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DISTRICT

Henry Wanyonyi Kituyi, J. Waweru



## EVALUATION OF THE ACCESSIBILITY OF KENYA E-GOVERNMENT WEBSITES IN THE NAIROBI CENTRAL BUSINESS DISTRICT

<sup>1\*</sup> Henry Wanyonyi Kituyi, <sup>2</sup> J. Waweru

<sup>1</sup>MBA student, Management College of South Africa

<sup>2</sup>Lecturer, Management College of South Africa

### Abstract

**Purpose:** The purpose of this study was to evaluate the accessibility of Kenya E-Government Websites in the Nairobi Central Business District.

**Methodology:** This study adopted a descriptive survey design. The targeted population of this study was all cyber cafés management/owners and their users. This study used stratified random sampling. A sample size of 384 respondents was used. The questionnaire was the instrument for data collection. Questionnaires were issued to the respondents through self-introduction. Frequencies, descriptive statistics and inferential statistics were used. Microsoft excel were also used to complement SPSS.

**Results:** This further means that ICT literacy influenced Government websites accessibility as supported by a p value of 0.000. Results also revealed that ICT delivery channel influenced Government websites accessibility as supported by a p value of 0.000. Further, results revealed that disability was statistically significant in explaining or predicting the accessibility of e-government websites as evidenced by p value of 0.000.

**Unique contribution to theory, practice and policy:** The study recommends that Government website should accommodate facilities for persons with disabilities. It is therefore recommended that Government policy makers should review existing knowledge disseminations regulations within Government with the aim of relaxing regulations on information dissemination. This will build a culture of information openness between the Government and citizens. In other words the Government should maximize information dissemination through their websites.

**Keywords:** E-government websites ICT literacy, international languages, ICT delivery channels, Nairobi Central Business district

## 1.0 INTRODUCTION

### 1.1 Background of the Study

The use of the internet provides an opportunity for governments to offer services to their citizens via websites. Government websites provide a platform for efficient communication and access to public information. They are a useful tool to transparency and democracy because they enable citizens to easily interact with their governments.

A study survey carried out by Choudrie and Dwivedi (2005) inspected citizen awareness and accessibility of e-government services in the UK. They found that 76 percent of the respondents were not even aware of the “government gateway” in the UK. The study showed that only 6 percent of the respondents in the sample had registered for the “government gateway.”

According to Gallant (2007), in the US the proportion of citizens adopting e-government services had been growing at a high rate. It was found that in 2005, 52 percent of tax payers filed their tax forms electronically. Nevertheless, this proportion is far from the aim of having 80 percent of tax returns filed electronically by 2007.

According to the UN (2010), most developed countries benefit from e-government services, but there is still much room for improvement globally. Many challenges involved in the adoption of e-government services still exist, which leads to the low levels of the adoption of e-government services universally. Numerous researches like UN (2010); Cater and Weerakkody (2004) have suggested the necessity for more research in the area of e-government adoption. The above discussion shows that governments across the globe still face problems from the citizen’s perspective, which demonstrates the need for studies that investigate the adoption rate of e-government services. Many prior studies focus on accessibility although the two concepts are complementary design philosophies which overlap each other (Alexander, 2006). The primary focus of accessibility is access by people with disabilities while usability focuses on the elements of learn ability, memo ability, effectiveness, efficiency and satisfaction for all website users (Henry, 2002). Usability aims at satisfying the users - a reason why users’ cultural contexts are considered when designing usable websites (Hillier, 2003). All in all “accessibility is a subset of a more general pursuit: usability” Henry (2002) because websites may be technically accessible but hard to use. Since accessibility is a subset of usability, usability represents an important aspect in the development of government websites.

The attainments of e-Government in Kenya is a milestone and has been one of the top agenda for the Government in an effort to engineer and propel the realization of national development goals and objectives for Wealth and Employment Creation, as stipulated in the Kenya Vision 2030. The Government of Kenya established the e-Government Programme in June 2004. It has since then committed itself towards achieving an effective and operational e-Government to facilitate better and efficient delivery of information and services to the citizens, promote productivity among public servants, encourage participation of citizens in Government and empower all Kenyans (GoK, 2012).

The Kenya e-Government Strategy is designed to achieve pre-determined set of goals and objectives, which are: better and efficient delivery of Government information and services to the citizens, promote productivity among public servants, encourage participation of citizens in Government and empower all Kenyans in line with development priorities outlined in the Economic Recovery Strategy for Wealth and Employment Creation (GoK, 2012).



## **1.2 Statement of the Problem**

A number of perspectives are found in literature about the adoption of e-government. Researchers focus their studies on a number of different aspects of e-government (Coursey& Norris, 2008). Studies across various disciplines present varying perspectives about information technology and society, the Internet and social change, technology and institutional transformation. These perspectives represent a variety of views about research on electronic communication, in general, and e-government in particular.

Optimists claim that e-government leads to citizen empowerment through improvement of government relations with citizens. Others support claims that e-government has a major role in the transformation and improvement of public sector operations (Kumar and Best, 2006). Welch (2004) say that e-government enhances government accountability, La Porte (2000) says that it has greater efficiency in service delivery, access of information for citizens, while Pina (2007) claims that e-government improves opportunities for cross collaboration and information resource sharing between government agencies, businesses, citizens and other stakeholders.

According to Pina (2007), the success of e-government services depends on government support as well as on citizens' ability to use and access its websites. This therefore means that website accessibility is two pronged with the Government and citizens playing their respective role to enhance web accessibility. This study seeks to explore accessibility from a user/citizen point of view with and sought to provide feedback to the Government in order to enhance web accessibility. This study sought to fill this twined web accessibility gap by exploring the challenges and barriers of e-government services from the user's perspective by evaluating the level of accessibility of Kenyan Government Websites among cyber users in Nairobi city. The accessibility will be evaluated in terms of the website's contents and the ease of access by users within the Nairobi City.

## **1.3 Research Objective**

The objective of this study was to evaluate the accessibility of E-Government websites in the Nairobi Central Business District.

## **2.0 LITERATURE REVIEW**

### **2.1 Theoretical Review**

#### **2.1.1 Modernization Theory**

Modernization theory hypothesized a direct relationship between mass communication and the process of changing traditional societies to modern ones. The dissemination of developmental information, mostly following the model in western industrial countries, was expected to have the effect of transforming traditional societies into modern ones. Schech (2002) argued that the promises of new technologies for developing countries, formulated within the broader discourse of modernization and development, is premised on the assumption that a deficiency in knowledge is responsible for underdevelopment. Information and communication technologies are seen, through this perspective, as a means for the diffusion of knowledge and information required for development. This view is, in many ways, similar to the view of the radio as a conduit for the diffusion of western knowledge to the rest of the world which characterized early modernization thinking.

McQuail (2000) views modernization as the process of spreading education. This concurs with

Schech (2002), who assert that ICTs are comparable to the radio in their respective periods and they demonstrate a continuity of modernization thinking; however, ICTs represent a shift from centralized state-led development to a decentralized vision of development that empowers citizens for greater participation in government. Pioneering studies such as Lerner's (1958) suggested that exposure to national and international media eased the transition for Middle Eastern populations from traditional to modern societies. Studies by Schramm (1964) saw the media as a way of expanding the horizons of traditional societies while Pye (1970) saw a role for communications in the political development of new countries.

While modernization theory has been discredited in recent times, the idea of communication for development has remained a crucial model for studying developing countries. Roman (2005:311) suggested that the study of communication phenomena is relevant for developing countries where social change and modernization (driven by dissemination of information) are expected to take place. Studies of the impact of the Internet, therefore, are, partly, based on the underlying discourse of communication for development. The argument of these discussions is that modernization remains a dominant underlying approach to the framing of the role of ICTs in development. Modernization theory perceived development as spreading from the west to the rest of the world aided by modern communication technologies. In this view of ICTs for development, ICTs are considered vital to the production and transfer of knowledge for development by governments to communities in developing countries.

In this study the concept of modernization theory being used is that of the first wave that pertain to economic development. Technological advancement has been credited to social change in a society. Modernization theory helps to explain the public role of the Internet café business models which drive the wave of modernization in the towns and rural areas.

## **2.2 Empirical Review**

The United Nations (UN) estimates that approximately 10% of the world's populations are persons with disabilities (over 650 million people), of which 80% live in developing countries (UN, 2007). A sizable number of disabled users are using services available on the Internet, such as e-government sites. A study by the UK Office for Disability Studies in 2007 found that 27 percent of disabled users gave one of the reasons for accessing the Internet as the ability to access government or official services (Williams, Copestake, Eversley & Stafford 2007). The capability to use government Web services is an important way to enhance the empowerment of disabled persons and to be fully included in society. There are two frameworks that are used to enhance the accessibility of Web services, including e-government sites: industry standards and legal mandates.

In the UK, the Disability Discrimination Act (DDA) of 1995 requires providers of goods and services to provide equal access to all customers, including accessibility to information services such as Web sites and the use of communications (Blues, 2001). However, most UK government sites do not meet minimum levels of accessibility. In 2005, a report produced by the Cabinet Office found that 97% of official sites were unusable by disabled people, largely because they ignored well-known techniques for making data accessible (BBC News, 2007).

According to Carter and Belanger (2005), the success of e-government depends upon the citizens levels of ICT literacy. Governments across the world need to investigate and understand the factors that influence or could encourage citizens to use e-government services instead of

traditional communication. Governments still face the problem of a low-level of ICT literacy of e-government services by their citizens.

Language is perceived to be one of the most challenging barriers to overcome in order to reach high levels of customer-citizen satisfaction. Since English has become the preferred language to communicate in the information highway, English is the official and widely used language among the leading countries in the implementation of e-Government. As reported by the United Nations (2005) 68% of the current web content is in English a language spoken by 5.4% of the world population causing a major language divide (Tamez & Al-Sharieh, 2009).

Comparisons of the size and capabilities of infrastructures reveal considerable differences between developed and developing countries. Developed countries have the infrastructure levels and capabilities to make Internet and telephone access available to almost all of their residents, some with populations over 300 million. The insufficient infrastructure of developing countries, because of economic conditions and governmental regulations of telecommunications industries hinder the progress of e-government in these countries (Howard, 2007).

### 3.0 RESEARCH METHODOLOGY

This study adopted a descriptive survey design. The targeted population of this study was all cyber cafés management/owners and their users. This study used stratified random sampling. A sample size of 384 respondents was used. The questionnaire was the instrument for data collection. Questionnaires were issued to the respondents through self-introduction. Frequencies, descriptive statistics and inferential statistics were used. Microsoft excel were also used to complement SPSS.

### 4.0 RESULTS AND DISCUSSIONS

#### 4.1 Response Rate

The initial target sample for the study was 384 respondents which were classified into two strata of cyber owner and cyber users. There were 384 questionnaires which were distributed to the cyber owners and users as laid on Table 1.

**Table 1: Response Rate**

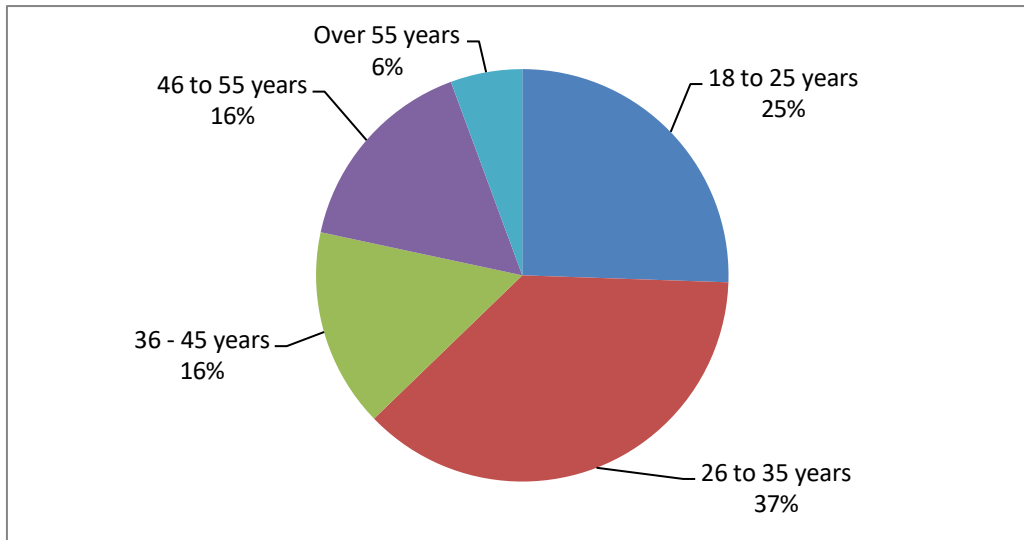
Category	Issued Questionnaires	Returned	Percentages
Cyber Owners	128	94	73%
Cyber Users	256	137	54%
<b>Total</b>	<b>384</b>	<b>231</b>	<b>60%</b>

Table 1 shows that there was an overall response rate of 60% with 73% for the cyber owners and 54% for the cyber users. According to Mugenda and Mugenda (2003) and Kothari (2004) a response rate of 50% is adequate for a descriptive study. Based on this recommendation from renowned research scholars 60% response rate is adequate for this study.

## 4.2 Demographic Characteristics of the Respondents.

### 4.2.1 Age Distribution

Respondents were asked to indicate their ages. Figure 1 shows the results.



**Figure 1: Respondents Age**

Based on the analysis presented on Figure 1 majority of the respondents had ages lying between 18 years to 45 years which comprised of 78% of the respondents. This indicates that majority of the cyber owners and users are young people which again relates to the age of the internet and digital revolution. This is supported by an exploratory study done by Bringula, Bonifacio, Natnaum, Manuel, and Panganiban (2012:149) to determine the profile and pattern of internet usage of respondents in cyber cafés in Manila. It was found that 73% of internet users were young people who were below 20 years and were mostly students.

### 4.2.2 Education Level

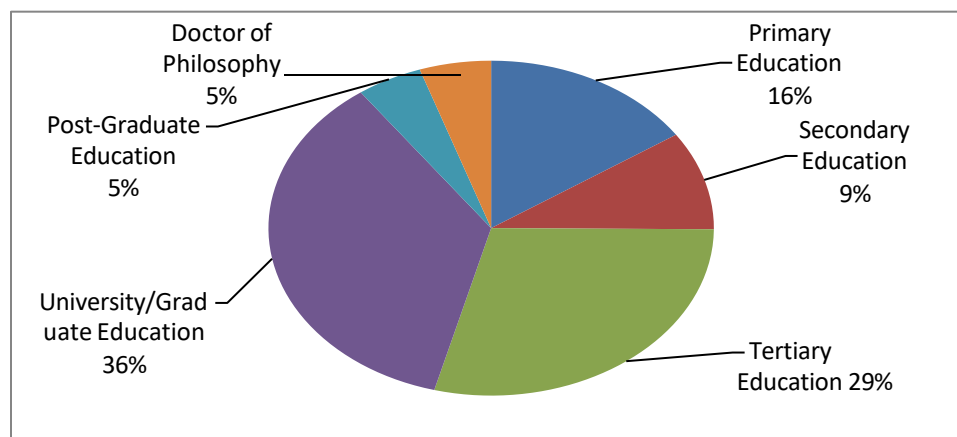


Figure 2 shows results on education level of the respondents

## Figure 2: Level of Education

Based on the results presented on Figure 2, majority of the cyber users and owners had levels of education beyond secondary school. This could be explained by the fact that in Kenya the main language used on the internet is English which is an international language and hence could only be used by a literate person.

### 4.2.3 Years of Internet Usage

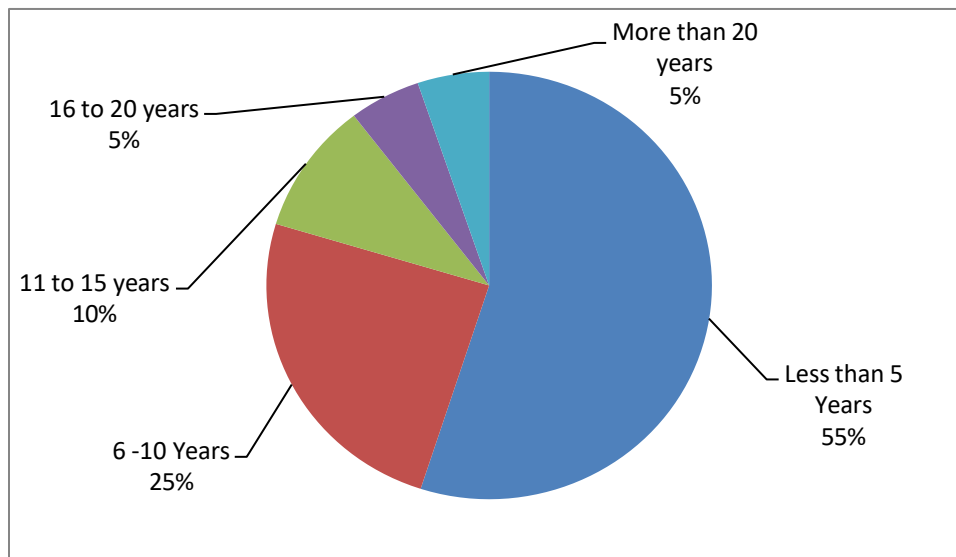


Figure 3 presents results on internet usage experience.

## Figure 3: Internet Usage Experience

Figure 3 shows that most of the internet users and cyber owners had used internet for a period of between 5 to 10 years. These results are consistent with the number of years that -internet has been available to the public.

## 4.3 Data Analysis and Discussion

This section contains a presentation and discussion of the data analyses. The results are organized based on the study variables and objectives.

### 4.3.1 Government Websites Accessibility

Table 2 displays results of data analysis regarding the views of the respondents on accessibility of Government websites.



**Table 2: Government Websites Accessibility**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std
I am aware of various government websites in Kenya	7.80%	6.10%	7.40%	64.10%	14.70%	3.72	1.04
Government websites provide important information	13.90%	1.70%	7.40%	20.80%	56.30%	4.04	1.40
I use government websites regularly whenever I want to deepen my knowledge on government services	13.90%	6.10%	9.50%	19.00%	51.50%	3.88	1.45
It is possible to make enquiries with Government website	29.40%	47.20%	6.10%	17.30%	0.00%	2.11	1.02
Government websites are interactive.	40.70%	28.10%	7.80%	23.40%	0.00%	2.14	1.19
Government services are well elaborated on each ministry's website	6.50%	47.20%	6.10%	40.30%	0.00%	2.80	1.05
<b>Average</b>	<b>18.70%</b>	<b>22.73%</b>	<b>7.38%</b>	<b>30.82%</b>	<b>20.42%</b>	<b>3.12</b>	<b>1.19</b>

Results indicate that 79% of the respondents were aware of various government websites in Kenya, 76% agreed that Government websites provided important information and 70% agree that they were using government websites regularly whenever they wanted to deepen their knowledge on government services. Seventy six percent disagreed that it was possible to make enquiries with Government website, 68% disagreed that Government websites were interactive while 53% disagreed that Government services were well elaborated on each ministry's website. On a 5 point scale, where 1 represented strongly disagree and 5 represented strongly agree, the mean score of the responses was 3.12 indicating a higher overall level of agreement with the questionnaire statements by the respondents. The overall standard deviation was 1.19 which indicates that approximately 68% of the respondents were spread within one standard deviation from the mean. These findings indicate that many of the internet users in Kenya are aware of the existence of Government websites. The findings are in line with the general public information regarding the unfriendly nature of Government of Kenya websites.

The findings agree with those of Choudrie and Dwivedi(2005:5)who carried out a citizen awareness and accessibility of e-government services in the UK. They found that 76 percent of the respondents were aware of the "government gateway" in the UK. The study showed that

only 6 percent of the respondents in the sample had registered for the “government gateway.”

#### 4.3.2 ICT Literacy and Government Websites Accessibility

The first objective of the study was to establish whether ICT literacy affected accessibility of Government websites in Kenya. The analysis of the responses is presented on Table 3.

**Table 3: ICT Literacy and Website Accessibility**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std
I am a regular user of government websites	7.80%	0.00%	7.80%	45.90%	38.50%	4.07	1.08
My friends who are not computer literate are not aware of the existence of government services on the website	9.50%	14.30%	7.80%	30.30%	38.10%	3.73	1.35
Most of my friends are computer literate and are able to access government websites	8.20%	6.10%	7.80%	42.40%	35.50%	3.91	1.19
Government websites are simple to navigate and it is easy to get the information required	7.80%	12.60%	9.50%	34.20%	35.90%	3.78	1.27
Access to computer hardware is a key impediment to accessing government websites	7.80%	1.70%	9.50%	35.10%	45.90%	4.10	1.15
Youthful people(16-35yrs) are the largest users of government websites than the older citizens because they have a higher computer literacy	7.80%	9.50%	0.00%	39.40%	43.30%	4.01	1.23
<b>Average</b>	<b>8.15%</b>	<b>7.37%</b>	<b>7.07%</b>	<b>37.88%</b>	<b>39.53%</b>	<b>3.93</b>	<b>1.21</b>

Results indicate that 83% of the respondents agreed that they were regular users of government websites while 68% agreed that their friends who were not computer literate were not aware of the existence of Government services on websites. Sixty seven percent agreed that most of their

friends were computer literate and they were able to access government websites while 69% agreed that Government websites were simple to navigate and easy to get the information required. Regarding whether access to computer hardware was a key impediment to accessing government websites 71% agreed and 82% agreed that youthful people(16-35yrs) were the largest users of government websites than the older citizens because they had a higher computer literacy. The overall mean score for the responses was 3.93 on a 5-point likert scale. This means that there were more respondents agreeing with the statements on the questionnaire. The responses were spread from the mean at 1.21 standard deviations.

The results above indicate that ICT literacy was a key factor in having better accessibility to Government websites. These findings are consistent to those of Carter and Belanger (2005:5), who stated that the success of e-government depends upon the citizens' levels of ICT literacy. Governments across the world need to investigate and understand the factors that influence or could encourage citizens to use e-government services instead of traditional communication. Governments still face the problem of a low-level of ICT literacy of e-government services by their citizen, Kunstelj, Jukic, & Vintar (2007:305) discussed in their survey findings that there are many reasons people are not using online services. Few of them found no need yet to use online services and instead they preferred using traditional means, also they lacked awareness of online services and had no interest in internet use.

#### 4.3.3 Language and Government Websites Accessibility

Table 4 displays the findings of the second objectives which were to find out whether e-government websites are accessible based on various international languages.

**Table 4.4: Language and Website Accessibility**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std
All the government websites that I have ever used are all written in English	1.70 %	6.10%	0.00%	32.90 %	59.30 %	4.4 2	0.91
Some Kenya Government websites are written in Swahili	6.10 %	82.70%	7.80%	3.50%	0.00%	2.0 9	0.52
Government websites should have UN working languages	1.70 %	1.70%	7.80%	27.30 %	61.50 %	4.4 5	0.85
Government websites written in local language can improve penetration and communication	1.70 %	7.40%	6.10%	33.30 %	51.50 %	4.2 6	0.98
Government policy on web development assumes that all users are able to communicate in English	0.00 %	13.90%	7.80%	41.10 %	37.20 %	4.0 2	1.00
Kenya constitution gives a right to all citizens to communicate in English and Swahili and hence the Government should implement this right in their websites	9.50 %	0.00%	6.10%	23.80 %	60.60 %	4.2 6	1.21
<b>Average</b>	<b>3.45 %</b>	<b>18.63 %</b>	<b>5.93%</b>	<b>26.98 %</b>	<b>45.02 %</b>	<b>3.9 2</b>	<b>0.91</b>

#### 4.3.4 Disability and Government Websites Accessibility

Results indicate that 92% agreed that all the government websites that they have ever used are all written in English. Eighty three percent (83%) disagree with the statement that some Kenya Government websites are written in Swahili while 89% of the respondents agreed with the statement that Government websites should have UN working languages. Eighty five percent of the respondent agreed with the statement that Government websites written in local language can improve penetration and communication of government services. Regarding whether Government policy on web development assumes that all users are able to communicate in English 78% agreed while 84% of the respondent agreed that the Kenya constitution gives a right to all citizens to communicate in English and Swahili and hence the Government should implement this right in their websites. The overall mean score for the responses was 3.92 on a 5 point likert scale. This means that there were more respondents agreeing with the statements on the questionnaire. The responses were spread from the mean at 0.91 standard deviations.

The results above indicate that Language was key a factor to having better accessibility to Government websites. According to Tamez and Al-Sharieh (2009) 94.6% of the population worldwide was not of native English speakers, which causes a major impact and threatens the advancement of e-Government. He stated that it was time for governments to seriously consider internationalization in the global delivery of information and services.

Table 5 displays results of the third objective which analyzes the disability and accessibility of Government websites.

**Table 5: Disability and Website Accessibility**

Statement	Strongly Disagree	disagree	Neutral	Agree	Strongly Agree	Mean	Std
Government websites cater for the visually impaired citizens	7.80%	74.90%	9.50%	1.70%	6.10%	2.23	0.86
Government websites are well-equipped for accessibility by users with hearing impairments	1.70%	73.60%	7.80%	10.80%	6.10%	2.46	0.93
Government websites are in most of the times inaccessible on the web due to high levels of down time	0.00%	16.00%	0.00%	63.20%	20.80%	3.89	0.92
Government websites that I have ever visited have very low functionalities for assisting accessibility by persons with disabilities	0.00%	21.60%	7.80%	70.60%	0.00%	3.49	0.83
Many websites that I have ever accessed have little or no facilities for persons with disabilities	0.00%	29.40%	17.30%	46.30%	6.90%	3.31	0.97
<b>Average</b>	<b>1.90%</b>	<b>43.10%</b>	<b>8.48%</b>	<b>38.52%</b>	<b>7.98%</b>	<b>3.08</b>	<b>0.90</b>

Results indicate that 82% of the respondent disagreed with the statements that Government

websites cater for the visually impaired citizens and 75% of the respondents disagreed that Government websites are well-equipped for accessibility by users with hearing impairments. Eighty four percent of the respondent agreed with the statement that Government websites are most of the times inaccessible on the web due to high levels of down time. 71% agreed that the Government websites that they have ever visited have very low functionalities for assisting accessibility by persons with disabilities. Fifty three percent of the respondents agreed with the statement that many websites that they have ever accessed have little or no facilities for persons with disabilities. The overall mean score for the responses was 3.08 on a 5 point likert scale. This means that there were more respondents agreeing with the statements on the questionnaire. The responses were spread from the mean at 0.90 standard deviations.

These findings corroborate to those of Williams, Copestake, Eversley and Stafford (2007) who did a study by the UK Office for Disability and found that 27 percent of disabled users gave one of the reasons for accessing the Internet as the ability to access government or official services. They concluded that the capability to use government Web services is an important way to enhance the empowerment of disabled persons and to be fully included in society.

#### 4.3.5 Delivery Channels and Government Websites Accessibility

To establish the results of delivery channel and web accessibility.

**Table 6: Delivery Channels and Website Accessibility**

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std
I always access government services through computer	32.00 %	30.70 %	6.10%	25.10 %	6.10%	2.42	1.33
I regularly use my mobile phone to access government websites	35.50 %	35.10 %	21.60 %	1.70%	6.10%	2.08	1.09
Government should provide outlets where citizens can access web services for free	0.00%	7.80%	7.40%	26.80 %	58.00 %	4.35	0.92
The Government should use mobile short messages to update citizens regarding availability of new services and implementation of new regulations	1.70%	1.70%	1.70%	35.50 %	59.30 %	4.49	0.77
I have subscribed to automatic email updates regarding government services	0.00%	1.70%	6.10%	39.40 %	52.80 %	4.43	0.69
<b>Average</b>	<b>13.84</b>	<b>15.40</b>	<b>8.58%</b>	<b>25.70</b>	<b>36.46</b>	<b>3.55</b>	<b>0.96</b>
	<b>%</b>	<b>%</b>		<b>%</b>	<b>%</b>		



Table 6 indicates that 63% of the respondents disagreed with the statement that they always access government services through computer while 70% disagree that they regularly use their mobile phone to access government websites. Eighty four percent of the respondents agreed with the statement that Government should provide outlets where citizens can access web services for free and 94% of the respondent agreed that the Government should use mobile short messages to update citizens regarding availability of new services and implementation of new regulations. Regarding whether they have subscribed to automatic email updates regarding government services 92 % agreed with the statement. The overall mean score for the responses was 3.55 on a 5 point likert scale. This means that there were more respondents agreeing with the statements on the questionnaire. The responses were spread from the mean at 0.96 standard deviations.

#### 4.4 Inferential Statistical Analysis

This section contains data analyses using bivariate Pearson’s correlation and regression analysis.

##### 4.4.1 Bivariate Correlation

Data was further subjected to inferential analysis and Pearson’s correlation was applied to test the extent of relationship among the variables.

**Table 7: Bivariate Pearson’s Correlation**

Variable		Government Websites	ICT Literacy	Website Languages	Disability	Delivery Channels
Government Websites	Pearson Correlation	1				
	Sig. (2-tailed)					
ICT Literacy	Pearson Correlation	0.473	1			
	Sig. (2-tailed)	0.000				
Website Languages	Pearson Correlation	0.853	0.326	1		
	Sig. (2-tailed)	0.000	0.000			
Disability	Pearson Correlation	0.731	0.267	0.646	1	
	Sig. (2-tailed)	0.000	0.000	0.000		
Delivery Channels	Pearson Correlation	0.675	0.437	0.457	0.533	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	

Correlation test results on Table 7 indicate that ICT literacy had a moderate correlation (0.473) and statistically significant (0.000). Web language (0.853) and disability facilities (0.731) had strong and positive correlations with website accessibility. The positive correlations mean that a unit change on the predictor variables resulted to a positive change in Government website accessibility. Delivery channels had a strong and positive correlation of 0.675 which means that a unit change in delivery channels led to a positive change in website accessibility. On an overall basis it can be concluded that the variables of the study had strong to moderate correlations.

#### 4.4.2 Regression Analysis

Data analysis was also done using a linear multiple regression models in the form of;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \mu$$

In the model,  $\beta_0$  = the constant term while the coefficient  $\beta_i = 1 \dots 4$  was used to measure the sensitivity of the dependent variable (Y) to unit change in the predictor variables.  $\mu$  is the error term which captures the unexplained variations in the model.

Where Y = Government website accessibility which is the dependent variable of the study,  $X_1$ ,  $X_2$ ,  $X_3$  and  $X_4$  represent; ICT literacy, website language, disability and delivery channels respectively which are the independent variables.

**Table 8: Regression Model Fitness**

Indicator	Coefficient
R	0.928
R Square	0.860
Std. Error of the Estimate	0.17212

Table 8 shows the initial regression results regarding the robustness of the regression model in explaining the study phenomena. The composite correlation between the dependent and the independent variables is 0.928 which is a positive and a strong correlation. The coefficient of determination also called R square is 0.860 (86%). This means that the independent variables (ICT literacy, website language, disability and delivery channels) of the study explain 86% of the variations in the dependent variable (Government website accessibility) while the rest is explained by other factors or variables not captured in this current study.

**Table 9: Analysis of Variance (ANOVA)**

Indicator	Sum of Squares	df	Mean Square	F	Sig. (p-value)
Regression	41.219	4	10.305	347.815	0.000
Residual	6.696	226	0.03		
Total	47.914	230			

ANOVA statistics indicate that the overall model was significant. This was supported by an F statistic of 347.815 and p value of 0.000. The reported probability was less than the conventional probability of 0.05 (5%) significance level. The ANOVA results imply that the independent variables are good joint predictors of e-Government websites. The ANOVA results also indicate

that predicting e Government websites accessibility through independent variables yields better results than predicting e-Government websites through the mean.

**Table 4.10: Regression Coefficients**

Variable	B	Std. Error	T	Sig. (p-value)
Constant	-1.741	0.143	-12.143	0.000
ICT Literacy	0.075	0.017	4.393	0.000
Disability	0.182	0.033	5.517	0.000
Delivery Channels	0.233	0.029	8.119	0.000
Website Languages	0.811	0.048	17.063	0.000

Regression results in Table 10 indicate that there is a positive relationship between e-Government website accessibility and ICT Literacy, website language disability functionalities and delivery channels as indicated by the beta coefficients of; 0.075, 0.182, 0.233 and 0.811 respectively. All the study predictor variables were statistically significant in explaining Government website accessibility. Results indicate that a unit change in ICT Literacy, website language disability functionalities and delivery channels led to a positive change in Government website accessibility.

#### 4.5 Statistical Results Snapshot

Based on the analysis of data the key results are summarized on the Table 11 below. The indicators will form the key summary points and conclusions for the study. ICT literacy has the highest likert mean score of 3.93 followed by website language (3.92), delivery channels (3.55) and disability (3.08). All the variables were statistically significant in explaining accessibility of e-government websites in Kenya. In terms of beta power, delivery channels had the strongest influence on accessibility of e-government websites.

**Table 11: Summary of Key Statistical Indicators**

Variable	Mean Score	Std	Beta	p value
ICT Literacy	3.93	1.21	0.075	0.000
Website Language	3.92	0.91	0.182	0.000
Disability	3.08	0.90	0.233	0.000
Delivery Channels	3.55	0.96	0.811	0.000

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusions

Based on the findings relating to ICT literacy and Government website accessibility, it can be concluded that ICT literacy influences accessibility of Government websites. Knowledge, be it basic or advanced on the operations of ICT related platforms or softwares are important in

knowing how to navigate ICT hardware and software which are key drivers of website accessibility.

Results revealed that website languages were statistically significant and were important in enabling website accessibility. It can therefore be concluded that website languages are better accessed when they have a language which is palatable to the target users.

It is possible to conclude that disability was statistically significant and hence influences accessibility of Government websites. Therefore, Government website should accommodate facilities for persons with disabilities.

From the findings of data analysis related to ICT Delivery Channels and Government website accessibility, it can be concluded that Delivery Channels influence accessibility of Government websites.

## **5.2 Recommendations**

The study recommends that Government website should accommodate facilities for persons with disabilities. It is therefore recommended that Government policy makers should review existing knowledge disseminations regulations within Government with the aim of relaxing regulations on information dissemination. This will build a culture of information openness between the Government and citizens. In other words, the Government should maximize information dissemination through their websites.

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