Gender Mainstreaming in E-government Services Adoption - A Case of E-citizen Portal in Kenya

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Declaration

I, the undersigned, do declare that this project is my original work and has not been presented for a degree in any other university or institution for academic credit.

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Dedication

This research project is especially dedicated to my parents, Father, Barrack Sagimo and Mother, Sarah Sagimo for their prayers, encouragement and unending support both morally, spiritually and financially to this day and to my lovely and beautiful daughter Martha Mephiah Sagimo. Thank you all.

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Abstract

The motivation behind this study was to determine and see how the concept of gender mainstreaming could impact the adoption of e-government services in Kenya, which like numerous other developing nations, the Kenyan e-government activities has confronted various difficulties since its commencement in 2004. E-administration programs have been started by a few governments utilizing ICTs to make taxpayer driven organizations more available to citizens by availing them electronically, now and again with an express system to provide guarantee that these services reach women and men who confront hindrances in accessing them.

While contemplates by researchers keep on outlining the most notable adoption techniques, and also different systems and models for understanding adoption, this study uses and depends on Technology Acceptance Model to investigate the reception of e-government services in the Siaya County of Kenya, and presents justifications for the need of both men and women to have same access to e-government information and administrations so as to encourage its adoption.

To accomplish this, three research inquiries and six theories were utilized. A distinct descriptive study was used that centered on the number of inhabitants in Siaya County who were 18 years and above. A simple random sampling procedure was utilized to collect data from the populace and a questionnaire was utilized to gather information from the participants. Examination of the demographic information was done using SPSS version 20 to test the exploration theory utilizing graphic measurements of recurrence tallies and rate. The real findings of the study concerning gender uncovered that this variable assumes a noteworthy part in E-government adoption. This is shown by a positive correlation that was found after a regression done on gender orientation in connection to E-government adoption. The study uncovers that men are potential adopters of e-government services after cross classifying gender with different elements, for example, e-administrations conveyance, ICTs access, Perceived usefulness, perceived ease of use and design for E-governance Policies and Strategies

It is expected that the discoveries of this study will help the Kenyan government and other concerned stakeholders pick up a superior comprehension of mainstreaming gender orientation keeping in mind the end goal to induce the reception of e-government services by empowering them to arrange and outline e-administration approaches and design e-governance policies and strategies more successfully.

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Acronyms

C-TAM-TPB - Combined Technology Acceptance Model and Theory of Planned Behavior

DOI - Diffusion of Innovation

EGap - E-Government Action Plan

EGDI - E-Government Development Index

G2B - Government and citizens

G2C - Government and citizens

G2E - Government and its employees

IDT - Innovation Diffusion Theory

IEBC - Independent Electoral and Boundaries Commission

MM - Motivational Model

MPCU - Model of PC Utilization

OECD - Organization for Economic Co-operation and Development

SCT - Social Cognitive Theory

TAM - Technology Acceptance Model

TPB - Theory of Planned Behavior

TRA - Theory of Reasoned Action

UTAUT - Unified Theory of Acceptance and Use of Technology

CHAPTER ONE

1. INTRODUCTION

E-Government is a major component in the modernization of any administration. It gives a typical framework and course over the general population area and improves coordinated effort inside and among public organizations, institutions and foundations, amongst Government and the business group, and amongst nationals and the administration that foresees the implementation of strategies and policies in Government. It additionally distinguishes procedures for carrying out the abilities required by public servants to understand the new open doors provided by ICT headway, for instance, the internet. (IST Africa 2014)

E-government can hence be categorized into what are known as essential conveyance models; the relationship amongst government and citizens (G2C), electronic connections between government offices and private organizations (G2B), relationship between administrative associations (G2G), and the relationship amongst government and its employees (G2E) (IST Africa 2014). This study focuses on the delivery model of government and citizens (G2C)

1.1.Background

The importance of e-government has seen the Kenyan Government increase its interest in ensuring that most of its services are offered within the e-citizen portal. This interest has put the government to task on how e-government can be adopted in order to improve the traditional services, increase efficiency and reduce costs. (M. Warkentin, D. Gefen, Paul A. Pavlou & Gregory 2002). The achievement of such initiatives is needy on government support, as well as on gender orientation variable to acknowledge and embrace those e-government services. Government leaders, accordingly, require a comprehension of the factors that would empower utilization of e-government services as opposed to more customary administration conveyance strategies. (L. Carter and F. Belanger 2004)

As in earlier years, the survey done by United Nations in 2014 demonstrates that Europe leads the pack with the most noteworthy E-Government Improvement List (EGDI). It was taken after nearly by the United States of America which was positioned seventh all around; the Republic of Korea took the lead in Asia; Oceania led by Australia; and Africa was led by Tunisia ranked 75th globally. This United Nations study demonstrates that distinctive topographical locale shows high inner assorted qualities.

As observed in the study, the E-government advancement index progress in Africa remains moderately uneven and moderate. The documented regional index average in Africa is 0.2661. The African nations (Tunisia, South Africa, Egypt, Mauritius and Seychelles) were found to have regional index values higher than the worlds typical of 0.4709, situating them within the principle 50 for every penny in the whole world. Despite what might be expected, around 30 percent (16 African nations) of the 54 African nations are at the last 10 percent of the world positioning. To keep up a positive pattern, nations in the African area need to concentrate on creating human capital, expanding ICT education and connecting ICT related framework crevices to give an empowering domain to e-government improvement. Economical ICT procedures and functional execution arrangements ought to take after for effective deployment of feasible online administrations. (United Nations 2014 Survey)

Gender issues are proposed in this study and are viewed as an imperative component with regards to e-government supported organizations reception. A close look at the e-citizen portal, which is already available and mostly used by the citizens of Kenya, a few ways are proposed in which the administration can build gender orientation balance and in this manner energize the acceptance of this new and conceivably noteworthy method of e-government service. The proposed research model considers issues of gender, e-administration arrangements and techniques, access to ICTs, training level and ICTs access which are seen to impact the utilization of e-Government services.

1.2.Research Problem

E-governance has recently been the main channel through which most governments devolve their services to its citizen. It creates a platform where people access the various government services online. In spite of the fact that e-government has expanded straightforwardness and enhanced correspondence and access to data for nationals, computerized dissemination of data is regularly accomplished at high cost to government organizations. On the other hand, citizens' selection of e-administration services has not been exactly palatable in many nations (World development report 2012). Bhatnagar (2008) states that various testing issues of e-government acceptance incorporate social and cultural elements, for example, gender orientation, destitution, training level, class, rank, age, and social rejection.

As indicated by world advancement report, 2012, ladies and men have diverse necessities and requirements when accessing and utilizing ICT. In numerous social orders, women's and men's entrance to and utilization of innovation are established in behavioral, social, and religious conventions: Besides, Social and cultural dispositions are regularly unfavorable to women's support in the fields of science and innovation, which constrains their chances in the zone of ICT. Distribution of assets for ICT tasks and administration frequently supports men than ladies. In a few social orders, women's withdrawal from general society field makes access to group telecenters troublesome, (World development report 2012). Most observations in earlier research show that not many women in rural areas especially in Africa use ICTs for activities such as data processing, e-government and e-service delivery, Marcelle (2002). Deficient training and aptitudes have additionally obstructed access to fare and ICT-empowered occupations in the administration segment. Training sorting along gender lines has likewise restricted female nearness in occupations specifically identified with ICTs, for example, PC software engineers.

Marcelle (2002) observes and outlines the major challenges of using ICTs for sophisticated applications such as e-government; these include inappropriate infrastructure and supporting policies that are unevenly distributed. With a specific end goal to expand the effect and utilization of ICTs, Marcelle (2002) proposes for the strengthening of women through the improvement of abilities, ICT proficiency, and access to ICTs.With a specific end goal to expand the effect and utilization of ICTs, Marcelle (2002) proposes for the strengthening of women through the improvement of abilities, ICT proficiency, and access to ICTs.

Given the statistics of the world development report of 2012, quantity of private connections of internets in developing nations is still low; women's entrance to ICTs and internet data access is likewise influenced by the geographic area of public internet access points. At the point where internet access points are far from local communities or in risky neighborhoods, female gender are more averse to regularly visit them.

Lastly, it is mentioned in previous research that without personal access to ICTs and the ability to make powerful utilization of them, it is more likely that citizens and social organizations cannot afford to use ICTs to capably engage and interact in wider democratic processes, (Nadia Hijab and Raúl Zambrano 2007). ICT administration access is constrained to a couple of major cities forgetting the county regions of the nation where most Kenyans live. (ICT Strategy, 2006)

1.3. Objectives

The general objective of this research is to gain insight on how gender factor can be mainstreamed to emphatically impact the selection of e-government services in Kenya. Other specific objectives include;

1. To increase better comprehension of how gender orientation impacts the reception of e-government services in Kenya, especially in Siaya county
2. To propose options in which e-government can better serve as a critical tool for men and women
3. To uncover the constituents of empowering/handicapping environment's for access and utilization of e-government services by each gender

1.4. Research Questions

1. Do the ICT policies, decisions and strategies focus on equally including women and men when setting up e-government initiatives?
2. Do women and men possess the required training and education to utilize e-government activities successfully?
3. Does the e-citizen portal provide the basic services and public information required by each gender?

1.5. Significance of the study

A Gender responsive e-Government can provide means for Kenyan citizens to participate and utilize e-Government services and hence provide ways for both women and men to participate in new e-government innovations. Gender mainstreaming will help ICT project managers and the government to understand the distinctive requirements women and men confront with regards to utilizing and taking care of e-Government ventures. It will add to enhancing both men's and women's interest in e-government activities; increment the rate of utilizing e-government services to provide solutions for time consuming tasks for both men and women and provide an important source of information from the government. This study will also help the Kenyan government and other key stakeholders such as project managers properly comprehend gender mainstreaming in order to engender the acceptance of e-government services by making them design e-governance methodologies and strategies more effectively.

1.6. Assumptions

The assumptions made in this study were that all the respondents know and understand what e-government is. The results obtained from the sample population were assumed to be indicative of all the respondents from different counties within the country.

CHAPTER TWO

2. LITERATURE REVIEW

2.1.Introduction

E. Tambouris, S. Gorilas, and G. Boukis, 2001 characterizes e-government as "the use of data and correspondences innovation to change the productivity, straightforwardness, adequacy, and responsibility of educational and value-based trades inside government, amongst governments and government offices at elected, city and nearby levels, citizens and organizations; and to engage nationals through access and utilization of information" . The use and emergence of information and communication technology (ICT) has positively affected how governments carry out their functions and roles worldwide. One of the main and major impacts of ICT in the recent past has been E-governance. This impact has seen many governments start offering their services through the internet in order to serve their citizens promptly. (ATRCAD, 2007)

Usage of e-Government initiatives either comes up short or succeeds, a gander at different nations that have actualized e-Government effectively demonstrate that in such nations there has been all around composed strategies and execution arrangements. Cases of nations that have adopted this strategy incorporate Singapore which has an e-Government action plan (eGap), Mozambique and Tanzania which have set up e-Government usage techniques and guides (Thong Tee, 2003; Menda, 2005). Many African governments both local and national have comprehended and valued the commitment of e-government to the administration agenda. Right now, key arrangements of strategic plans have been started in Kenya, Mozambique, Senegal, South Africa and Egypt. **(**Bwalya, Kelvin Joseph, 2009**)**

United Nations 2014 survey report noted that because of various elements, there are wide incongruities among locales and nations in their condition of e-government improvement. The report additionally laid out wage level of a nation as the general marker of monetary limit and advance, which thus affects its e-government improvement. Different components, for example, access to ICT assets and the arrangement of training, including ICT proficiency, are identified with the salary level of a country. In this manner, the nonattendance of these variables blocks the execution of e-government activities. (United Nations 2014 Survey)

2.2. A glance at Kenyan E -Government

The e-Government methodology of Kenya is intended to accomplish pre-decided arrangement of objectives and destinations, which are: better and effective conveyance of Government information and administrations of services to the nationals, advance profitability among open workers, support investment of citizens in Government and enable all Kenyans in accordance with development needs laid out in the Monetary Recuperation Technique for Wealth and Business Creation. (IST Africa, 2014). The accomplishment of e-Government in Kenya has been one of the primary needs of the government towards the acknowledgment of national development objectives and destinations for wealth and Business Creation, as stipulated in the Kenya Vision 2030.

The administration of Kenya set up the e-Government Program in June 2004. It has from that point forward conferred itself towards accomplishing a powerful and operational e-Government to encourage better and proficient conveyance of information and administrations to the citizens, advance efficiency among public servants, support investment of nationals in Government and empower all Kenyans. (IST Africa- 2014). The developing enthusiasm for the utilization of e-Government brings up the issue of how the government of Kenya can bring issues to light and increase native appropriation and use of their online e-government services through the e-citizen portal. The need to utilize E-Government turns out to be particularly imperative given its capability to diminish costs and enhance benefit contrasted and elective customary modes. (M. Warkentin, D. Gefen, Paul A. Pavlou & Gregory, 2002).

Since its launch, e-citizen portal, one of the e-administration initiatives has received praises by the government to provide solution to the devolution of e-services to its citizen both nationally and at the county level. By investigating e-citizen portal, already available and used in Kenya, several ways are proposed in which the government can increase gender equality and in this manner energize the selection of this new and conceivably critical method of e-government service. The proposed study model considers issues of gender orientation, access to ICTs, training level, e-service conveyance, perceived usefulness, perceived ease of use and design for e-governance Policies and Strategies which are seen to engender the use of e-administration services. IST Africa (2014) affirms that different arms of the Kenyan government have indulged on various e-government programs.

A portion of the key online administrations accessible through the e-government activity include but not constrained to; Use of open administration employments web based, following status of ID and international IDs, exam results and hopeful choice, accommodation of expense forms, custom administrations, reporting of defilement, business authorizing e-registry . (Mudhai 2004) observes that the Kenya government is working on increasing transparency, efficiency and democracy in public administration through the establishment of a master plan for e-commerce and e-administration strategies. The usage of e-Government has been generally acclaimed in that it gives new stimulus to convey benefits rapidly and proficiently (Evans and Yen, 2006:208). The most as of late propelled e-government activity, e-citizen portal, gives a one stop shop to most taxpayer supported e-services. These administrations services incorporate; business name enrollment, business name look, marriage notices, Issuance of a marriage authentication, solemnization of marriage, appointing of affirmations, unique licenses for relational unions, driving licenses (e-Citizen portal, 2015)

2.3.ICT and Gender

The present Kenyan national ICT strategy of 2006 backs the vision of inducing ICT to all gender. Gender based issues address all parts of ICTs being developed in the country. There is, along these lines, need to:

a. Guarantee the involvement of male and female in formulating policies in ICT and usage at all levels.
b. Guarantee that ICT strategies at all levels are caused and equipped towards meeting particular formative needs of women and men.

The United Nations Development Programme Report 2001 contends that to tackle today's technological changes as instruments for human advancement requires moves in national and worldwide open strategy. It advances "a worldwide call for policy – not philanthropy – to assemble innovative limit in developing nations". Tragically regardless of the potential capacity of information to engage burdened groups and in spite of the huge interests in information and communication technologies the technology society has remained generally quiet on gender issues (Jansen 1989). There are proofs of a gender orientation imbalance in the utilization of ICT that undermine and limit ladies to be the equivalent accomplices/recipients of the rising technology society in this way making a gender based advanced separation. (Jansen 1989).

An all-around outlined e-government must be of valuable to clients just if policymakers do consolidate and encourage acceptance and adoption methodologies which consider elements influencing particularly carefully underestimated groups. (G. Kaisara, Shaun Pather, 2009)

The Economic Co-operation and Development (OECD) report information of 2012 layouts that there is a little rate representation of women in ICT-related field and are underrepresented in administrative, logical, and proficient positions and overrepresented in office and secretarial occupations. Strasbourg, (May 1998) observes that there is a gap in the field of ICT as far as gender relations is concerned. Strasbourg mentions that females are disadvantaged owing to historically determined inequalities. They generally do not enjoy the equal access to ICTs like the male counterparts and feel constrained from entering the global ICT knowledge economy. The situation is worse for women in Africa's rural sector, where ICT illiteracy and poverty are more acute and traditional practices and beliefs which oppress women more deeply entrenched, is even more precarious.

2.4.Understanding Gender Mainstreaming

Gender mainstreaming is the way toward evaluating the suggestions for women and men of any arranged activity, including enactment, strategies or projects, in all regions and at all levels. It is a system for making women and additionally men's worries and encounters a necessary measurement of the plan, execution, checking and assessment of arrangements and projects in all political, financial and societal circles so that women and men gain similarly and inequality is not sustained. A definitive objective is to accomplish gender orientation balance. (UN women report, 2008). The issue of gender mainstreaming of ICT strategies is straightforwardly identified with the issue of financial improvement. The new information and communications technologies are thought to be the main impetus behind current economic improvements and globalization handle. The United Nations Human Development Report 2001 mentions that, "Innovation is made in light of market weights – not the requirements of needy individuals, who have small obtaining power". In many parts of the world thus, the guarantee of interfacing most of the general population with ICT stays unfulfilled. There is a wide worry from both governments and common society that this worldwide pattern will prompt to further and more extensive prohibition of most of the world's kin from a world economy and recently rising worldwide information society that is quickly being formed by innovative changes.

In this atmosphere, it is dire to look more carefully into the relationship between innovation, particularly information and communications innovation, and improvement with reference to gender orientation issues (world development report 2012). Gender fairness is an essential objective in itself and a method for accomplishing development. World development report urges government approaches and establishments to guarantee that all portions of society, both women and men, have a voice in basic leadership, either straightforwardly, or through organizations that honestly speak to their interests and needs. The rejection of women from full cooperation in basic leadership hampers the organs of the legislature out in the public sector strategies and foundations to oversee e-government activities successfully. Such gender related prohibition bargains the prospects for brilliant service conveyance through e-government. (World development report 2012)

2.5.E-government Projects and Gender

Vishanth (2009) characterizes orientation of gender as a progressive partition amongst men and female integrated in both social establishment and social practices. Morgan (1986) as referenced by Dwivedi and Lal's (2007) advance recommends that sex as a social variable can likewise be utilized as a descriptive construct and in addition an informative variable. Studies from research analyst, for example, (Choudrie and Lee, 2004; Anderson and Youthful, 1999; Gefen and Straub, 1997; Morris and Venkatesh, 2000; Venkatesh et al., 2000; Venkatesh et al., 2003) as referenced by Shafi and Vishanth (2009) have invested very positive energy in examining the function of gender in the appropriation and usage of ICT innovations. From the examinations done in the past, it has been uncovered that gender has a critical impact and role when considering innovation appropriation in ICT and utilization in hierarchical setting. Venkatesh et al., (2000) look into result demonstrated that male citizens utilize PCs more frequently than females to affirm gender factor as a standout amongst the most imperative factors while embracing innovation. The examination yield of past studies as per Morris and Venkatesh (2000) delineates that gender contrasts have been seen to exist in innovation adoption settings. What's more, gender factor is seen to altogether direct the impact of the determinants on behavioral aim. A decent case as Venkatesh et al., (2003) discovered, is that the impact of perceived usefulness on conduct goal was directed by gender.

The momentum look into the previous studies has been guided by Dwivedi and Lal's (2007) on the recommendation that gender (as a social variable) can be considered as an autonomous variable to clarify the contrasts amongst adopters and non-adopters of innovation, for this situation e-government. The vast majority of the research identified with gender orientation and e-Government focuses to gender advanced partition in ICT access for some constraints. Rathgeber (2006) states that "most e-government activities have been composed without perceiving that female and male everywhere have distinctive patterns of association with PCs and the Internet. In numerous industrialized nations, female utilization of the internet is equivalent to that of males, yet females utilize it for the most part for handy purposes, i.e. to discover particular data or to shop". Women and young ladies in developing nations and rural zones in industrialized nations have impediments in getting to e-Government conveyed data and administrations since they are, as Rathgeber asserted, more improbable than men to utilize the Web since they don't have access to it. Additionally, she guaranteed that they don't have aptitudes, they don't have extra cash or they don't have time or interests. At last, as males and females have distinctive examples of use, then the exertion made by governments to give ICTs is not profiting the gender cause. Rathgeber(2006).

Attempting to comprehend ICT and their potential for the strengthening of women (Jaeger, P., 2006), gender technology gap was characterized as disparity to women in access to ICT for some restrictions, for example, training, customary refined convictions and practices, financial imbalance and ICT plan and creation which are for the most part men-commanded situations and thus they don't relate to the extraordinary needs of women Huong, H., (2007)

Primary pundits of ICT and poor women issues indicate real needs of women in developing nations for safe water, satisfactory sustenance, enhanced wellbeing, and preferred training rather over access to ICT yet the counter contention that protected water, sufficient nourishment, instruction and ICT are not in inverse to each other on the grounds that ICT can be an apparatus to enable women and provide health, food, and training. From this point of view there is a marker of underestimating women in e-Government. Rathgeber(2006) study additionally demonstrated that most e-Government applications have late starting points and have not tended to women issues and needs, (Bhatnagar, S., 2004). In this manner, gender issues are proposed in this research to be an imperative impetus of e-Government reception.

2.6. ICT policy and gender in Africa

In 2000, Gillian Marcelle took a look at the developing ICT arrangements of four nations that were pioneers in the ICT-policy making region that likewise were nations known to be progressed in the range of gender uniformity in national strategy (Zambia, Nigeria, Senegal and Mozambique). These were her perceptions on the treatment of gender issues in the nations as refered to by WM Olatokun (2008): In Mozambique, existing procedures do reject any treatment of social issues, including sexual orientation. Right when the country's ICT approach was attested in December 2000, there was much trust this would transform into a best practice on gender issues in light of the way that the policy contained an entire part on gender and youth, covering a wide collection of system areas from fundamental initiative to training, e-exchange, applications and content headway (Mozambique, 2000). In Senegal, Telecom policy detailing has concentrated solely on execution of the administrator and sector structure; Women's NGOs and different partners worried about gender issues are dynamic in Senegal but have not possessed the capacity to impact the advancement of national ICT policy. In Senegal, Telecom policy detailing has concentrated solely on execution of the administrator and sector structure; Women's NGOs and different partners worried about gender issues are dynamic in Senegal but have not possessed the capacity to impact the advancement of national ICT policy.

From the content investigation of the Nigerian IT approach, it is clear that the IT strategy consigned gender issues to the background. All through the approach record, gender concerns were not tended to in a way that demonstrates a comprehension of power imbalance characteristics and gender relations. It makes no endeavor to demonstrate a comprehension or energy about gender issues. From the vision and statements of purpose, it is clear that the Nigerian IT policy does not have anything identifying with gender. As per Zunguze (2003), as refered to by WM Olatokun (2008), the Zambian ICT strategy addresses the different services and divisions yet neglects to address gender and specifically women's worries in setting. Gender concerns are not tended to in a way that demonstrates a comprehension of power imbalances characteristics and gender relations. The policy makes no endeavor to demonstrate a comprehension or valuation for gender issues.

This is proved in the utilization of gender impartial terms all through the report that appears to expect that by utilizing these terms, it is including everybody, inside more extensive classes of individuals without perceiving the distinctive settings, needs or commitments by various genders.

2.7. Technology Adoption Theories

Various studies have examined the selection of e-government services utilizing innovation acknowledgment hypotheses and models, for example, the Theory of Reasoned Action (TRA) , the Theory of Planned Behavior (TPB) , the Technology Acceptance Model (TAM) , the Diffusion of Innovation (DOI) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Suha AlAwadhi, Anne Morris 2009). These studies give helpful bits of knowledge and suggestions to comprehension an individual's expectation of utilizing e-government services. They additionally have recognized various elements that decide the acceptance of e-government services, for example, external influence, and ease of use, perceived risk, compatibility, Internet safety, interpersonal influence, relative advantage, trustworthiness, image and facilitating conditions. (Suha AlAwadhi, Anne Morris 2009)

From the various hypotheses that look to clarify singular selection of new innovation. Davis' (1989) technology acceptance model and (Rogers 2003) diffusion of innovation theory (DOI) are two models usually used to study client selection of information frameworks. A more complete picture of the acceptance process was presented by Venkatesh, Morris, Davis and Davis (2003) when they made an incorporated model known as Unified Theory of Acceptance and Use of Technology (UTAUT). The UTAUT model as demonstrated by Anne Morris, Suha Al Awadhi (2009), consists of eight hypothetical models: the motivational model (Davis et al., 1992), the theory of planned behaviour (Ajzen, 1991,the technology acceptance model Davis (1989), the theory of reasoned action (Davis et al. 1989) as referenced by Shafi and Vishanth (2009),

a model consolidating the theory of planned behavior and the technology acceptance model(Taylor and Todd 1995), the model of computer usage (Thompson et al., 1991), the innovation diffusion theory (Rogers, 2003), and social cognitive theory (Compeau and Higgins, 1995) as referred to by Shafi and Vishanth (2009). UTAUT is seen to help ranking staff in associations to evaluate and decide the probability of accomplishment for new advancements and in addition comprehend the key drivers of innovation acknowledgment.

Everett Rogers (2003) in his framework of the diffusion approach builds up the hypothesis of Diffusion of Innovations (DOI) with a reason to dissect the qualities of innovation adopters. The framework comprised of factors, for example, the relative advantage, results demonstrability, complexity, image, visibility, compatibility and voluntariness of use of the technology. Significant Key factors innovation diffusion theories are like the builds in TAM (relative advantage is similar to perceived usefulness, complexity is similar to perceived ease of use) TAM, which depends on the theory of reasoned action, has two noteworthy builds: perceived usefulness and perceived ease of use which impact one's aim to utilize an information system. Perceived usefulness was initially characterized by Davis as the conviction that utilizing a specific framework would upgrade one's employment execution. Perceived ease of use alludes to one's impression of the measure of exertion required to utilize the system. The model predicts that higher impressions of usefulness and ease of use will build aim to utilize a system. Every other thing being equivalent, perceived ease of use is anticipated to have impact on perceived usefulness, since the less demanding a system is to utilize, the more helpful it can be (Davis 1989).

To date, there has been little research investigating gender issues that influence the reception of e-government services by nationals in developing nations, particularly in Africa. Notwithstanding the way that the researchers have examined components that decide the acceptance of e-government services by adjusting the Unified Theory of Acceptance and Use of Technology (UTAUT) model, there has been little research that has investigated gender issues that may impact the take-up of government online administrations in developing nations. (Suha AlAwadhi, Anne Morris, 2009). This study tries to use and develop the capacity of TAM by joining components that will decidedly impact the two noteworthy builds of perceived usefulness and perceived ease of use which is expected to have impact on one's expectation to utilize a system. The exploration sketched out in this paper focuses to address this gap. The particular point of the exploration depicted is to pick up understanding into the gender figures that influence the acceptance of e-government services in Kenya particularly in Siaya County. It is expected that the discoveries will help leaders pick up a superior comprehension of gender mainstreaming and reception of e-government services empowering them to arrange and plan services more viably.

2.7.1. TAM 2

TAM has received criticism on the assumption it makes that; behavioral intention is a predictor of use. Salovaara & Tamminen, (2009) points out that though a technology may be initially accepted by a user, it may later be abandoned due to factors beyond their control. Salovaara and Tamminen, 2009 assert that TAM is not sensitive to different user contexts.

The innovations contemplated under TAM have been portrayed by Venkatesh et al, 2003 as moderately basic, individual-situated information innovation rather than more mind boggling and complex hierarchical advancements that are of administrative worry. To enhance the quality and address the impediments of TAM, Venkatesh and Davis, 2000 stretch out TAM to fuse social impact and procedures, for example, subjective standard, willfulness of utilization, importance, and results demonstrability, yield quality and perceived usability. These procedures clarify the impacts of determinants on perceived helpfulness and behavioral aim.

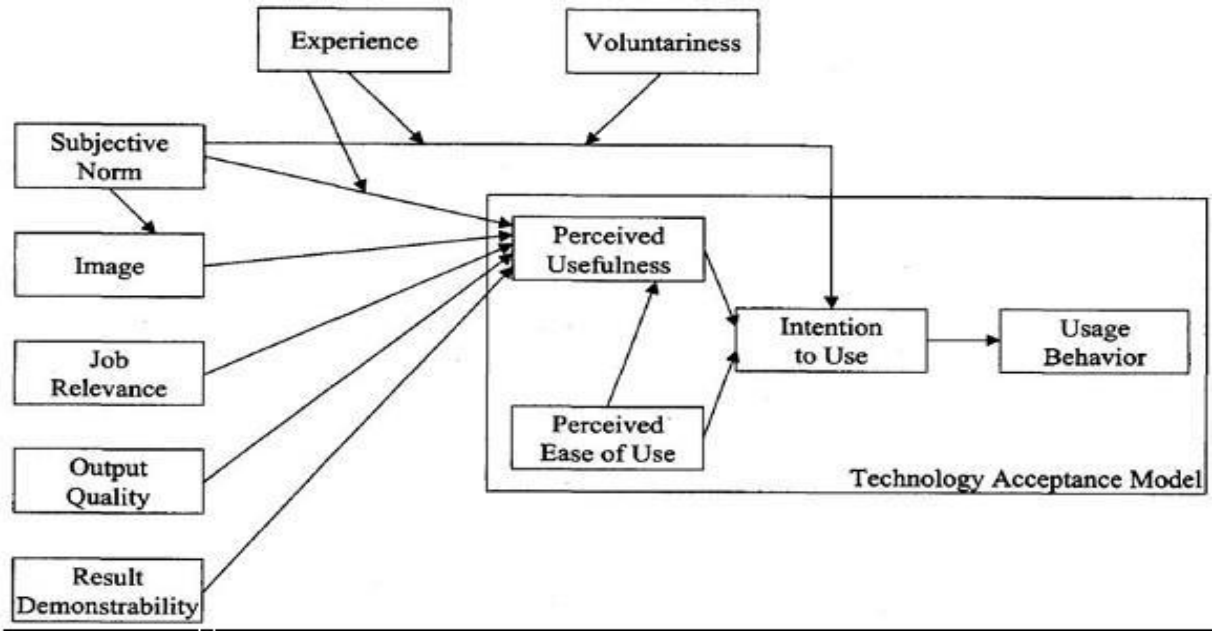


Figure 1 Technology Acceptance Model 2

The predictors of perceived usefulness in TAM 2 are subjective standard, picture, work pertinence, yield quality, result provability, and saw convenience. Two distinguished mediators are experience and voluntariness. Dissimilar to TAM, TAM 2 makes a qualification amongst deliberate and required use.

Analysts, for example, Hartwick et al.., 1994 proposed that use expectations fluctuate notwithstanding when a change is hierarchically commanded. Likewise, TAM 2 considers that required framework acknowledgment approaches seem less compelling after some time than social impact, Stam, et al.., (2004).

2.7.2. Unified Theory of Acceptance and Use of Technology

The experimental study was produced by Venkatesh, Morris, Davis and Davis, 2003. The study received an arrangement of determinants and arbitrators that affected on the aim by individuals to utilize information innovation from eight extraordinary models. The eight models are: (1)Combined Technology Acceptance Model and Theory of Planned Behavior (C-TAM-TPB),(2)Social Cognitive Theory (SCT) Venkatesh, (3)Innovation Diffusion Theory (IDT), (4) Theory of Planned Behavior (TPB), (5)Theory of Reasoned Action (TRA), (6) Model of PC Utilization (MPCU),(7) Motivational Model (MM), and (8)Technology Acceptance Model (TAM), et al., 2003. As a basic system, Venkatesh et al, 2003 conceptualized user Acceptance of Technology Innovation (UTAUT) as a bringing together perspective of the considerable number of models.

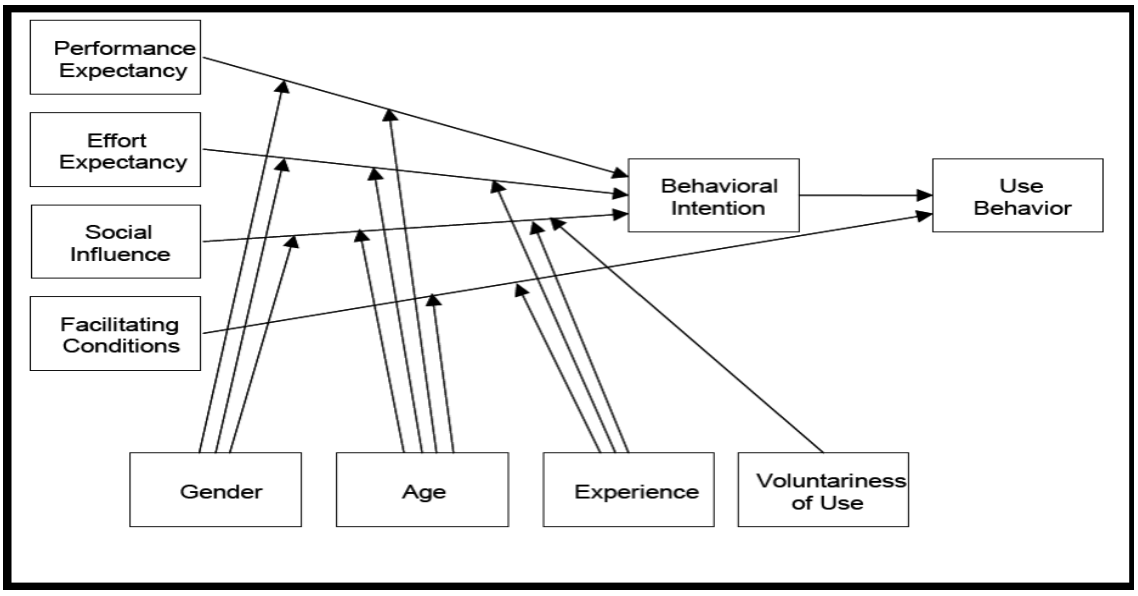


Figure 2 UTAUT Model (Venkatesh, 2003)

In planning the model, basic evaluation of the eight models were made by the analysts, resulted by the definition of four essential determinants of expectation and utilize the determinants were execution hope, exertion hope, social impact and encouraging conditions.

Four mediators were likewise created for key connections these were willfulness of utilization, gender, age, and experience. A trial of the model was finished by Venkatesh et al, 2003 by testing for heterogeneity crosswise over various enterprises, advancements, business capacities, and nature of utilization by taking a gander at intentional versus obligatory. Venkatesh et al, 2003 did an exact approval of UTAUT in the longitudinal study and discovered that the hypothesis represents 70% of difference in utilization goal. Past studies have demonstrated that past innovation acknowledgment models, for example, TAM can just effectively foresee the acknowledgment of another innovation in around 30% to 40% of cases, Venkatesh and Davis, (2000).

2.7.3. Justification for TAM

Having carefully analyzed the previous research to build up which hypothesis is most appropriate for this study in the Kenyan setting. Technology Acceptance Model is prescribed keeping in mind the end goal to accomplish the targets of this study.

TAM has greatly been utilized to examine user's acknowledgment through different e-administration studies. It depends on the conviction that individual elements influencing the client’s choice whether to acknowledge or dismiss an e-government upheld administrations that can be perceived and measured. TAM sees perceived ease of use and perceived usefulness as basic determinants of client acknowledgment. The mentioned factors impact goal to utilize an e-administration service, which, thus, associates with real service utilization. The model utilizes estimation scales for both convenience and helpfulness. (S. E. Colesca and L. Dobrica, 2008)

In spite of the fact that it has as of now been utilized as a part of other e-government acknowledgment research, (AlAwadhi S. and Morris A, 2008), UTAUT does not appear to be effortlessly adjusted for this study. The model is best used to gauge innovation acknowledgment in organizations. Two of its six factors depend vigorously on the innovation being presented in an association. A portion of the criteria proposed to gauge "social impact" incorporate help of the senior administration, and authoritative support for the new innovation. "Willfulness of utilization" measures whether innovation is obligatory in the occupation, to what degree it is required by the manager, or expected by bosses.

2.8.Literature Review conclusion

A lot of research effort has been put on e-government, however existing research has not adequately addressed the concept of gender mainstreaming in implementation and acceptance of e-administration. Little effort is in place to assess the effects for women and men in the adoption of e-government services. Few researchers have actually come up with working strategies of helping most governments in planning, executing, observing and assessing policies and projects so that women and men advantage similarly through the different e-government activities. By doing so, inequality is not perpetuated and e-government adoption is enhanced. (S. Huyer, T. Sikosa, 2003)

Guaranteeing gender correspondence in e-administration includes ensuring the strengthening, organization, and incorporation of women in the administration division. It implies recognizing approaches to beat the deterrents and imperatives women face, and understanding the association between women empowerment and e-government reception. Unless unequivocal measures are taken through gender mainstreaming to address the limitations and difficulties women confront, e-government may build gender differences and the solutions and points of interest they have will be decreased and not understood. (World development report, 2012)

The choice to utilize TAM to foresee client acknowledgment in this study was seen proper on the grounds that numerous e-government services are intended to be utilized as a part of the citizens' regular daily existence. At the point when utilized as a part of new fields of study, TAM frequently should be adjusted or extended to suit the qualities of the particular service. The real preferred standpoint of TAM is that it can be reached out by utilizing domain-specific builds when utilized with more up to date technologies. (Suha AlAwadhi, Anne Morris, 2009)

In view of the current research writing, arrangements of e-government acknowledgment constructs were distinguished: access to ICTs, education status for men and women, design for e-governance policies and strategies, gender and e-service delivery. In this manner, particular criteria measuring every build were formulated.

2.9.Research Model and hypothesis

This research model was proposed based on the aforementioned literature. This model indicates that gender, design for e-governance policies and strategies, and e-service delivery have a major influence on both the proposed perceived ease of use and perceived usefulness constructs to accept and utilize e-government services.

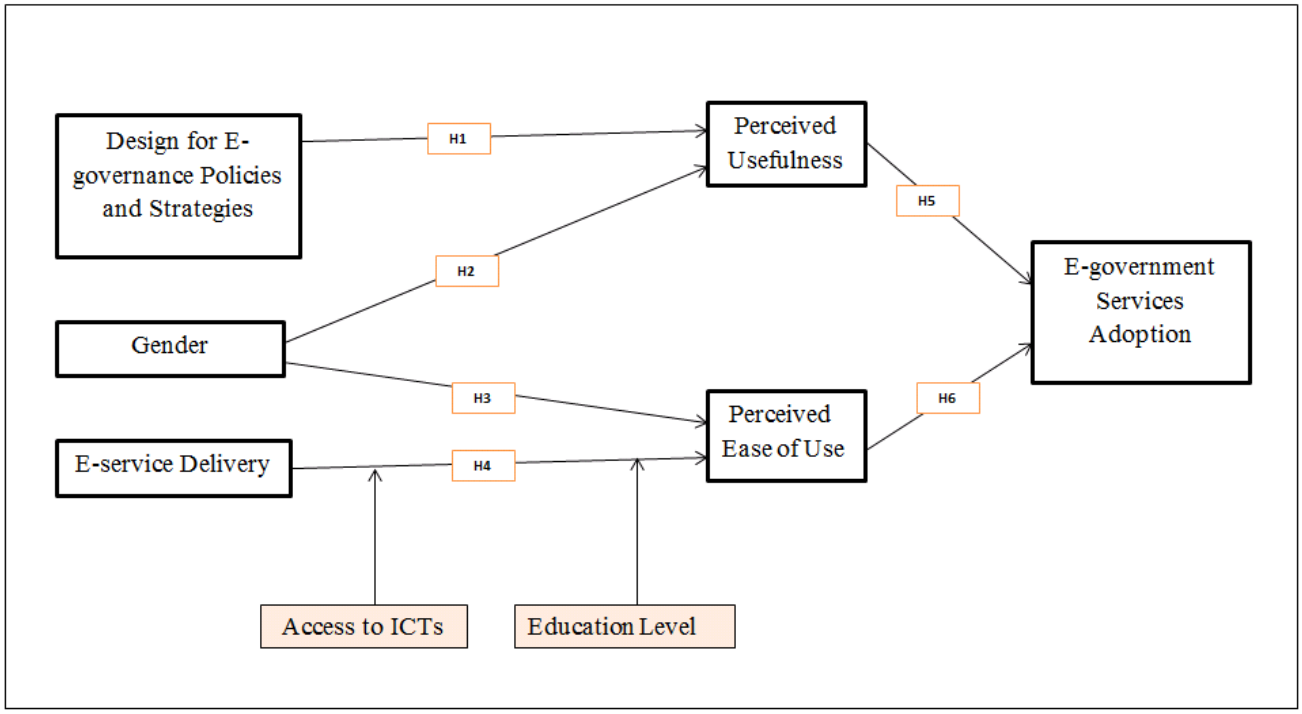


Figure 3 Conceptual Model

2.10. Hypothesis Formulation

Effective plan, usage and organization of e-government services require an exhaustive comprehension of the elements that cause the e-government reception and acknowledgment that would be of awesome esteem. In this study, to pick up a superior comprehension on gender orientation toward e-government reception and utilize, it was hypothesized;

H1: Design for e-governance policies and strategies will have a positive influence on perceived usefulness

H2: Men will rate the perceived usefulness higher compared to women

H3: Women will rate the perceived ease of use lower compared to men

H4: Delivery of E-service will influence perceived ease of use of significantly

H4a: E-service delivery will be influenced positively by Access to ICTs

H4b: Education level will have a positive effect on E-service delivery

H5: Perceived usefulness will impact positively the selection of e-government service

H6: Perceived ease of use will impact positively the selection of e-government service

Table 1 Study Constructs

Construct	Criteria
Gender	More males are expected to adopt e-government services than female gender
Access to ICTs	Affordability (Are you capable of purchasing ICT equipment?) Availability (are there available cyber cafes or telecenters in your area?)
Education Level	Education status (Are you educated? If yes, up to what level?)
	Relevancy (Do you feel your competency can enable you use ICT?)
E-service delivery	Which language do you prefer to use when accessing information from internet? Reliability (Does the bandwidth enable you to have consistent access to the internet?)
Design for E-governance Policies and Strategies	Participation (Have you ever participated in any ICT policy formulation?) Policy Awareness (Are you familiar with any gender related ICT policy?)
Perceived usefulness	(Does e-citizen portal provide the exact information you require?)
	Online help (Are you able to get assistance online via the e-citizen portal)
Perceived ease of use	Usability (How easy is it for you to use of e-citizen portal?)

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1. Introduction

A research technique is a procedure of examination including philosophical suppositions, look into plan, information gathering and investigation (Myers, 1997). This section illustrates the methods and procedure to be used in this study and to explore and discover useful information regarding the reception of e-government services by mainstreaming gender factor. The research design, target population, data collection methods and procedures, data analysis and data interpretations are presented as operational framework for the study.

3.2. Research design

There are three designs that have traditionally been used in scientific research. These are descriptive, correlational and experimental designs. Abel Gitau, (2008) suggests that when examining social issues such as gender that exist in communities, it is recommended to use descriptive design.

A quantitative research strategy utilizing a survey questionnaire was chosen as the essential data gathering technique for this study. The examination plan was utilized to subjectively investigate gender issues that influence the selection of e-government services in Kenya, for instance, education, e-governance policies and strategies and access to ICTs to use such services.

A research questionnaire was utilized in this study as it is cheap, less tedious and can give both quantitative scale and subjective data from an expansive research test. These are the sentiments of (Cornford and Smithson, 1997) as cited by Shafi and Vishanth (2009).

3.3. Target Population

Both quantitative scale and subjective data was collected using survey method from a cross section of female and male inhabitants residing in the rural areas of Siaya County.

The population consisted of women and men aged between 18-60 years. According to statistics found in Kenya open data; there are a total of 47 counties in Kenya. This study focused on Siaya County which is located in Nyanza and constitutes 6 constituencies (Ugenya, Alego, Ugunja, Gem, Bondo and Rarieda). Siaya has a total population of 842, 304 people.

3.4.Sample size and sampling technique

There are various techniques of selecting a representing sample from the accessible population depending on the design of the study. In scientific research, Abel Gitau (2008) takes note that an agent test is acquired through arbitrary examining. A basic random inspecting strategy will be utilized to choose a sample measure from the populace. 150 copies of questionnaire will be distributed in order to collect data from the participants

The participants will be comprised of both men and women in Siaya County who have interest in the benefits of using e-citizen services.

3.5.Sampling procedures

The criteria used to decide the suitable sample estimate for this study comprised of the level of accuracy, the level of certainty and the level of changeability in the qualities utilized. As indicated by Glenn D. Israel (1992), there are a few ways to deal with deciding the sample estimate. These incorporate utilizing an enumeration for little populaces, mirroring a sample size of comparative studies, utilizing distributed tables, and applying equations to ascertain a specimen measure. This study depended on distributed tables and use of recipes to ascertain the sample measure

Table 2 Sample Procedures

Size of Population	Sample Size (n) for Precision (e) of:			
	±3%	±5%	±7%	±10%
15,000	1,034	390	201	99
20,000	1,053	392	204	100
25,000	1,064	394	204	100
50,000	1,087	397	204	100
100,000	1,099	398	204	100
>100,000	1,111	400	204	100

Sample size for ±3%, ±5%, ±7% and ±10% Precision Levels Where Confidence Level is 95% and P=.5.

Source (Israel, Glenn D. 1992)

Since Siaya county has a large population size of above 100,000 and the variability in the proportion that would adopt e-government was unknown, a precision level of ±10, Confidence level of 95% and an estimated proportion of p=0.5 were used for the sample needed. The actual sample size was gotten by using Glenn D. Israel (1992) equation beneath

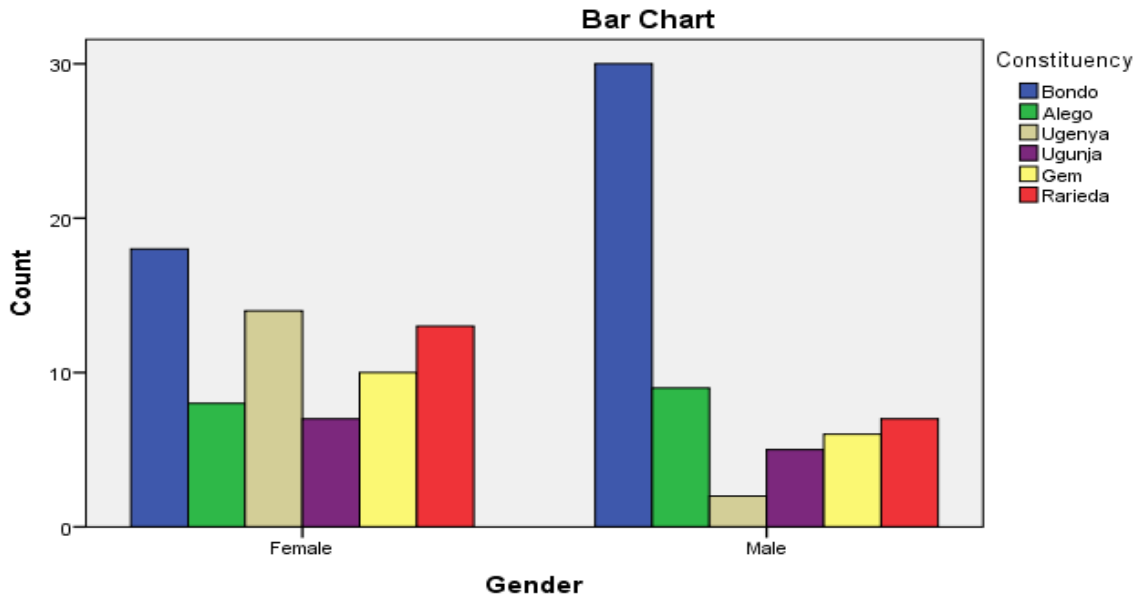
$$ss = \frac{Z^2 * (p) * (1-p)}{c^2}$$

According to Glenn D. Israel (1992), the above formula can be interpreted as follows; Z = Z esteem (e.g. 1.96 for 95% certainty level), p = rate picking a decision, communicated as decimal (.5 utilized for test measure required) and c = confidence interval, communicated as decimal (0.5). The result of the formula gave a sample size of 96. Table 3 below shows the sample distribution per constituency

Table 3 Sample distribution per selected constituency

Gender * Constituency Crosstabulation

			Constituency						
			Bondo	Alego	Ugenya	Ugunja	Gem	Rarieda	Total
Gender	Female	Count	18	8	14	7	10	13	70
		% within Gender	25.7%	11.4%	20.0%	10.0%	14.3%	18.6%	100.0%
	Male	Count	30	9	2	5	6	7	59
		% within Gender	50.8%	15.3%	3.4%	8.5%	10.2%	11.9%	100.0%
Total		Count	48	17	16	12	16	20	129
		% within Gender	37.2%	13.2%	12.4%	9.3%	12.4%	15.5%	100.0%



3.6.Data Collection tools and technique

The motivation behind using a tool or instrument in research is to measure the variables of study. Abel Gitau, (2008) informs that the validity and reliability of data are functions of the quality of the tools used in collecting information. The type of measurement tool used depends on the design and type of study. To guarantee collection of quality data, Abel Gitau confirms that appropriate data collection techniques must be applied. The term 'technique' refers to the way a given tool is applied to collect information. For example, interviewing, as a data collection technique requires the use of an interview guide. The data collection instrument that was used in the study was a questionnaire. The questionnaire construction began by anticipating possible sources of errors which might make the respondents give erroneous information or even fail to answer a question completely. This was done to minimize threats to reliability and validity that may be present in the study. It was ensured that the operational definitions matched the theoretical concepts and that the sample population will answer the questions adequately. In safeguarding relevance of the study the objectives were explained, justified and made clear to the respondents by using word of mouth and a short introductory statement on top of the questionnaire. This was also done to convince the respondents on the importance of the research so as to give accurate responses.

In coming up with the questions for the study the relevance of the questions to the study was also tested. This was to ensure that the questions did not contain wasted questions. To achieve this, the questions were checked first to find out if they could be analyzed using the selected tool of analysis for the study. To avoid a situation in which some questions were not answered, the wordings were checked properly to avoid pitfalls associated with wording of the questions.
The method of data collection was through the distribution of questionnaires to the constituencies that are taking part in the study. This strategy was chosen over different techniques, for example, interviewing studies on account of various variables that are basic to the time allotment of leading the study. This strategy was chosen over different techniques, for example, interviewing studies on account of various variables that are basic to the time allotment of leading the study. These factors include, the use of questionnaires is not very expensive to carry out as compared to the other forms of data collection, the respondents were assured of anonymity since no interviewer was present, and the questionnaire was to be completed by the

respondents at their own convenience, Standardized wording was easily applicable and lastly this method of data collection saves time and money for the researcher. Online questionnaire was also administered as a data collection technique.

3.7.Instrument Advancement

The model proposed incorporates three independent factors, e-service delivery, gender and Design for E-governance Policies and Strategies and two dependent variables, perceived usefulness and perceived ease of use. Training Level and access to ICTs were the directing factors, Data gathering was led from seventh January to April 2016. The surveys concentrated on gender figures that impact the reception of e-government services in Siaya County. The reactions were recorded both physically and electronically then broken down for study.

3.8.Reliability Verification

Unwavering quality is the appraisal of the level of consistency between numerous measures of a variable. It is intended to show the degree to which the operations in a concentrate, for example, information gathering can be rehashed and comparable results are acquired and the properties being measured is accepted not to have changed in the interim between estimations regardless of the possibility that the test is directed by various individuals utilizing same or option types of the test. A measure is deemed solid if an individual's score on the test is the same when given more than once in similar test and under similar circumstances. A solid instrument or test must meet two conditions; it must quantify a solitary measurement and it must have a little irregular blunder.

In this study Cronbach's alpha coefficient which is the most well-known measure of size of unwavering quality was utilized to gauge dependability of the survey. This test was selected over the other tests on the strength that it has been applied to similar studies, Venkatesh el al 2003. The concurred lower limit acceptable for Cronbach's alpha is 0.7, Davis 1989. If the value obtained in any test is below 0.7 the test is normally considered not to be reliable.

The reliability estimates generated by this method is known as coefficient of internal consistency. In the pilot test the results were as displayed in Table 4 below.

Table 4 Reliability test

Cronbach's Alpha	Cronbach's Alpha In view of Institutionalized Items	No of Items
.855	.985	28

3.9.Data Analysis

In scientific inquiry, notes Abel Gitau (2008), that data is transformed into knowledge when it is properly analyzed, interpreted and the interpretations given meaning. Steven (1946) as quoted by Abel Gitau, perceives four levels of estimation scales. The ordinal scale, nominal scale, interim scale and proportion scale. The research data was categorized into nominal scale that is considered to be the lowest level of measurement of a variable. The technique that was used in data analysis was partial correlation. This technique was chosen because of its ability to estimate the relationship between the predictor and criterion variable. To clearly examine the true correlation amongst variables without the influence of other variables, controlling the effects of other variables is necessary. Examination of the demographic data was done to test the exploration theory utilizing clear insights of frequency counts and percentage. The analysis also described the relationship of the distribution of the main variables using cross tabulation and Chi-square. Data was further summarized visually using frequency tables, graphs, and charts.
A correlation analysis of variables was carried out to confirm the influence of the variables on the adoption. The tools used for analysis included Microsoft Excel 2010 and SPSS 20.0
Not all participants addressed the majority of the inquiries thus the rates reported relate to the aggregate number of individuals noting the individual questions. The factual significance of relationships among chosen factors was resolved utilizing the Fishers correct test. The level of significance was set at 0.05. Table 5 shows the significance test results.

Table 5 Significance Test

Construct	Number of Items	Reliability
Design for E-governance Policies and Strategies	5	0.879
Education Background	4	0.821
Perceived Ease of Use	4	0.815
Access to ICTs	5	0.824
E-service delivery	6	0.842
Perceived Usefulness	4	0.821

CHAPTER FOUR

4. DISCUSSIONS AND RESULTS

4.1. Introduction

This section portrays the outcomes and dialogs of the discoveries of the research. The discoveries depend on the three research addresses that guided the study. Examination of research data was done to distinguish, portray and investigate the relationship amongst gender and variables, for example, access to ICTs, instruction level, e-benefit conveyance, and outline for e-administration approaches and procedures that are probably going to impact the e-government services selection. Data was obtained from both self and online administered questionnaires which was completed by 129 citizens (n=129). The statistical software used to analyze data was Statistical Package for the Social Science. Graphic measurements were utilized to dissect information where relative frequencies were utilized as part of a few inquiries and other were broken down using various reactions with the assistance of Likert scale in acquiring correlation.

4.2. Response Rate

A sum of 149 surveys was conveyed and out of this number 129 were observed to be substantial for use in the investigation procedure. This spoke to a reaction rate of 87%.

4.3. Reliability test (cronbach's alpha)

The table 6 below shows the result of the alpha scores obtained when all the items in the questionnaire were exposed to Cronbach's alpha test keeping in mind the end goal to beware of the inner consistency based on inter- item correlation.

Table 6 Cronbach's Alpha

Cronbach's Alpha	Cronbach's Alpha In view of Institutionalized Items	No of Items
.855	.985	28

The questionnaire items obtained the recommended alpha score of above 0.7. The reliability analysis results in table 6 show that alpha coefficient of 0.855, is considered to be a very good score.

These results show that the Questionnaire was a reliable measuring instrument, therefore every item as revised have all the deserving potential of being maintained and every one of the items associate with the aggregate scales to a decent degree.

4.4.Research Findings

4.4.1. Demographic and Study Variables

In this study, gender was a key demographic variable. In spite of the fact that whatever remains of the demographic information were not part of the motivation behind the study, this arrangement of information was planned to depict demographic factors of the sample and to survey for any impact on the research discoveries. The demographic information comprised of sex, age, constituency and probability of having any income generating activity.

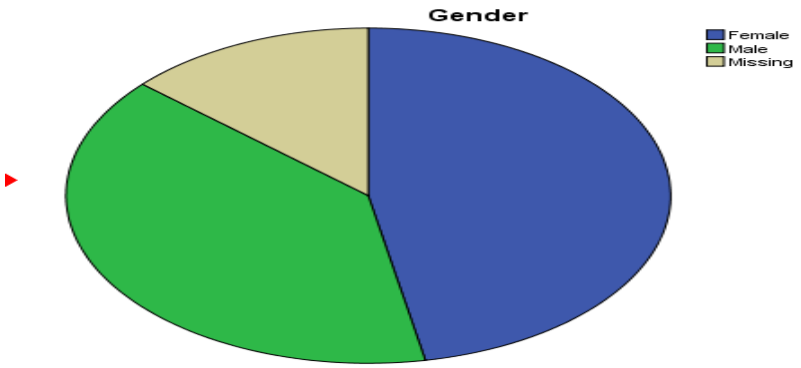
4.4.2. Participants gender

Participants were requested to select the gender orientation class fitting to them (see table 7 below). A total of 129 or (86.6%) participants responded to the question. 20 participants that make 13% of the sample did not respond. 47% of the respondents were female (70 responses) and 40% constituted the male (59 responses). Majority of the females and males were from Bondo Constituency

Table 7 Gender

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	70	47.0	54.3	54.3
	Male	59	39.6	45.7	100.0
	Total	129	86.6	100.0	
Missing	System	20	13.4		
Total		149	100.0		



4.4.3. Constituencies of the participants

This study focused on Siaya County which is located in Nyanza and constitutes 6 constituencies (Ugenya, Alego, Ugunja, Gem, Bondo and Rarieda). Independent Electroral and Boundaries Commission (IEBC) confirms that Siaya has a total population of 842, 304 people. Responses were received from all the constituencies. From Bondo constituency, 25.7% of participants were female and 50.8% of participants were male making a total of 48 respondents. In Alego constituency, 11.8% of participants were female and 15.3% of participants were male making a total of 17 respondents. In Ugenya, there were 14 Female and 16 male respondents. In Ugunja we had 7 female and 5 male respondents. In Gem constituency, 14.3% of participants were female and 10.2% of participants were male making a total of 16 respondents. Rarieda constituency had 13 Female and 7 male respondents. Table 8 below displays the distribution

Table 8 Constituency cross tabulation

Gender * Constituency Crosstabulation

			Constituency						
			Bondo	Alego	Ugenya	Ugunja	Gem	Rarieda	Total
Gender	Female	Count	18	8	14	7	10	13	70
		% within Gender	25.7%	11.4%	20.0%	10.0%	14.3%	18.6%	100.0%
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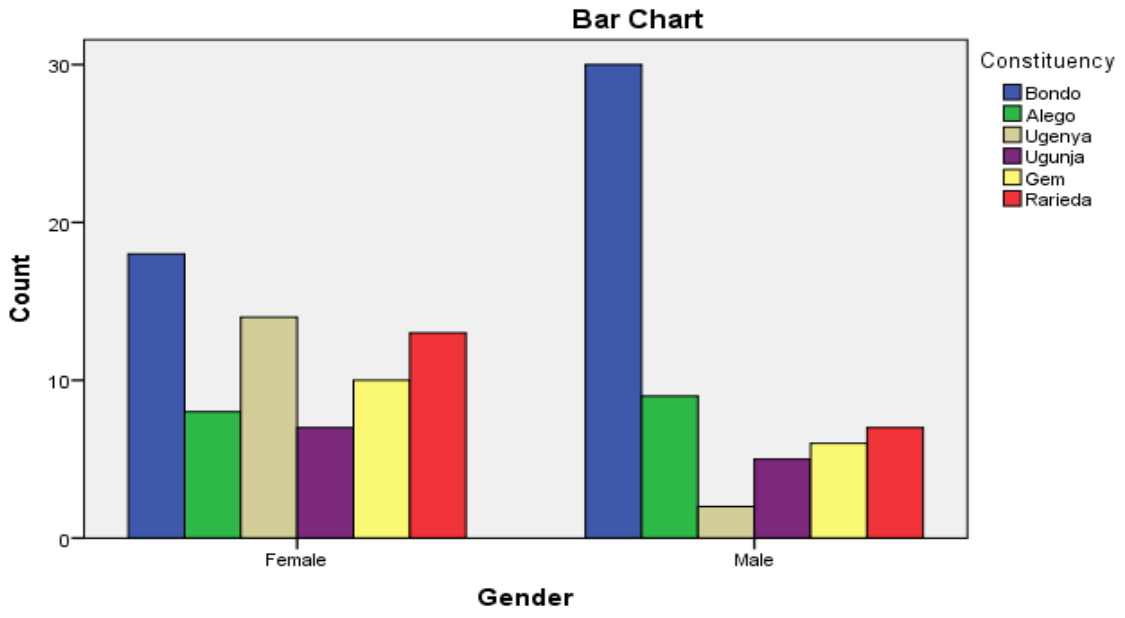

4.4.4. Income Status of the Participants

The study had three categories of income status, those who had no income at all, those who had and those who were not willing to disclose their income status. 36 female and 40 male participants had income while 27 female and 16 male had no income at all. Only 10 of the participant were not willing to disclose their income status. The income status variable was crucial in this study since it was used to determine if it had influence on the access to ICTs

Table 9 Income Status

Gender * Income Status Crosstabulation

Count

		Income Status			
		N/A	No	Yes	Total
Gender	Female	7	27	36	70
	Male	3	16	40	59
Total		10	43	76	129

4.4.5. Age of the participants

The highest numbers of respondents were of the age between 26 to 35 years. This was followed by the age bracket of 36 to 45 with 33 respondents. There were 18 respondents within the age bracket of 18 to 25 and 15 respondents within the age bracket of 46 to 60. Only one male did not indicate his age. This demonstrates most of the participants of this study were significantly young people who had interest in e-government services or were already using the services.

Table 10 Age

Gender * Age(Years) Crosstabulation

Count

		Age(Years)					
		18 to 25	26 to 35	36 to 45	46 to 60	No	Total
Gender	Female	13	31	18	8	0	70
	Male	5	31	15	7	1	59
Total		18	62	33	15	1	129

4.4.6. Descriptive Statistics of the Independent Variables

This study consisted of three independent variables namely gender, E-service delivery and Design for E-governance Policies and Strategies. The descriptive statistics in this study was based on cross tabulations between the dependent variables and independent variables to establish how each of the independent variable will affect their association with the dependent variable. Chi-square type of non-parametric test for goodness of fit was applied to explore the proportion of cases that fall into the various categories of the variables and relationship between them

4.4.7. Gender

4.4.7.1. Cross tabulation between education level and gender

The table 11below shows a cross tabulation results between education level and gender. The result indicates that out of 124 responses, 68 responses were female and 56 male. 66.2% of females had education at tertiary level, 32.4% of them had education at secondary level and only 1.5% had education at primary level. On the other hand, 67.9% of male had education at tertiary level, 30.4% of them had education at secondary level and only 1.8% had education at primary level.

When the percentages within the education levels are combined the results shows that 66.9% of both male and female had education at the tertiary level, while 31.5% of the total gender had their education at the secondary level and only a total of 1.6% of the gender had their education at primary level. This shows that majority of the gender had their education at tertiary level while minority had their education at primary level.

When chi-square was applied, the results as shown in table 12 below indicates that there was no significance difference in education between the two proportions (male and female) in all the three levels. This is because the chi-square table indicates a significance value of 0.965 which is above the recommended significance value of 0.05. This implies that both female and male had equal representation across all levels of education.

Table 11Cross tabulation between education level and gender

			Education Level			
			Primary Level	Secondary Level	Tertiary Level	Total
Gender	Female	Count	1	22	45	68
		Expected Count	1.1	21.4	45.5	68.0
		% within Gender	1.5%	32.4%	66.2%	100.0%
	Male	Count	1	17	38	56
		Expected Count	.9	17.6	37.5	56.0
		% within Gender	1.8%	30.4%	67.9%	100.0%
Total		Count	2	39	83	124
		Expected Count	2.0	39.0	83.0	124.0
		% within Gender	1.6%	31.5%	66.9%	100.0%

Table 12 Chi-Square Tests between education level and gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.071[a]	2	.965
Likelihood Ratio	.071	2	.965
Linear-by-Linear Association	.022	1	.882
N of Valid Cases	124		

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is .90.

4.4.7.2. Cross tabulation between basic computer training and gender

Table 13 below shows a cross tabulation results between basic computer training and gender. The result indicates that out of 129 responses, 70 responses were female and 59 male. 36.4% of females had basic computer training while 33.6% of them had no basic training in computer. On the other hand, 55.9% of male had basic computer training and 44.1% of them had no basic training in computer

When the percentages of those who had basic training in computer were combined, the results showed that 51.9% of both male and female had computer training and 48.1% of the total gender had no basic training in computer. This shows that majority of the gender had computer training while minority had no computer training. However, when chi-square test was executed to verify whether the proportion of women and men had a difference in basic computer training, the results as shown in table 14 below indicates that there was no significance difference in basic computer training between the two proportions (male and female).

This is because the chi-square table indicates a significance value of 0.405 which is above the recommended significance value of 0.05. This implies that both female and male had equal basic training in computer.

Table 13Cross tabulation between basic computer training and gender

			Basic computer training		
			No	Yes	Total
Gender	Female	Count	36	34	70
		Expected Count	33.6	36.4	70.0
		% within Gender	51.4%	48.6%	100.0%
	Male	Count	26	33	59
		Expected Count	28.4	30.6	59.0
		% within Gender	44.1%	55.9%	100.0%
Total		Count	62	67	129
		Expected Count	62.0	67.0	129.0
		% within Gender	48.1%	51.9%	100.0%

Table 14 Chi-square between basic computer training and gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.695[a]	1	.405
Continuity Correction[b]	.431	1	.511
Likelihood Ratio	.696	1	.404
Fisher's Exact Test			
N of Valid Cases	129		

4.4.7.3. Cross tabulation between experience with ICTs and gender

Table 15 below shows a cross tabulation results between experience with ICTs like internet and gender. The result indicates that out of 128 responses, 70 responses were female and 58 male. 55.7% of females had excellent experience with ICTs like internet, 34.3% of them had a good experience with ICTs while only 10% had a fair experience with ICTs like internet. On the contrary, only 17.2% of male had excellent experience with ICTs like internet while 74.1 % had a good experience with ICTs and 8.6% of them had a fair experience with ICTs like internet.

When the percentages of those who excellent experience with ICTs like internet were combined, the results showed that 38.5% of both male and female had excellent experience while 52.3% of the total gender had a good experience with ICTs and only 9.4% of the total gender had no basic training in computer. This shows that majority of the gender had fair experience with ICTs like internet.

A chi-square test was performed to verify whether the proportion of women and men had a difference in experience with ICTs like the internet, the results as shown in table 16 below indicates that there was indeed a significance difference in experience with ICTs like the internet between the two proportions (male and female). Statistical results ($X^{2,}$ df=2, n= 128, Asymp.sig=0.000) indicates that there is a difference between observed and expected values.

Table 15 Cross tabulation between experience with ICTs like internet and gender

Gender * Experience with ICTs like the Internet Crosstabulation

			Experience with ICTs like the Internet			
			Fair	Good	Excellent	Total
Gender	Female	Count	7	24	39	70
		% within Gender	10.0%	34.3%	55.7%	100.0%
	Male	Count	5	43	10	58
		% within Gender	8.6%	74.1%	17.2%	100.0%
Total		Count	12	67	49	128
		% within Gender	9.4%	52.3%	38.3%	100.0%

Table 16 Chi-square between experience with ICTs like internet and gender

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.953[a]	2	.000
Likelihood Ratio	23.010	2	.000
Linear-by-Linear Association	11.018	1	.001
N of Valid Cases	128		

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.44.

4.4.7.4. Cross tabulation between gender and access to ICTs

Table 17 below shows a cross tabulation results between use and availability of ICTs and gender. The result indicates that out of 129 responses, 70 responses were female and 59 male. 14.3% of females said ICTs were available and not used, 50% females observed that ICTs were available and used, 5.7% of the females said ICTs were not available, 10% females said ICTs were somehow available and not used while 20% observed somehow availability and usage. On the other hand, 8.5% of the males said ICTs were available and not used, 13.6% males observed that ICTs were available and used, only 1.7% of the males said ICTs were not available, 16.9% males said ICTs were somehow available and not used while 57.6% observed somehow availability and usage.

When the views of those who said that ICTs was available and not used were combined as a percentage, the outcomes demonstrated that 11.6% of them were male and female. 33% of the total gender observed that ICTs was available and used. Only 3.9% of the total gender said ICTs was not available in their county, 13.2% observed that somehow ICTs was available and not used while 57.6% said that somehow ICTs was available and used.

The performed chi-square test was to verify whether the proportion of women and men had a difference in their view on the availability, access, and use of ICTs in their county, the results as shown in table 18 below indicates that there was indeed a significance difference in their view on the use and availability of ICTs. Statistical results (X2, df=6, n= 129, Asymp.sig=0.000) indicates that there is a difference between observed and expected values.

Table 17 Cross tabulation between gender and access to ICTs

			Use and availability of ICTs							Total
			Available and not used	available and used	Available and used	N/A	Not available	Somehow available and not used	Somehow available and used	
Gender	Female	Count	10	14	21	0	4	7	14	70
		% within Gender	14.3%	20.0%	30.0%	0.0%	5.7%	10.0%	20.0%	100.0%
	Male	Count	5	2	6	1	1	10	34	59
		% within Gender	8.5%	3.4%	10.2%	1.7%	1.7%	16.9%	57.6%	100.0%
Total		Count	15	16	27	1	5	17	48	129
		% within Gender	11.6%	12.4%	20.9%	0.8%	3.9%	13.2%	37.2%	100.0%

Table 18 Chi-square tests between gender and access to ICTs

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	29.942[a]	6	.000
Likelihood Ratio	32.149	6	.000
N of Valid Cases	129		

a. 4 cells (28.6%) have expected count less than 5. The minimum expected count is .46.

4.4.7.5. Cross tabulation between gender and frequently used ICT resource

The table below shows a cross tabulation results between gender and frequently used ICT resource. The result indicates that out of 129 responses, 70 responses were female and 59 male. From the results, 30 % of females frequently use radio, television, cellular phones and computer while only 27.1 % of men use the mentioned resources. The highest combined percentage of total gender that frequently uses radio, television, cellular phones and computer is 57%. The lowest combined percentage of gender that frequently uses radio, television, cellular phones, computer and tablet is 2.4%. Interesting result also shows that men frequently use cellular phones and computer at 23.7% compared to females who use the same resources at 4.3%. The result still shows that 20.3% of men frequently use Cellular phones while only 8.6% of female use their phones frequently. The performed chi-square test was to verify whether the proportion of women and men had a difference in the ICT resource that they frequently use, the results as shown in table below indicates that there was indeed a significance difference in ICT resource that they frequently use. Statistical results ($X^{2,}$ df=12, n= 129, Asymp.sig=0.001) indicates that there is a difference between observed and expected values.

Table 19 Cross tabulation between gender and frequently used ICT resource

			Frequently Used ICT Resources													
			Cellular Phones	Cellular Phones, Computer	Cellular Phones,ipad	Computer	N/A	Radio, Television, Cellular Phones	Radio, Television, Cellular Phones, computer	Radio, Television, Cellular Phones, Computer	Radio, Television, Cellular Phones, Computer, Printer	Radio, Television, Cellular Phones, Computer, Tablet	Radio, Television, Cellular Phones, Computer, tablets	Television, Cellular Phones	Television, Cellular Phones, Computer	Total
Gender	Female	Count	6	3	4	7	0	15	9	12	4	1	0	2	7	70
		Expected Count	9.8	9.2	2.2	8.1	.5	10.9	7.6	12.5	2.2	.5	1.1	1.1	4.3	70.0
		% within Gender	8.6%	4.3%	5.7%	10.0%	0.0%	21.4%	12.9%	17.1%	5.7%	1.4%	0.0%	2.9%	10.0%	100.0%
	Male	Count	12	14	0	8	1	5	5	11	0	0	2	0	1	59
		Expected Count	8.2	7.8	1.8	6.9	.5	9.1	6.4	10.5	1.8	.5	.9	.9	3.7	59.0
		% within Gender	20.3%	23.7%	0.0%	13.6%	1.7%	8.5%	8.5%	18.6%	0.0%	0.0%	3.4%	0.0%	1.7%	100.0%
Total		Count	18	17	4	15	1	20	14	23	4	1	2	2	8	129
		Expected Count	18.0	17.0	4.0	15.0	1.0	20.0	14.0	23.0	4.0	1.0	2.0	2.0	8.0	129.0
		% within Gender	14.0%	13.2%	3.1%	11.6%	0.8%	15.5%	10.9%	17.8%	3.1%	0.8%	1.6%	1.6%	6.2%	100.0%

Table 20 Chi-square between gender and frequently used ICT resource

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	33.174[a]	12	.001
Likelihood Ratio	39.794	12	.000
N of Valid Cases	129		

a. 14 cells (53.8%) have expected count less than 5. The minimum expected count is .46.

4.4.7.6. Cross tabulation between gender and use and availability of ICTs

Table 21 below shows a cross tabulation results between use and availability of ICTs and gender. The result indicates that out of 129 responses, 70 responses were female and 59 male. 14.3% of females said ICTs were available and not used, 50% females observed that ICTs were available and used, 5.7% of the females said ICTs were not available, 10% females said ICTs were somehow available and not used while 20% observed somehow availability and usage. On the other hand, 8.5% of the males said ICTs were available and not used, 13.6% males observed that ICTs were available and used, only 1.7% of the males said ICTs were not available, 16.9% males said ICTs were somehow available and not used while 57.6% observed somehow availability and usage.

When the views of those who said that ICTs was available and not used were combined as a percentage, the outcomes demonstrated that 11.6% of them were male and female. 33% of the total gender observed that ICTs was available and used. Only 3.9% of the total gender said ICTs was not available in their county, 13.2% observed that somehow ICTs was available and not used while 57.6% said that somehow ICTs was available and used.

The performed chi-square test was to verify whether the proportion of women and men had a difference in their view on the availability, access, and use of ICTs in Kenya, the results indicates that there was indeed a significance difference in their view on the use and availability of ICTs. Statistical results ($X^{2,}$ df =6, n= 129, Asymp.sig=0.000) indicates that there is a difference between observed and expected values.

Table 21Cross tabulation between gender and use and availability of ICTs

			Use and availability of ICTs							
			Available and not used	available and used	Available and used	N/A	Not available	Somehow available and not used	Somehow available and used	Total
Gender	Female	Count	10	14	21	0	4	7	14	70
		% within Gender	14.3%	20.0%	30.0%	0.0%	5.7%	10.0%	20.0%	100.0%
	Male	Count	5	2	6	1	1	10	34	59
		% within Gender	8.5%	3.4%	10.2%	1.7%	1.7%	16.9%	57.6%	100.0%
Total		Count	15	16	27	1	5	17	48	129
		% within Gender	11.6%	12.4%	20.9%	0.8%	3.9%	13.2%	37.2%	100.0%

4.4.7.7. Cross tabulation between gender and availability of cybercafés

Table 22 below shows a cross tabulation results between gender and availability of cybercafes. The result indicates that out of 129 responses, 70 responses were female and 59 male. From the results, 78.6 % of females observed availability of cybers in their county's and only 11.4% females said cybercafés were unavailable .96.6% of men confirmed availability of cybercafés and only 1.7% observed no availability of cybers. When the percentages of those who observed the availability of cybercafés were combined, the results showed that 86.8% of both male and female ticked yes while only 7.0% of the total gender ticked no indicating unavailability of cybercafés. This shows that majority of the gender confirmed availability of cybercafes

The performed chi-square test was to verify whether the proportion of women and men had a difference in observing whether there was availability or no availability of cybercafes, the results as shown in table 23 below indicates that there was no significance difference in their observations. Statistical results ($X^{2,}$ df =2, n= 129, Asymp.sig=0.011) indicates that there was no difference between observed and expected values.

Table 22 Cross tabulation between gender and availability of cybercafés

			Availability of cybercafes or telecentres			
			N/A	No	Yes	Total
Gender	Female	Count	7	8	55	70
		Expected Count	4.3	4.9	60.8	70.0
		% within Gender	10.0%	11.4%	78.6%	100.0%
	Male	Count	1	1	57	59
		Expected Count	3.7	4.1	51.2	59.0
		% within Gender	1.7%	1.7%	96.6%	100.0%
Total		Count	8	9	112	129
		Expected Count	8.0	9.0	112.0	129.0
		% within Gender	6.2%	7.0%	86.8%	100.0%

Table 23 Chi-Square tests between gender and availability of cybercafés

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	9.108[a]	2	.011
Likelihood Ratio	10.356	2	.006
N of Valid Cases	129		

4.4.7.8. Cross tabulation between gender and access to ICTs that has internet

Table 24 below shows a cross tabulation results between experience with ICTs like internet and gender. The result indicates that out of 128 responses, 70 responses were female and 58 male. 55.7% of females had excellent experience with ICTs like internet, 34.3% of them had a good experience with ICTs while only 10% had a fair experience with ICTs like internet. On the contrary, only 17.2% of male had excellent experience with ICTs like internet while 74.1 % had a good experience with ICTs and 8.6% of them had a fair experience with ICTs like internet. When the percentages of those who excellent experience with ICTs like internet were combined, the results showed that 38.5% of both male and female had excellent experience while 52.3% of the total gender had a good experience with ICTs and only 9.4% of the total gender had no basic training in computer. This shows that majority of the gender had fair experience with ICTs like internet.

The performed chi-square test was to verify whether the proportion of women and men had a difference in experience with ICTs like the internet, the results as shown in table 25 below indicates that there was indeed a significance difference in experience with ICTs like the internet between the two proportions (male and female). Statistical results ($X^{2,}$ df=2, n= 129, Asymp.sig=0.377) indicates that there is no difference between observed and expected values.

Table 24 Cross tabulation between gender and access to ICTs that has internet

			Access of ICTs resource with internet			
			N/A	No	Yes	Total
Gender	Female	Count	3	39	28	70
		Expected Count	2.2	36.4	31.5	70.0
		% within Gender	4.3%	55.7%	40.0%	100.0%
	Male	Count	1	28	30	59
		Expected Count	1.8	30.6	26.5	59.0
		% within Gender	1.7%	47.5%	50.8%	100.0%
Total		Count	4	67	58	129
		Expected Count	4.0	67.0	58.0	129.0
		% within Gender	3.1%	51.9%	45.0%	100.0%

Table 25 Chi-Square tests between gender and access to ICTs that has internet

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	1.951[a]	2	.377
Likelihood Ratio	1.991	2	.370
N of Valid Cases	129		

4.4.8. E-service delivery

Table 26 below shows a cross tabulation result between gender and e-service delivery. The result indicates that out of 129 responses, 70 responses were female and 59 male. 54.3% of females feel that e-citizen portal doesn't provide the precise information they need, 14.3% did not answer the question while 31.4% confirmed that e-citizen provided information that they needed. On the other hand, 54.2% of male felt that e-citizen portal doesn't provide the precise information they need while 13.6 % did not choose either yes or no and 31.8% of them confirmed that e-citizen provided information that they needed.

When the percentages of those who felt that the e-citizen portal provided the information they needed were combined, it totaled to 54.3% while 31.8% of the total gender felt that e-citizen portal doesn't provide the precise information they need. This shows that majority of the gender both male and female felt that e-citizen portal didn't provide the precise information they needed. A chi-square test was conducted showing statistical results ($X^{2,}$ df=2, n= 129, Asymp.sig=0.991) that indicated there was no difference between the observations for both the gender. This result answers the research question, *'Does the e-citizen portal provide the basic services and public information required by each gender?'*

Table 26 E-service delivery Variable

Gender * E-service delivery

			Does e-citizen portal provide the precise information you need			
			Yes	N/A	No	Total
Gender	Female	Count	22	10	38	70
		% within Gender	31.4%	14.3%	54.3%	100.0%
	Male	Count	19	8	32	59
		% within Gender	32.2%	13.6%	54.2%	100.0%
Total		Count	41	18	70	129
		% within Gender	31.8%	14.0%	54.3%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	.018[a]	2	.991
Likelihood Ratio	.018	2	.991
Linear-by-Linear Association	.003	1	.959
N of Valid Cases	129		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 8.23.

4.4.9. Design for E-governance Policies and Strategies

Table 27 below shows a cross tabulation results between gender and design for e-governance Policies. The result indicates that out of 129 responses, 70 responses were female and 59 male. 68.6% of females were not conversant with the current Kenyan ICT policy, 24.3% of them were conversant while only 7.1% were not willing to declare their opinion. On the other hand, 74.6% of male were not conversant with the current Kenyan ICT policy while 16.9 % did not choose either yes or no or only 8.5% of them were conversant with the ICT policy.

When the percentages of those who were not conversant with the current Kenyan ICT policy were combined, it totaled to 71.3% while only 17.1% of the total gender were conversant with the ICT policy. This shows that majority of the gender both male and female had no clue of what ICT policy was all about.

The performed chi-square test was to verify whether the proportion of women and men had the same view on the design for e-governance Policies and Strategies, the results as shown in table 27 below indicates that both men and women were not conversant with the current Kenyan ICT policy. Statistical results ($X^{2,}$ df=2, n= 129, Asymp.sig=0.023) indicates that there is no difference between observed and expected values.

Table 27 Design for e-governance Policies and Strategies

Gender * Are you conversant with the current Kenyan ICT policy- Crosstabulation

			Are you conversant with the current Kenyan ICT policy-			
			Yes	N/A	No	Total
Gender	Female	Count	17	5	48	70
		% within Gender	24.3%	7.1%	68.6%	100.0%
	Male	Count	5	10	44	59
		% within Gender	8.5%	16.9%	74.6%	100.0%
Total		Count	22	15	92	129
		% within Gender	17.1%	11.6%	71.3%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	7.503[a]	2	.023
Likelihood Ratio	7.850	2	.020
Linear-by-Linear Association	2.566	1	.109
N of Valid Cases	129		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.86.

4.4.10. The analysis of moderating factors on independent variables

The descriptive statistics in this study was based on cross tabulations between the moderating factors and independent variables to establish how each of the moderating factors will affect their association with the independent variable.

4.4.10.1. Access to ICTs

Chi-square test type of non-parametric test for goodness of fit was applied to explore the proportion of cases that fall into the various categories of the variables and relationship between them. A chi-square test was conducted to verify whether ICT access had a positive effect on e-service delivery, the results as shown in table below indicates that there was indeed significance in the relationship between the two variables. Statistical results ($X^{2,}$ df=4, n= 149, Asymp.sig=0.000) indicates that there is difference between observed and expected values.

Table 28 Access to ICTs

Access of ICTs resource with internet * E-Service Delivery

			Does e-citizen portal provide the precise information you need			
			Yes	N/A	No	Total
Access of ICTs resource with internet	Yes	Count	22	8	28	58
		% within Access of ICTs resource with internet	37.9%	13.8%	48.3%	100.0%
	N/A	Count	1	22	1	24
		% within Access of ICTs resource with internet	4.2%	91.7%	4.2%	100.0%
	No	Count	18	8	41	67
		% within Access of ICTs resource with internet	26.9%	11.9%	61.2%	100.0%
Total		Count	41	38	70	149
		% within Access of ICTs resource with internet	27.5%	25.5%	47.0%	100.0%

Table 29 Chi-Square test for Access to ICTs

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	68.465[a]	4	.000
Likelihood Ratio	62.154	4	.000
Linear-by-Linear Association	2.624	1	.105
N of Valid Cases	149		

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 6.12.

4.4.10.2. Education Level

Another Chi-square test type of non-parametric test for goodness of fit was applied to explore the proportion of cases that fall into the various categories of the variables and relationship between them. A chi-square test was conducted to verify whether education level had a positive effect on e-service delivery, the results as shown in table below indicates that there was indeed a positive significance in the relationship between the two variables.

Statistical results ($X^{2,}$ df=4, n= 149, Asymp.sig=0.003) in table 30 indicates that there is a difference between observed and expected values.

Table 30 Education Level

Education Level * Eservice delivery

			Does e-citizen portal provide the precise information you need			
			Yes	N/A	No	Total
Education Level	Primary Level	Count	0	2	0	2
		% within Education Level	0.0%	100.0%	0.0%	100.0%
	Secondary Level	Count	8	6	25	39
		% within Education Level	20.5%	15.4%	64.1%	100.0%
	Tertiary Level	Count	32	10	41	83
		% within Education Level	38.6%	12.0%	49.4%	100.0%
Total		Count	40	18	66	124
		% within Education Level	32.3%	14.5%	53.2%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	15.929[a]	4	.003
Likelihood Ratio	12.034	4	.017
Linear-by-Linear Association	2.430	1	.119
N of Valid Cases	124		

a. 3 cells (33.3%) have expected count less than 5. The minimum expected count is .29.

4.4.11. Hypothesis validation

H1 Design for E-governance Policies and Strategies has an impact on perceived usefulness. The Pearson's correlation coefficient between Design for E-governance Policies and Strategies and perceived usefulness as shown in Table 31 is positive and significant, the significance of each of the variable is less than 0.05 at 0.000 hence the values are significant. This complies with the hypothesis that design for e-governance policies and strategies will influence positively perceived usefulness of e-government services.

Table 31 H1 Design for E-governance Policies and Strategies

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.000	.242		8.276	.000
	Design for E-governance Policies and Strategies	.079	.094	.069	.838	.403

a. Dependent Variable: Perceived Usefulness

H2 Gender positively affected perceived ease of use. The Pearson's correlation coefficient between gender factor and perceived ease of use as demonstrated in table 32 is certain and critical, significance of each of the variable is under 0.05 at 0.000 and therefore the values are noteworthy. The speculation that men will rate the apparent ease of use of e-government services higher than women is valid.

Table 32 Gender influence on perceived ease of use

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.943	.359		5.405	.000
	Gender	.529	.233	.197	2.265	.025

a. Dependent Variable: E-citizen portal ease of use

H3 Gender has a significant influence on perceived usefulness. The Pearson's correlation coefficient between gender and perceived usefulness as shown below is positive and significant, significance of each of the variable is less than 0.05 at 0.000 hence the values are significant. The theory that men will rate the apparent convenience of e-administration services higher than ladies is valid. Table 33 Gender influence on usefulness

Table 33 Gender influence on perceived ease of use

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.237	.247		9.060	.000
	Gender	-.008	.160	-.005	-.051	.959

a. Dependent Variable: Does e-citizen portal provide the precise information you need

H4 E-service delivery; the association of e-service delivery with perceived ease of use was moderated by ICTs access and education level, both moderators were relied upon to have a strong positive effect on relationship between the variables. Indeed, the moderators did have a significant effect on the association as claimed. The Pearson's correlation coefficient between e-service delivery and perceived ease of use as shown table 34 is positive and significant, significance of each of the variable is less than 0.05 at 0.000 hence the values are significant.

Table 34 the association of e-service delivery with perceived ease of use

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.724	.380		4.536	.000
	E-Service Delivery	.284	.163	.142	1.743	.083

a. Dependent Variable: E-citizen portal ease of use

H5 Perceived usefulness positively affected user satisfaction. The Pearson's correlation coefficient between perceived usefulness and e-government services reception as shown in Table 35 is positive and significant, the significance of each of the variable is less than 0.05 at 0.000 hence the values are significant. The outcomes affirms the theory that apparent helpfulness will have a critical impact on e-government services adoption selection

Table 35 Perceived usefulness on user satisfaction

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.697	.276		6.138	.000
	Perceived Usefulness	.122	.065	.153	1.874	.063

a. Dependent Variable: E-government services adoption

H6 Perceived ease of use has a significant influence on e-administration services adoption. The Pearson's correlation coefficient between perceived ease of use e-administration services adoption as shown in Table 36 below is positive and significant, the significance of each of the variable is less than 0.05 at 0.000 hence the values are significant. The outcome affirms the theory that perceived ease of use will have a critical impact on e-government services selection.

Table 36 Expected ease of use on e-administration services

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.928	.144		27.253	.000
	E-citizen portal ease of use	.085	.051	.135	1.657	.100

a. Dependent Variable: E-government services adoption

4.5. Discussion of Findings

This study affirms a large number of the theories proposed in the model. A portion of the speculations were plan for e-administration arrangements and systems, perceived ease of use, E-service conveyance, and perceived helpfulness.

The proposed model had six constructs, where all the free builds reported positive and critical connection with both perceived usefulness and seen ease of use. The aftereffects of every constructs are in light with the expectations of this study.

The findings are as discussed below.

4.5.1. Gender Factor

Gender is characterized by (UNDP, 2007), as the social recognizable proof connected with being male and female and the connections between women, men, young ladies and young men, and in addition the relations amongst ladies and those between men. Most recent research has specified gender to have an essential impact and part while considering innovation selection and its use in organizational setting. As Venkatesh et al., (2000) shows in early studies that male clients utilize a PC more than females to depict gender as a standout acceptance.

This is in line with the outcome of this research which shows that males are more likely to be potential adopters compared to their female counterparts.

This section seek to address this objective *'To gain better understanding of how gender influences the acceptance of e-administration services in Kenya, particularly in Siaya County'*

Study by Morris and Venkatesh (2000) demonstrates gender contrasts to exist in innovation appropriation settings. Moreover, gender altogether directs the impact of the determinants on conduct aim. The Venkatesh et al., (2003) research discovered that the impact of perceived usefulness on conduct intention was influenced by gender.

This study relied on Shafi and Vishanth (2009) reference of Dwivedi and Lal's (2007) recommendation that gender (as a social variable) can be utilized as an autonomous variable to clarify the contrasts between innovation adopters and non-adopters of innovation, for this situation e-government. To delineate gender variable toward e-government reception and consumption, it was predicted that men will rate both the perceived usefulness and perceived ease of use of e-government services higher than female. As indicated by the findings, this speculation was bolstered since there was evident distinction amongst men and women with regards to rating the perceived ease of use and s perceived usefulness of e-government services. The result of this study is in accordance with past researches that observe there are gender crevices with regards to utilization and access of ICTs. Accordingly, this study affirms that men are probably going to be potential adopters of e-government services

4.5.2. E-service delivery

From the above study and analysis of findings it is evident that E-service delivery plays a major role in E-government adoption. To confirm this, respondents suggested that the following should be done to the current e-services;

i. All necessary services e.g. id registration and replacement should be provided
ii. Online payment of these services should be enabled

Other services that were recommended included, company or business registration, Public land disposal tribunals, Police services, (security) tax department. Metrology, disasters and general government services

Therefore, from the findings, it would be appropriate to suggest that e-administration services offered have to be accessible for the initiative to succeed. Furthermore a report by UNDP (2007) suggests prioritizing of electronic administrations that spotlights on the real prerequisites of both ladies and men and are more receptive to sexual orientation balance issues.

This prioritization is primarily vital for region level administration conveyance, as both men and female, partners and groups for the most part have much nearer connects with area government powers than the national levels of government and regularly have better open doors and environment to express their needs and worries at the neighborhood level.

4.5.3. Design for e-governance policies and strategies

Most recent research discoveries demonstrate that most national governments e-administration arrangements and procedures are outlined on a "business driven" premise, with next to no contributions from non-State partners. From the above study and analysis of findings it is evident that design for e-governance policies and strategies plays a major role in E-government adoption. Both men and women argue that the policies and strategies in place don't equally represent their interest. Policies that exist put obstructions like: un-necessary control of information flow, un-authorized access to information by employees, and prohibited access of information by the general public for fear of confidentiality breach. Some of these guidelines slow down E-government adoption in the public sector (Ngugi, 2009). 96.9% of female respondents and 86.3% of male respondents strongly agree that gender equality is not considered when it comes to ICT formulation. Numerous studies illustrated in the writing don't support consideration of sexual orientation in their ICT strategy. For instance, Existing strategies in Mozambique, do exclude any treatment of social issues, including gender, (Olatokun, 2012). In support of the previous researches, this study confirms that there is a strong need for inclusion of gender factor when it comes to strategizing and formulating ICT policies.

CHAPTER FIVE

5. SUMMARY, RECOMMENDATIONS AND CONCLUSIONS

5.1.Introduction

This section includes the summary, conclusions, and recommendations of the research respectively. It is expected that the contents of this section will help the Kenyan government and other concerned stakeholders pick up a superior comprehension of mainstreaming gender

5.2. Summary

The reason for the study was to see how gender variable can be mainstreamed to positively affect the reception of e-government services in Kenya. The study was guided by the accompanying examination questions: Do the ICT policies, decisions and strategies focus on equally including women and men when setting up e-government initiatives? Do women and men have the needed education, training, and skills needed to use e-government initiatives correctly? Does the e-citizen portal provide the basic services and public information required by each gender?
To realize the above purpose, a descriptive survey design was adopted. The focus population of this study was people of Siaya County. A sample size of 129 participants was exposed through stratified sampling. Primary data was collected using questionnaire; prior to data collection with questionnaires. The data collected was input in SPSS program for analysis and non-parametric test was carried out on the data. Patterns and tendencies were identified in form of percentages and the final data was presented in form of frequency tables and charts.

5.3.Recommendations and Suggestions

The adoption of e-government services processes is a critical component in the creation of an efficient and responsive e-government portal (Warkentin et al., 2002). This section seek to achieve the second objective of this study which states '*To propose ways in which e-government can better serve as an important tool for men and women'*

5.3.1. Perceived Usefulness of E-citizen portal

There are numerous methods in which Kenyan government can increment perceived convenience.

One is through the e-citizen entrance: the data in the site must be precise, auspicious, enlightening, redesigned and pertinent to nationals' needs. A decent site contains adequate data as well as intended to be easy to understand for all level of clients. The site ought to have an inquiry and help elements to empower clients rapidly and easily find important data accommodate two path correspondences amongst clients and the site; furthermore react rapidly to clients' pursuit and perusing needs. State government ought to likewise evoke and break down user's criticism about their site. These profitable inputs will empower government to update locales to present data and administrations in a way that is simple for citizens to use, improve their productivity in social occasion data and additionally associating with e-government. Government should dependably guarantee the e-service to pace with the innovation and style being diffused all through society by Web developments; nationals will take it as the benchmark for high caliber of online experience. Government authorities can diminish perceived many-sided quality by making the appropriation of online administrations as consistent and normal as could be expected under the circumstances. E-administration ought to take after conventional taxpayer driven organizations to support subject acknowledgment. For example, for online assessment recording, the office ought to introduce a frame that takes after the more natural paper-based tax document

5.3.2. Access to ICTs

The Kenyan government under the Ministry of ICT ought to set up a program to create local capacity and ICT aptitudes, particularly among ladies, men and the underestimated. The program ought to have a plan of bringing issues to light among ladies and men about the potential open doors ICTs can make, specifically their part in helping Kenyan citizens to take part in administration forms and to get to access data.

Additionally the government ought to set up measures to recognize and convey moderate best in class ICTs for men, ladies and other minimized groups. ICTs may incorporate PDAs, advanced mobile phones and laptops that take into account mobile use and access to electronic administrations and open data.

5.3.3. E-service delivery

The administration and other stakeholders ought to cultivate the inclusion of various gatherings that incorporates inconvenience groups of men and women in the choice of essential open administrations and in the arrangement of input on the nature of administrations, including regardless of whether such administrations react to women and men's basic needs.

A select board of trustees ought to be framed to conceptualize basic e-services that will address the imperative necessities of both ladies and men that are more receptive to sexual orientation correspondence issues. These basic e-administrations will especially be important for local benefit conveyance, since men and women inside the counties typically have much direct connections with region government authorities than different levels of national government and frequently have better chances to express their needs and worries at the county level.

In conclusion, the council ought to screen utilization and use of taxpayer driven organizations through committed ICT solutions for guarantee that the presentation of e-administration programs does not advance gender based separation.

5.3.4. Design for e-governance policies and strategies

The Kenyan administration ought to expand the nearness and dynamic support of both men and women in equivalent measures in strategy arranging advisory groups for national e-administration procedures and projects since it is the initial move towards making a gender responsive approach environment. This can be supplemented by additionally having women and men required in the detailing of national-level ICT for Improvement strategies which could likewise be connected to poverty elimination and other development arrangements.

The law makers ought to likewise guarantee that male and female members in the approach procedure see how gender roles and relations affects e-administration, and that they have the fundamental limit and information to take an interest in these strategy talks.

5.3.5. Enabling/Disabling Environment

This section achieves the last objective of the research '*To determine the constituents of enabling/disabling environments for access and use of e-government services by each gender'*

The research finding outlines various disabling and enabling factors that may promote or hinder the access and use of e-government services.

5.3.5.1. Infrastructure

Rural or remote locations may need power to associate with ICTs and TV and radio signals may not be strong enough to be used by all individuals in the region. Women and men, poor people and individuals in remote zones might not have adequate pay to buy new innovations and the costs involved, for example, membership to the Web or PDA administrations. Internet charge is likewise high.

5.3.5.2. Awareness

Lack of awareness on the existing e-services has proved to be a major obstacle towards adopting e-government services. Create awareness on the services offered to both men and women. This can be done through social media networks, radio and newspapers.

5.3.5.3. Gender differences

Gender contrasts influence the open doors and difficulties in ICT connectivity and access. For instance, extra interest in women's ICT education might be required to address proficiency hindrances that ruin their fundamental access to ICTs. Men and women may likewise require all the more training in the utilization of computer driven applications, (UNDP 2007). Gender orientation examination is a basic initial step to find out how responsive e-government services are to the necessities and needs of men and women in various social and financial strata. Such examination ought to analyze spending plans and assets apportioned along gender lines to fundamental services, (UNDP 2007).

Gathering disaggregated information on women and men's distinctive access to fundamental administrations, and how much they advantage from these administrations, is basic in distinguishing needs and holes in administration conveyance.

5.3.5.4. ICT literacy

Building ICT abilities is an essential part of any ICT mediation on the grounds that new skills are required for handling a PC, perusing the Web and making utilization of different specialized internet tools, for example, email, "talk rooms" and video conferencing. Suppliers and clients require proceeding with instruction and preparing to learn ICT abilities and stay aware of new improvements in hardware equipment, programming and administrations.

Interest in building human capacity is vital in making ICTs advantage women in Africa. Basic education is an essential for learning ICT abilities. This prerequisite is a noteworthy test in extending ICT in Africa where ignorance is far reaching (Olatokun, 2012)

5.4.Limitations and suggestions for future research

In this research, just a little sample size of data was gathered. The aggregate number of usable sample in this study was 129 out of 149 surveys that had been dispersed. Greater part of the respondents were somewhere around 26 and 35 years of age, which was more than half of the aggregate respondents. 66.2% of females had training at tertiary level and 67.9% of male had training at tertiary level. This demonstrates dominant part of the respondents were either in school or college graduates .These imperatives may prompt to difficulties to sum up the discoveries of this study to all level of residents in Siaya County.

Another reality is that, this study is just restricted to Siaya Region. Thus, the example of this study may not be a genuine representation of the importance of gender factor in Kenya towards utilizing e-government service.

Future study is prescribed to broaden the extent of this examination to entire or half of Kenyan masses with a particular ultimate objective to better appreciate the piece of gender introduction, get ready for e-administration methodologies and systems, perceived helpfulness, perceived convenience, Instructive level , ICTs access and E-service conveyance in e-government allocation in Kenya .

To wrap things up, this study is restricted in that one and only e-government case has been displayed. It is wanted that in future, more cases will be examined and to the most profound detail. This will clear ways for testing of this model to discover its helpfulness

5.5. Conclusion

To achieve successful adoption of e-government in Kenya, gender equality should be taken into account together with some important issues like design for e-governance policies, strategies and e-service delivery. The study has also shown that still male gender is likely to be e-government services adopters compared to female. Though the margin difference is minimal, it is expected that future research will present a different outcome when it comes to gender and e-government adoption

Also, there are some hurdles interfering with the adoption of e-administration services, most notably the ICT literacy, infrastructure, Awareness and gender equality. There ought to be a great deal of mindfulness battles sharpening the common residents on the advantages of e-government for them to completely embrace it and consolidate it as a feature of their way of life. There ought to be a great deal of mindfulness battles sharpening the common residents on the advantages of e-government for them to completely embrace it and consolidate it as a feature of their way of life. The findings show that both men and women are not conversant with e-citizen portal. Development of local capacity and ICT skills for both genders should be addressed. This ought to likewise incorporate bringing issues to light among ladies and men about the potential open doors ICTs can make, specifically their part in helping Kenyan citizens to take an interest in administration processes and to access government information

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APPENDICES

Appendix 1: Questionnaire

WELCOME TO E-GOVERNMENT SURVEY

Thank you for agreeing to take part in this important survey. The purpose of this survey is to examine the different gender issues that can be moderated to influence the adoption of e-government services. E-Government is the use of information and communication technologies (ICTs) to improve the activities of public sector organizations.

SECTION A: (BACKGROUND INFORMATION)

1).What is your gender?

Please choose **only one** of the following:

- ○Female
- ○Male

2).What is your age?

Please choose **all** that apply:

- ☐Between 18 yrs. to 25 yrs.
- ☐Between 26 yrs. to 35yrs
- ☐Between 36 yrs. to 45 yrs.
- ☐Between 46 yrs. to 60 yrs.

3).What is your constituency?

Please write your answer here:

4). Do you have any income generating activity?

Please choose **only one** of the following:

- ○Yes
- ○No

SECTION B: (EDUCATION BACKGROUND)

6. What is your highest level of education? *

Please choose **all** that apply:

- ☐ Primary Level
- ☐ Secondary Level
- ☐ College/University Level
- ☐ None

7. While studying to obtain your mentioned level of education, what was your favorite area of study? *

Please choose **all** that apply:

- ☐ Mathematics
- ☐ Biology
- ☐ Chemistry
- ☐ Physics
- ☐ History
- ☐ Geography
- ☐ English
- ☐ Kiswahili
- ☐ Other:

8. Do you have any basic computer training? *

Please choose **only one** of the following:

- ○ Yes
- ○ No

9. How would you rate your experience with ICTs like the Internet? *

Please choose **all** that apply:

- ☐ Poor
- ☐ Fair
- ☐ Good
- ☐ Excellent

SECTION C: (ACCESS TO INFORMATION AND COMMUNICATION TECHNOLOGIES)

10).What is your view on the use of and availability of ICTs in your County?

Please choose **all** that apply:

- ☐ Available and used
- ☐ Available and not used
- ☐ Somehow available and used
- ☐ Somehow available and not used
- ☐ Not available

11). Which ICT resources do you frequently use?

Please choose **all** that apply:

- ☐ Radio
- ☐ Television
- ☐ Cellular Phones
- ☐ Computer
- ☐ Other:

12). Are there available cybercafes or telecentres in your area?

Please choose **only one** of the following:

- ○ Yes
- ○ No

13). Are you in a position to access any ICTs resource that has internet?

Please choose **only one** of the following:

- ○ Yes
- ○ No

14).What device do you normally use to access information on the internet?

Please choose **all** that apply:

- ☐ Computer
- ☐ Mobile Phone
- ☐ IPad(Tablet)
- ☐ I don't Access

SECTION D: (E-SERVICE DELIVERY)

15).Which language(s) do you prefer to use when accessing information from the internet?

Please choose **all** that apply:

- ☐English
- ☐Kiswahili
- ☐Other:

16).Do you have any idea what e-citizen portal is?

Please choose **only one** of the following:

- ○Yes
- ○No

17). Does e-citizen portal provide the precise information you need?

Please choose **only one** of the following:

- ○Yes
- ○No

18). Are you able to get assistance from government officials when looking for e-government service?

Please choose **only one** of the following:

- ○Yes
- ○No

19).Please propose the kind of e-government service(s) that you would like to access from e-citizen portal

Please write your answer here

20). How easy is it to access and use the e-citizen portal?

Please choose **all** that apply:

- ☐So Easy
- ☐Somewhat Easy
- ☐Easy
- ☐Difficult
- ☐Some What difficult
- ☐Other:

SECTION E: (DESIGN FOR E-GOVERNANCE POLICIES AND STRATEGIES)

21). Are you conversant with the current Kenyan ICT policy?

Please choose **only one** of the following:

- ○Yes
- ○No

22).To what extent do you agree or disagree that men and women should be involved and participate equally in the ICT policy formulation?

Please choose **all** that apply:

- ☐Strongly Agree
- ☐Somewhat Agree
- ☐Strongly disagree
- ☐Somewhat disagree
- ☐Other:

23). Have you ever participated in any e-government or ICT policy formulation?

Please choose **only one** of the following:

- ○Yes
- ○No

24). Do you feel encouraged to take part in strategizing IT related issues in your county.

Please choose **all** that apply:

- ☐Agree
- ☐Neither Agree nor Disagree
- ☐Disagree
- ☐Don’t know

25). Does your county have a strategy (including an Implementation plan) relating to e-Government issues?

Please choose **all** that apply:

- ☐YES
- ☐NO
- ☐I have no idea

SECTION F: (PERCEPTIONS ON E-GOVERNMENT SERVICES)

26).What kind of information do you normally access from the internet?

Please choose **all** that apply:

- ☐Health Information
- ☐Security Updates
- ☐Government Services
- ☐Social media Updates
- ☐Entertainment
- ☐Other:

27). How often do you use e-citizen portal to look for government services?

Please choose **all** that apply:

- ☐More Often
- ☐Less Often
- ☐Not at all
- ☐Other:

28). Please rate your overall satisfaction level with the e-government services

Please choose **all** that apply:

- ☐Excellent
- ☐Very good
- ☐Good
- ☐Satisfactory
- ☐Poor
- ☐Other:

29).Would you like to provide us with your valuable suggestions to improve these services?

Please write your answer here:

Appendix 2: Research Budget

S/No.	Budget Line Items	Cost (Kshs.)
1	**Proposal Development**	
	Materials	5,000
	Printing	5,000
	Photocopying	3,000
2	**Data Collection**	
	Photocopying	3,500
	Logistics	15,000
	Research assistant	10,000
3	**Data Analysis**	3,000
4	**Report Writing & Dissemination**	1,500
	Total Cost	45,000

Appendix 3: Schedule of Activities

Year		2015			2016				
No	Activity	Sept	Oct	Nov	Jan	Feb	Mar	Apr	May
1	Proposal Development								
2	Data Collection (Fieldwork)								
3	Data Analysis								
4	Report Writing								
5	Report dissemination								