were conducted by the researcher. The Secondary data was collected from the firm's storage of magazines and archives.

3.7 Data analysis

The data collected from questionnaires was analyzed by the use of descriptive statistics (frequencies and percentages). The descriptive analysis was appropriate for this study because it involved the description, analysis and interpretation of circumstances prevailing at the time of study. Descriptive statistical techniques were used to analyze various items of the questionnaire. These included averages, percentages, frequencies and totals. This study used frequencies and percentages because they easily communicate the research findings to majority of readers (Gay, 1992). Frequencies easily show the number of subjects in a given category.

A number of Tables were used to present data findings. Coding was done where the response were transferred into summary sheets by tabulating. They were tallied to establish frequencies. The frequencies were determined by converting similar responses into percentages to illustrate related levels of opinion.

3.8 Ethical considerations

Consent of the participants was sought whereby they agreed to participate in the study through voluntary informed consent without threat or undue inducement. In addition the respondents were assured that the information they gave was to be kept confidential and used only for the purpose of research. For anonymity the respondents were requested not to write their identities in the questionnaire section while the appropriate chain of command was followed before the commencement of the data collection process.

There are numerous ethical considerations that the researcher observed during the study. The researcher obtained the respondents' consent before carrying out the study. The researcher then

explained the reason for the study to the respondents. The respondents were assured that the information they provide was to be treated with extreme confidentiality.

3.8.1 Protection of participants

The American Educational Research Association, (2002) notes that, it is of importance that all researchers respect the rights, privacy, dignity, and sensitivities of their research populations and also the integrity of the institutions within which the research occurs. This research study entailed working with a sensitive target group i.e. vulnerable population whose rights and dignity should be protected. The research assistants were therefore careful while working with this population.

The conduct of researchers is under close scrutiny largely due to the potential for mistreatment of research participants and the demand for high quality and ethically appropriate research (Department of Health, 2001/2005, ESRC 2005).

3.8.2 Consent

Dresser (1998), in his study explains that this is the procedure by which research subjects choose whether or not they wish to participate in a research study. Consent involves three elements: capacity, information, and voluntariness. All three elements must be satisfied for consent to be given. The consent of participants in research, whatever their age or competence, should always be sought, by means appropriate to their age and competence level. For children under 16 years of age and for other persons where capacity to consent may be impaired the additional consent of parents or those with legal responsibility for the individual should normally also be sought.

In this study, the researcher relied heavily on collecting data through interviews, and available written materials. While in the field, the researcher had to negotiate access to participants to collect data. Without observing this the quality of social interactions between the researcher and the participants could have facilitated or inhibit access to information.

3.11 Operational definition of variables

Table 1: Operationalization Table

Objective	**Variable**	**Indicators**	**Measurement scale**	**Types of analysis**
To determine the extent to which formulation of ICT policies affects adoption of ICT by the department of refugee Affairs under the ministry of Immigration and registration of persons in Kenya.	Capacity building Rules and regulation	Number of employee using computers Adherence to Privacy and ethical issue Training courses	Nominal Ordinal	Descriptive
To explore the extent to which leadership affects adoption of information and communication technology adoption at the department of refugee affairs	leadership	Availability of ICT vision/strategy Good communication Budgets for ICT	Nominal Ordinal	Descriptive
To examine how infrastructure affects adoption of ICT at the department of refugee affairs	e-infrastructure	Power lines Tarmacked roads Computer hardware Internet access	Nominal Ordinal	Descriptive
To find out the extent to which ICT improves service delivery of DRA.	Service delivery	Faster services Accurate records Easy communication Faster enquiries	Nominal Ordinal	Descriptive

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.0 Introduction

This chapter presents data analysis, presentation and interpretation following research objectives.

4.1: Items on the demographics of the respondents

The demographic characteristics of the respondents were sought and the results were presented on Tables 4.1 to 4.5

4.1.1 Questionnaires return rate

The researcher sought to establish the number of returned questionnaires before embarking on the data analysis so as to establish the number of respondents to be used in the analysis. The results on questionnaire return rate are presented in Table 4.1

Table 4.1: Questionnaires return rate

Categories	Responses	Percentage (%)
Returned	88	97.7
Not returned	3	2.3

Total	**91**	**100**

Table 4.1 shows that 97.7% of the questionnaires were returned by the respondents. This shows that the respondents were interested in the study and the researcher had a rapport with them.

4.1.2 Gender of the Respondents

The researcher sought information concerning the gender distribution of the respondents to ascertain whether the study was gender sensitive. The results were presented in table 4.2.

Table4.2: Distribution of Respondents by gender

Categories	**Responses**	**Percentage**
Female	32	36.0
Male	56	64.0
Total	**88**	**100.0**

Table 4.2 shows that, majority (64%) of the respondents interviewed were male while 36% were female respondents in Dadaab camp. The female were less because Dadaab is remote and insecure hence unfriendly for women who had maternal duties like bringing up children. It is also a non- family station so majority of those who worked there were singles. However the respondents' gender had no influence on the study results.

4.1.3 Age distribution of respondents

The researcher further sought to establish the age distribution of respondents. This was to establish whether age was affecting ICT adoption in any way. The responses were presented in table 4.3.

Table 4.3: Age distribution of respondents

Age	Frequency	Percentages
21-30	19	21.6
31-40	19	21.6
41-50	39	44.3
51- 60	11	12.5
TOTAL	**88**	**100.0**

Table 4.3 indicates that majority (50 %) of the respondents were above 40 years of age while the minority were 23 -35 and 35 – 39 years of age. This age indicates that the respondents were not too old to learn ICT and therefore were in a better position to adopt ICT in the work place.

4.1.4 Respondent's academic qualification

The researcher sought to establish the academic qualification of the respondents with a few to establish whether it had any influence on ICT adoption. The responses were presented in table 4.4

Table 4.4: Respondents academic qualification

Category	Frequency	Percentage (%)
PhD	0	0.0
Masters	12	14.0
First degree	66	75.0
Diploma	10	11.0
Total	**88**	**100.0**

Table 4.4 found out that majority (75%) of the respondents had a first degree as their highest academic qualification, a few (14%) had masters and 11% had Diplomas. It was however revealed no respondent had a PhD. This shows that all the respondents were qualified to learn and adopt ICT.

Further the researcher investigated the respondent's length of service so as to establish if it had any influence on ICT adoption. The responses were presented in Table 4.5.

Table 4.5: Respondent's length of service

Service Period in years	Frequency	Percentages (%)
1-5	7	8.0
5-10	12	14.0
10-15	22	25.0
15-20	41	47.0
Above 20	6	6.0
TOTAL	88	**100.0**

Table 4.5 shows that majority (47%) of the respondents had served for 15 – 20 years. This was followed by those with working experience of 10-15 years (25%). Those who had served for 5-10 years were (14%). The least is those with 1-5 years with 8% and those with above 20 years with 6%. These results indicate that the respondents had worked for the department for long enough hence were in a good position to give correct picture of what happened in the department.

4.2: Formulation of ICT policies and adoption of ICT

The first objective for this study was to determine the extent to which formulation of ICT policies affects adoption of ICT by the department of refugee Affairs under the ministry of Immigration and registration of persons in Kenya. To achieve this objective the respondents were

required to first indicate the forces that necessitate change. The responses were presented in Table 4.6 to 4.10

The study sought to investigate from the respondents whether ICT adoption was important. The finding are shown in Table 4.6

Table 4.6 responses as whether ICT adoption was important

Response	**Frequencies**	**Percentages**
Yes	88	100
No	0	0
Total	88	100

The results indicate that all (100%) were in agreement that ICT adoption was very important. Hence, there was need to adopt ICT fully at Dadaab Camp.

Respondents were asked whether the national government had specified ICT policy/guideline for their department and results were presented in Table 4.7

Table 4.7 Responses as to whether there was a policy on ICT

Response	Frequencies	Percentages
Yes	21	23.9
No	11	12.5
I don't know	57	64.7
Total	88	100

The Table indicates that Majority 64.75% were not aware of any policy on ICT adoption from the national government hence the need to sensitize them on the policy because some 23.9% indicated they know of it which means there is one in place.

Table 4.8 Response as to whether the policy was relevant

Response	Frequencies	Percentages
Yes	18	20.5
No	30	34.1
I don't know	40	45.4
Total	88	100

The results from Table 4.8 show that majority 45.4% did not know the relevance of the ICT policy. This could be attributed to the fact that, as indicated in Table 4.7 they did not know about the existence of such a policy.

The respondents were asked to indicate whether the government granted extra budgets for ICT adoption and the results were as shown in Table 4.9

Table 4.9: Responses as to whether government granted extra budgets for ICT adoption

Response	Frequencies	Percentages
Yes	30	34.1
I don't know	58	65.9
Total	88	100

The results of Table 4.9 indicate that majority 65.9% did not know whether the government allocated extra grants for ICT adoption. However there was 34.1% of the respondents who were aware. This means that the government allocates extra budget for ICT. Nevertheless, there is need for such awareness to be done to the majority of the employees in that department.

Table 4.10 Responses as to whether there was allocation of grants for buying of hardware, running expenses and for training

Response	Yes	%	No	%	Total	%
Purchase of hardware/ software	20	22.7	66	77.3	88	100
Running or working expenses	27	30.7	61	69.3	88	100
Training of employee	55	62.3	33	37.5	88	100

Table 4.10 shows that majority of the respondents were not aware whether there were allocation for grants for purchase of hardware/ software 77.3%. A big percentage also 69.3% did not know of any budget allocation for running expenses. This could be attributed to the fact that on Table 4.9 they had indicated that they were not aware of any budget allocations from the government. However it is interesting to note that majority 62.3% were aware of budget allocation for training of employee on ICT. This can be interpreted to mean that the employees were being trained on ICT.

4.3: Analysis on items on leadership and its effects on ICT adoption

The second objective for this study was to determine the extent to which management affects adoption of information and communication technology at the department of refugee affairs. To achieve this objective the researcher sought to establish the level of support from the management on ICT adoption. The responses were presented in Table 4.11 to 4.13

Table 4.11 Top management support on ICT adoption

Response	Frequency	Percentages
Very supportive	10	12.0
Supportive	23	26.0
Not Supportive	55	62.0
TOTAL	**88**	**100.0**

Table 4.11 shows that majority (62%) of the respondents indicated that the management was not supportive of the ICT adoption. 26 percent were supportive and only 12 percent were very supportive. It implies that the top management had not fully appraised the idea of ICT adoption and this was likely to compromise the initiative. The researcher further investigated the flexibility of the management structures in decision making. The responses were presented in Table 4.12. As a result adoption of ICT can be hindered by the management due to its resistance to change.

Table 4.12 Organizational Structure and Decision Making

Response	Frequency	Percentages
Very flexible	19	22.0
Flexible	14	16.0
Inflexible	30	34.0
Very inflexible	25	28.0
TOTAL	**88**	**100.0**

According to Table 4.12, 34% of the respondents felt that the organizational structure was inflexible in decision making. This was followed by 25 percent who indicated very inflexible. However 22 percent indicated that they were very flexible and 16 percent flexible.

Table 4.13 Responses as to whether there was ICT vision or strategy in their department

Response	Frequencies	percentages
Yes	51	58
I don't know	37	42
Total	88	100

The results indicate that majority 58% were aware of their department having a strategy or vision but there was a 42% who were not aware of its existence hence the need for awareness programs to be put in place to address that gap.

4.4 Analysis on items on how infrastructure affected adoption of ICT

The third objective investigated how infrastructure affected adoption of ICT. The respondents were asked to indicate whether they were connected to World Wide Web and results were tabulated in Table 4.14

Table 4.14: Responses as to connectivity to WWW

Response	Frequencies	percentages
Yes	88	100
No	0	0
Total	88	100

All employee 100% from the department showed that they were connected to WWW web. So in terms of internet connectivity the employee had access to that.

The employees were given a question which sought to find out whether they were given opportunities to learn to integrate computers into their jobs

Table 4.15 Responses as to whether employees were given opportunities to learn to integrate computers into their jobs?

Response	Frequencies	percentages
Yes	53	60.2
No	35	39.8
Total	88	100

According to results from Table 4.15 only slightly over half 60.2% of the respondents were integrating ICT in their jobs. 39.8% were not using ICT in their jobs. There is need for that group to be given an opportunity to use computers in their jobs

The respondents were given some factors that limited the use of ICT and were asked to tick by agreeing or disagreeing on the ones which affected their departments and the results were presented on Table 4.16

Table 4.16 Responses on the factors limiting the use of ICT in their department

Response	Yes	%	No	%	Total	%
Infrastructure issues	88	100	0	0	88	100
Cost	49	55.7	39	54.3	88	100
Lack of training	10	11.4	78	88.6	88	100
Concern over security	77	87.5	11	12.5	88	100
Attitude of staff	59	67.1	29	32.9	88	100
Outdated technology	60	68.1	28	31.9	88	100

The results of Table 4.16 show that the most limiting factors to use of technology were infrastructure issue with 100% score, concerns over security 87.5%, outdate technology 68.1%, attitude of staff 67.1% and cost 55.7%. Lack of training received the least score of 11.4% meaning that the government had tried its best to train the staff at the department.

The researcher sought to establish the source of electricity at the Daadab refugee camp and the results were presented on Table 4.17

Table 4.17 Responses as to the source of power at Dadaab

Response	Frequencies	Percentages
Public Utility	0	0
Generator	88	100
Solar	0	0
Total	88	100

The results of Table 4.17 show that 100% of the respondent indicated that generators are used as their source of power at Daddaab refugee camp. Although the employees indicated that the generators were reliable literature review indicated that generators are an expensive source of power. As such it could affect the scope of ICT adoption by the department.

Table 4.18 Responses as to whether there were frequent blackouts

Response	Frequencies	percentages
Yes	88	100
No	0	0
Total	88	100

As for the question on the power blackouts Table 4.18 established that there were frequent blackouts 100% at the refugee camp which in effect influenced the use of ICT because for ICT to be use effectively there needs to be a stable and reliable power supply. So, unstable power supply is another inhibiting factor to use of ICT.

4.5 Analysis on item on the influence ICT had on some of the management areas/ service delivery.

The last objective for this study was to determine the extent to which ICT improves service delivery of DRA. To achieve this objective the respondents were required to indicate whether there was evidence of better service delivery after ICT adoption. The responses were presented in Table 4.19

Table 4.19 Evidence of better service delivery after ICT adoption

Response	Frequency	Percentages
Yes	62	70.0
No	26	30.0
Total	**88**	**100.0**

Table 4.19 revealed that majority (70%) of the respondents indicated that there was evidence of better service delivery after ICT adoption while only 30 percent denied. This shows that if the management adopted ICT then the organizations service delivery would improve.

Using the key, very high (VH), high (H), moderate (M), low (L) and very low (VL) the respondents were requested to indicate some of the influences ICT had on a number of factors. The finding were tabulated on Table 4.20

Table 4.20 responses on the influence ICT had on a number of management issues

Response	VH %	H %	M %	L %	VL %
Influence on time saving	100	0	0	0	0
Influence of ICT Devices on Error Rate Reduction	100	0	0	0	0
Influence of ICT on Management Decisions	100	0	0	0	0
Influence of ICT on Speed of Transaction	100	0	0	0	0
Adoption Facilities Accurate Record	100	0	0	0	0
Adoption of ICT makes Communication Easy	100	0	0	0	0
Adoption of ICT Makes Enquiries Faster	100	0	0	0	0

All respondents in Table 4.20 indicated that the influence of ICT on all areas given namely time saving, error reduction rate, management decisions, speed of transaction, accurate record keeping, easy communication and making enquiries faster, was very high (VH) with all of them giving a 100% responses. This shows that ICT had a positive influence on management of refugee's affairs/service delivery hence the need for it to be adopted by the department and by all employees.

CHAPTER FIVE

SUMMARY OF FINDINGS, DISCUSSION OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The study was an analysis into factors affecting the adoption of information and communication technology by department of refugee affairs, ministry of immigration and registration of persons at Dadaab Refugee Camp. This chapter presents summary of the findings, discussion of the findings, conclusion from the findings, recommendations and suggestions for further research.

5.2 Summary of the findings

Majority of those who responded to this study were male. This can be attributed to the fact that the station (Dadaab) is a non family station whereby the employees are not allowed to stay with their families. The climatic conditions are also harsh, coupled with the insecurity associated with the area hence very few women survive in the refugee camp. Half of them were in the age 40 years. This age indicates that the respondents were not too old to learn ICT and therefore were in a better position to adopt ICT in the work place. As concerns educational level majority had a first degree level indicating that they are qualified to learn ICT or had the knowledge of it from their respective universities. Many of them had worked for the department for over 20 years which was a long enough for them to be in a position to comment on the issues concerning the department.

The first objective for this study was to determine the extent to which formulation of ICT policies affected adoption of ICT by the department of refugee Affairs under the ministry of

Immigration and registration of persons in Kenya. It was established that all (100%) of the respondents agreed that adoption of ICT in the department was very important. Majority 64.75% were not aware of any policy on ICT adoption from the national government hence the need to sensitize them. Only some 23.9% indicated they knew of it which means there is one in place. According to Ministry of Information & communication (2006) at the department of refugee affairs it is important to embrace policies which govern the rules of ICT in order for department to adopt ICT. A comprehensive policy, legal and regulatory framework support ICT development, investment and application, promote competition in the industry where appropriate, ensure affordability and access to ICT nationally, address issues of privacy, e-security, ICT legislation, cyber crimes, ethical and moral conduct, copyrights, intellectual property rights and piracy. These policies should be well communicated since they determine the adoption of the ICT which is not the case in DRA.

Majority 65.9% did not know whether the government allocated extra grants for ICT adoption. However 34.1% of the respondents were aware. This means that the government allocates extra budget for ICT. Nevertheless, there is need for such awareness to be done to the majority of the employees in that department.

Majority of the respondents were also not aware whether there were allocations for grants for purchase of hardware/ software 77.3%. A big percentage also 69.3% did not know of any budget allocation for running expenses. This could be attributed to the fact that earlier they had indicated that they were not aware of any budget allocations from the government. However it is interesting to note that majority 62.3% were aware of budget allocation for training of employee on ICT. This can be interpreted to mean that the employees were being trained on ICT.

The second objective for this study was to determine the extent to which management affects adoption of information and communication technology at the department of refugee affairs. The study established that 34% of the respondents felt that the organizational structure was inflexible in decision making. This was followed by 25 percent who indicated very inflexible. This means that it may be hard for any change including ICT adoption to be implemented. Nelson & Aaron (2005) indicate that leadership is situational, so instead of the leader being inflexible as the results show, they should instead be adaptable-providing the organization with the kind of leadership it needs as the organization grows and changes. Though 58% were aware of their department having an ICT strategy or vision, there was a 42% who were not aware of its existence hence the need for awareness programs to be put in place to address that gap.

The third objective investigated how infrastructure affected adoption of ICT. The results indicated that all employees 100% from the department showed that they were connected to WWW web but asked when asked the extent to which they were integrating ICT in their jobs only slightly over half 60.2% of the respondents were doing that. The other 39.8% were not using ICT in their jobs. The study found out that the most limiting factors to use of technology were, infrastructure issues 100%, concerns over security 87.5%, outdate technology 68.1%, attitude of staff 67.1% and cost 55.7%. These results are in agreement with UNESCO (2004) which found out that the extent to which a country is able to participate and benefit from the electronic communication technology depends on the country's digital divide as well as availability of e-infrastructure and technical knowhow in the country. Further, the government admits that the country lacks adequate ICT infrastructure (GOK, 2006). Lack of training received the least score of 11.4% meaning that the government had tried its best to train the staff at the

department. Generators were the main source of power which were not reliable due to the various black outs experienced at the camp.

The last objective for this study was to determine the extent to which ICT improves service delivery of DRA. Majority of the respondents indicated that there was evidence of better service delivery after ICT adoption while only 30 percent denied. This shows that if the management adopted ICT then the organizations service delivery would improve.

Also all respondents indicated that the influence of ICT on all areas given namely; time saving, error reduction rate, management decisions, speed of transaction, accurate record keeping, easy communication and making enquiries faster, was very high (VH) with all of them giving a 100% response. This shows that ICT had a positive influence on management of refugee's affairs/service delivery hence the need for it to be adopted by the department and by all employees.

5.3 Conclusions of the study

This study concludes that the factors that have affected the adoption of ICT by the department of refugee affairs were lack of awareness of the government policy on ICT adoption by its employees. Coupled with that was the leadership through the organizational structure which was felt by the employee to be inflexible and too bureaucratic. Leadership should be flexible and adaptive in order to effect any change within the organization. It can also be deducted that poor leadership of the change process by the management greatly contributed to the unsuccessful implementation of the strategic change. The structure tended to emphasise conformity to rules and procedures, which stifles creativity and innovation which are desirable in a competitive environment.

The study also concludes that the most limiting factors to use of technology were, infrastructure issues, concerns over security, outdate technology, attitude of staff and cost of the ICT. Lack of a reliable source of power also limited ICT adoption because the whole of the refugee camp is not connected to the national grid and as such depended on generators.

Lastly the study agrees that ICT adoption leads to better service delivery in form of time saving, error reduction rate, management decisions, speed of transaction, accurate record keeping, easy communication and making enquiries faster.

5.4 Recommendations from the study

This study makes several recommendations which include that;

1. There is need for all employees at the DRA to be educated on the government's policy on ICT so that it is used uniformly by all and issues of privacy as well as ethics are taken care of. It is also through the policy that the employees will understand the purpose for which ICT use is meant for. The new vision for improved productivity required to be more effectively communicated. Successful change can only take place by getting everyone committed and involved thereby eliminating any forms of resistance

2. Government bureaucracies and red tapes need to be reviewed in order to allow change to take place. It should be decentralized to allow for more empowerment and flexibility in decision-making in response to the competitive environment. That way it will be easier to introduce ICT into the department and encourage innovation among the employee. It is therefore recommended that the corporate culture shift from the previous orientation as a protected monopoly to competitive environment, which requires strong customer focus orientation

3. There is need for leadership to involve and create awareness among employee on the budget allocations so that they are aware of the budgetary allocation for ICT. This will assist in adopting of ICT because they would be aware of how much is to be spent on ICT.

4. There is need for the government to improve infrastructure in Dadaab especially the road network because there is no tarmacked road to the area. The area also needs to be connected to the national grid so that power is available to all which is a pre-requisite for ICT adoption.

5. Training and capacity building should be done for all employees so as to change their attitudes towards ICT adoption. Training should also be emphasized, as change requires finding and developing new competitive advantage, to equip employees with new skills and competencies were not effectively done.

6. Lastly the department needs to embrace strategic thinking guided by a more business orientation and vision. From the results of the study it is clear that DRA is still relying on the old competencies developed during monopoly regime. There should be a complete departure from reliance on historical strengths and age, old ways of doing things. Commercialization change process should not be seen as one off project that ends after certain activities are achieved. Instead staff should be encouraged to carry out reform measures as a continuous day-to-day management activity.

5.5 Suggestion for further research

This study investigated the factors affecting ICT adoption by the department of refugee affairs in Dadaab district, Garissa County, Kenya. Further study can be done on the following

(i) The effect of ICT adoption on the employee performance in DRA, the ministry of immigration and registration of persons.

(ii) The challenges of ICT adoption faced by the workers.

(iii) The effects of ICT adoption on the health of the workers.

REFERENCES:

Aalton, P. and lkavalko, H. (2001), *Implementation Strategies Successfully*. A Paperpresented At the XII World Productivity Congress.

Adenikinju, A. (2005) *Analysis of the cost of infrastructure failures in a developing economy: The case of the electricity sector in Nigeria.* Department of Economics and Centre for Economics and Allied Research, University of Ibadan, Nigeria.

Ahuja, G. (2000*).*"*Collaboration networks, structural holes, and innovation*: A longitudinal study."

Akpan-Obong, P. (2007) *Information and Communication Technologies in development: contextuality and promise*. Proceedings of the 9th International Conference On Social Implications of Computers in Developing Countries, São Paulo, Brazil.

Alam. S., Khatibi, A., Ahmad, M. & Ishmail, H. (2007) Factors affecting e-commerce adoption in the Electronic Manufacturing Companies in Malaysia. *International Journal of Commerce and Management*, 17 (1/2), 125-139.

Aleke, B. (2010), *Developing a Model for Information and Communication Technology Diffusion among Small and Medium sized Agribusiness Enterprises in Southeast*27*Nigeria*, Unpublished PhD Thesis, University of Northumbria, Newcastle

Andrade, A.D. & Urquhart, C. (2009) ICTs as a tool for cultural dominance: prospects for a two-way street. *The Electronic Journal on Information Systems in DevelopingCountries (EJISDC),* **37** (2).

Apulu, I. & Latham, A. (2009) *Knowledge Management: Facilitator for SMEs competitiveness in Nigeria.* UKAIS 2009 Conference, St Anne's College, Oxford, United Kingdom.

Arendt, L. (2008) *Barriers to ICT adoption in SMEs: How to bridge the digital divide*? Journal of Systems and Information Technology, **10** (2), 93-108.

Aris, N. M. (2006). *Building blocks for economic growth*. National Statistics conference 4-5 September 2006. Department of Statistics, Malaysia.

Ariyo, D. (1999) *Small firms are the backbone of the Nigerian economy.* Africa Economic Analysis*,* Africa Business Information Services, Bridge North, United Kingdom. URL http://www.africaeconomicanalysis.org/articles/gen/small htm.html (accessed on 10November 2008).

Awe, J. (2005) *Nigeria and the question of IT articles and management resource centre*. URL www.jidaw.com/itsolutions/itnigeria1.html (accessed on 12 June 2009).

Barbara S. (2001)> *Organizational Change* 2nd Edition Harlow England Prentice Hall

Beckhard, R. (1969). *Organization Development: Strategies and Models*, Addison-Wesley, Reading, MA.

Beitler, Michael (2006). "*Strategic Organizational Change*, Second Edition." Practitioner Press International.

Beatty, R. C., Shim, J. P. & Jones, M. C. (2001). *Factors influencing corporate web site adoption: a time based assessment.* Information and Management, **38** (6).

Beekhuyzen, J., von Hellens, L. & Siedle, M. (2005). *Cultural barriers in the adoption of emerging technologies*. Griffith University, Brisbane, Australia document].URL http://www.ucd.smartinternet.com.au/Documents/Cultural_Barriers.pdf

Benbasat, I., Goldstein, D.K. & Mead, M. (1987). The case research strategy in studies of information systems. *MIS Quarterly*, **11** (3).

Berisha-Namani, M. (2009) *the role of information technology in small and medium size enterprises in Kosovo.* Fulbright Academy 2009 Conference Small Places Can Change the World. [WWW document]. URL http://www.fulbrightacademy. (accessed on 15 July, 2013).

Carter, L. & Goldsmith, M. (2001) *Best Practices in Organization Development andChange*, San Francisco: Jossey Bass. Certified information system auditor study guide, by David L canonColes-Kemp, L., Overill, R. E.: *On the Role of the Facilitator in Information Security Risk* Assessment, J Computer Virology 3 (2)

Coles-Kemp E. (2008). The anatomy of an information security management system, PhD Thesis, University of London.The Journal of Applied Behavioral Science. 35 (3). Greenfield, A. (2008). *The 5 Forces of Change*. A Blueprint for Leading Successful Change, Management Books 2000, England.

Gichoya D (2005) "Factors Affecting the Successful Implementation of ICT Projects in Government" *The Electronic Journal of e-Government* Volume 3 Issue 4, pp 175-184, available online at www.ejeg.com

GOK, (2007). Kenya Vision 2030: A Globally Competitive and Prosperous Kenya, Government of Kenya, Nairobi.

Hiatt, J. (2003). *Change Management: the people side of change*. Learning Center Publications, Lovel Muthuiya, F. A (2004), *Strategy Practices within commercial internet service providers* (ISPS)

Hiatt, J. (2006). *ADKAR: A Model for Change in Business, Government and the Community*, Learning Center Publications, Loveland, CO. ITU (2004), ITU World Telecommunication Indicators Database, http://www.itu.int/ITUD/ict/statistics/index.html. Accessed on 28/4/06

Kaul, M. and ODEDRA, M., (1991). Government initiatives in information technology application: A Commonwealth perspective. *Report on the Information Technology Policy Workshop 12-16 November 1990.* Marlborough House, Pall Mall, London, UK: Commonwealth Secretariat, pp. 33-47.

Keengwe, J. Kidd, T and Blankson, L. K. (2009). Faculty and Technology: Implications for Faculty Training and Technology Leadership. Accessed on 24th August 2013 at http://webpages.csus.edu/

Khaled, M., (2003):Last update, Information technology in government: an action plan for Bangladesh.Available:http://www.sictgov.org/IT%20Action%20Plan%20for%20BG.doc [25.05. 2004].

Khalifa, G., Irani, Z., Baldwin, L.P. and Jones, S., (2004). Evaluating Information Technology with You In Mind. http://www.ejise.com/volume-4/volume4-issue1/issue1-art5.htm#_ftn1 edn. Reading, England: Academic Conferences Limited.

Knott, R.P. and Dawson, R.J., (1999). Software project management. Loughborough: Group Publications.

Knight J. and Pollard M. (2004), 2003 E-commerce Survey of business: Information and Communication Technologies (ICT) adoption and usage.

Limo, A., (2003). *Last update, Computer use bound to transform Kenya*. [Homepage of Nation Media Group,Online]. Available:http://www.nationaudio.com/News/DailyNation/24122003/Comment/Comment24122 0031.html [10.01. 2004].

Maciaszek, L.A., (2001). Requirements analysis and system design: developing information systems with UML. Harlow:

Mugenda, O. M. and Mugenda, A. G. (2003). Research Methods: Quantitative and Qualitative Approach, Acts Press, Nairobi, Kenya:

Nelson, K. and Aaron, S. (2005). *The Change Management Pocket Guide*, Change Guides LLC. Pearce J and Robinson R. (2000) *Strategic Management Formulation and Control*, Graw Hill 7th Edition.

Pellenbarg, P. H. and Van Steen P. J. M. (2003). *"The Netherlands in maps."* 94(1): 420-423.Peltier, T.R: *Information Security Risk Analysis*. Auerbach Publications. Project management professional Exam study guide, fifth edition by Kim Heldman.

Rowley, Robin; Joseph Roevens (2007). *Organize with chaos*. Cirencester: Management Books 2000. ISBN 1852525614. OCLC 170042193.

Rogers, E. M., (2003). *Diffusion Of Innovation*, New York: Free Press Senge, Peter; C. Otto Scharmer, Joseph Jaworski, Betty Sue Flowers (March 2004).*Presence*. Cambridge, MA: SoL. ISBN 0974239011.

Sherwood J., Clark A., Lynas D. (2007). *Enterprise Security Ar*chitecture – A business-driven approach. Tabrizi, N. B. Rapid Transformation, Harvard Business School Press. Tucker, Kate. "The Milan Approach To Family Therapy: A Critique". *Psychiatry On-line* (Priory Lodge Education Ltd.).

Wafula, J. M. and Wanjohi, N. G. (2004). *ICT Policy and ICT Initiatives: What Linkages, Science for Humanity,* IDRC, Ottawa, Canada. From: www.mirp.go.ke

APPENDICES

APPENDIX A: LETTER TO RESPONDENTS

Dear Respondent,

I am a post-graduate student of the University of Nairobi. I am conducting a research on the factors affecting department of refugee affairs in adopting ICT at the institution. This is in fulfillment of the degree in Masters of Arts in Project Planning and Management. You have been selected to participate in this study. I would very much appreciate if you would kindly assist me by responding to all the items attached in the questionnaire. Your name and that of your organization need not to appear anywhere in the questionnaire unless you wish. The information you provide is anonymous and will be used for academic research purposes only. Your cooperation will be greatly appreciated.

The completed questionnaire will be picked from you three days after delivery.

Thank you in advance.

Yours faithfully,

Samuel Nyumba.

Post graduate student.

Appendix B: QUESTIONNAIRE

Section A: Background Information

1. Indicate your Gender.

Male ( ) Female ( )

2. Indicate your age (in years) in the appropriately box

(a) 21- 30 ( ) (b) 31 – 40 ( )

(c) 41 –50 ( ) (d) 51 – 60 ( )

3. What is your highest Academic qualification?

(a) Primary ( ) (b) Diploma ( )

(c) Degree ( ) (d) others (specify) ----------

4. What section do you work in?

(a) Finance ( ) (b) HR ( )

(c) Customer Service ( ) (d) ICT ( )

5. How long have you worked in Department of refugee affairs.

(a) Under one years ( ) (b) 1- 5 years ( )

(c) 5-10 years ( ) (d) 15- 20 years ( )

(e) Above 20 years ( )

Section B: Items on ICT policies and its effects on adoption of ICT

6. Is ICT adoption an issue of unique importance in your department?

Yes ( ) No ( )

7. Does the national government specify an ICT policy/guideline for your department?

Yes ( ) No ( )

8. Is the above-mentioned policy relevant to the ICT in your department?

Yes ( ) No ( )

9. Does the government grant an extra budget for the ICT adoption in your department?

Yes ( ) No ( )

10. If Yes, what is the budget allocated for? Tick where appropriate

Budget allocation	**Yes**	**No**
Purchase of hardware and software		
Running or working expense		
Training of employee		

Section C: Items on leadership and its effects on ICT adoption

11. Does your head of department encourage use of ICT?

Yes ( ) No ( )

12. Please explain your answer in question 11----------

---

13 Do you have an ICT vision or strategy in your department?

Yes ( ) No ( )

Section D: Items on how infrastructure affects adoption of ICT

14. Are they connected to WWW

Yes ( ) No ( )

15. Are the employees given opportunities to learn to integrate computers into their jobs?

Yes ( ) No ( )

16. Below are some of the factors limiting the use of ICT by your department?

Please tick Yes (to agree) or No (to disagree) in the Table below.

Factor	Yes	No
Inability to use ICT		
Infrastructure issues		
Cost		
Lack of training		
Concerns over security		
Attitudes of staff		
Out of date technology		

18. What is your primary source of electricity?

a) Public utility ( ) b) Generator ( ) c) Solar ( )

19. How frequent are black out----------

20. How would you rate the top management on their support on ICT adoption?

a) Very Supportive ( ) b) Supportive ( ) c) Not supportive ( )

21. How would you describe the organizational structure of your department?

a) Very flexible ( ) b) Flexible ( )

c) Inflexible ( ) d) Very inflexible ( )

Section D. Items on the influence of ICT on service delivery

22. Below are some of the influences ICT has on a number of factors. Please tick in the appropriate box using the scale given.

VH-Very high

H-High

M-Moderate

L-low

VL- Very low

Statement	VH	H	M	L	VL
Influence on time saving					
Influence of ICT Devices on Error Rate Reduction					
Influence of ICT on Management Decisions					
Influence of ICT on Speed of Transaction					
Adoption of ICT Products Facilities Accurate Record					
Adoption of ICT makes Communication Easy					
Adoption of ICT Makes Enquiries Faster					