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RESEARCH ARTICLE

Inhibitors to E-governance Adoption and Implementation and the Impact on the Performance of University of Abuja, Nigeria: An Empirical Investigation

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Abstract

The drive for this study stems from the growing concern for the inability of the University of Abuja to adopt and implement e-governance effectively. Consequently, the paper investigates the inhibitors to the adoption and effective implementation of e-governance in the University of Abuja and how to mitigate them. Primary and secondary data were collected for the study. The primary data were obtained from copies of the questionnaire distributed, while the secondary data constitute relevant literature which were extensively reviewed. Hypotheses were tested using Z-test and multiple regression. The findings reveal that poor funding, inadequate awareness of e-governance activities and its importance, resistance to change and lack of training and retraining of personnel are the factors affecting the effective implementation of e-governance in the University of Abuja. It was also discovered that these barriers have affected the performance of the university, with funding being the most significant barrier affecting performance followed by low awareness of e-governance activities. In view of the above findings, the study recommends that adequate attention should be given to the funding of ICT within the University, an awareness campaign on the importance of e-governance be carried out in the University, and only qualified ICT personnel be recruited into the ICT department and that the University should periodically audit how funds allocated for e-governance development are utilized.

Keywords: Inhibitors; E-governance; Adoption; Implementation; Performance; Nigeria

Introduction

Traditional methods of gathering, storing, processing, and disseminating information were thought to be falling behind 21st-century demands (Marufu, 2016). Thus, the growing interest in using Information Communication Technology (ICT) to reform government by using it as a platform for communicating with citizens and businesses and providing services to them since the late 1990s (Bernhard,2014). Accordingly, it has been argued that the benefits of implementing a digital government/e-governance include increased accountability, transparency, inclusion, and democratic participation, among other things (Haldenwang, 2004). While the benefits and subsequent progression of e-Governance applications are limitless, there are a number of potential adoption and implementation barriers in a number of developing countries (Kazmi, 2010; Arif et al., 2010; Kayani et al., 2011). Due to these barriers, many e-governance projects implemented in both developed and developing countries have failed to result in significant improvements in citizens' services and welfare (Benjamin; Symonds; Gartner; UNDESA; Kanungo; Sify Business; Heeks; cited in (Madon, 2009).

Notwithstanding the barriers, developing countries are facing transitional challenges, and government systems must be reinvented to deliver public services to stakeholders via Information and Communication Technologies (ICT) (Chan et al., 2008). Committing itself to reinventing public service delivery, Professor James Sunday Adelabu (Former Vice-Chancellor, University of Abuja) launched an e-governance initiative in 2010, with the first phase focusing on online course registration, Joint Admission Matriculation Board (JAMB) regularization, and receipt processing following online school fee payment. Subsequent administrations improved on the e-governance facilities initiated by the former Vice-Chancellor by upgrading the online platforms and websites of the University of Abuja to make them more accessible and user-friendly. Despite the noble intentions and goals, e-governance adoption and implementation at the University of Abuja is yet to attain the desired height as obtainable in some climes across the globe. In this regard, this paper attempts to identify barriers affecting

the adoption and effective implementation of e-governance at the University of Abuja and also the extent to which barriers affect the performance of the University. In line with foregoing objectives, the paper is guided by the following hypotheses:

(i) Barriers (inadequate personnel training, lack of ICT experience, inadequate awareness creation, resistance to change, lack of political will and corruption) to e-governance adoption and implementation have no significant impact on the university's performance.

(ii) The perceived barriers to the adoption and implementation of e-governance have a significant impact on the performance of the university.

Literature Review

E-governance

The terms digital governance, online governance, mobile governance, ubiquitous government, and smart government have all been used to describe the concept and practice of e-government and/or e-governance (Manoharan and Ingrams, 2018). Adding an "e" to the concepts of government and governance denotes the use of electronic tools in governance. E-governance is the application of technology to improve governance practices and relationships with the rest of society, which includes elected bodies, non-profit organizations (NGOs), the private sector, commercial entities, and international organizations (Heeks, 1999, Khan, 2002). Similarly, it can be seen as the use of information and communication technologies (ICTs) to support public services, government administration, democratic processes, and relationships between citizens, civil society, the private sector and the state (Dawes, 2008). Furthermore, it can be seen as the use of information and communication technologies (ICTs) in government to either: (i) change governance structures or processes in ways that would be impossible without ICT, (ii) create new governance structures or processes that would be impossible without ICT, and/or (iii) reify previously theoretical ideas in normative governance (Bannister & Connolly, 2012). Issues (i) and (ii) concern structural governance, whereas issue (iii) relates to normative governance. Essentially, therefore, effective communication between the governors and the governed and a harmonious society which are the litmus test for good governance are at the heart of e-governance (Vijayahanka, 2000).

The bottom line is that the use of information and communication technology (ICT) applications to deliver various government services is referred to as electronic governance (or e-governance). The concept and practice of e-governance are very important as it improves the quality, accountability, and efficiency of government service and information to stakeholders (Alshehri et al., 2012; Dawes,2009). This portrays the fact that, E-governance and good governance share the same goals (Basu,2004). In essence, e-governance just like good governance promotes information sharing throughout government, while also increasing transparency and accountability, reducing discrimination and promoting inclusion, improving accessibility and removing barriers to accessing public services. E-governance boosts economic growth by improving coordination between the public and private sectors. For the purpose of this paper, (Broome's 2015) definition of e-governance as the use of ICT infrastructure to manage relationships across the government has been adopted.

Potential Inhibitors

Several factors have been considered as barriers to the adoption and implementation of e-governance across the globe. These include inter alia, the organizational governing cum political factors, dynamics of change, awareness and knowledge of e-governance, funding, training and ICT facilities. Vision, strategy, funding, top-level support, citizen-centric approach and leadership orientation are a few of the governing factors that have been investigated (Altameen et al; 2006). It has been discovered that the presence of a belief among leaders is a major influencing factor for successfully completing e-governance projects, particularly among the top leadership, and that when leadership is strong, the chances of success increase (Bakacsi 2010; Kim et al, 2009). Similarly, many studies, including Heeks (2003), the Europarat (2009), and Toots (2019), believe that political and top management support is critical in implementing e-government, particularly in e-democracy and e-participation. Corroborating the foregoing, Sang., Lee, and Lee (2009) identifies variations in leadership support and a lack of high priority for (or even need for) e-Government at the moment as critical challenges to implementing e-Government. Towards ameliorating political inhibitors, Guanghua (2009) suggested that top-level management must make a strong commitment to e-Government implementation.

Closely related to the governing cum political factors discussed above is resistance to change. Without mincing words, Al-Shboul et al. (2014) assert that resistance to change is a major impediment to e-government transformation in a political environment, particularly in the domain of e-democracy. In the same vein, Mahrer and Krimmer (2005), and Toots (2019) found that the majority of Austrian politicians are adamantly opposed to e-democracy because they fear losing control and status. In line with the foregoing, Local governments have claimed, according to Akbulut (2003), that their employees are under-trained in the use of information technologies, and that this lack of training is due to resistance to change, resistance to use, and inability to use information technologies. In order to reduce change resistance inhibitors, government must make e-governance more widely known. This can be accomplished by raising awareness among leaders, who can encourage people to use the internet, as well as informing the general public about the advantages of e-

governance over traditional governance (Sinha and Lal, 2017).

In addition to the political and resistance to change factors, Parent et al. (2005) identify a lack of knowledge or awareness of e-government services as a significant barrier to the adoption of e-governance. In specific terms, awareness of the ease of e-participation, as well as the relative advantage for the user, were identified as critical factors in the implementation of e-governance(Roblek 2020; Rokhman, 2011 and Voorberg et al. 2015). In the context of change resistance, Sang et al (2009) suggested increasing public awareness of the importance and utility of e-government as critical to its adoption and implementation. It could be seen from the foregoing that it is critical to emphasize the importance of raising citizen awareness through campaigns aimed at deploying e-government services that encourage citizen participation and, ultimately, successful implementation of these services. In addition to the other factors mentioned above, finance is a prime factor in the implementation of e-governance. Supporting this assertion, it was argued that significant capital and operational expenditures are required for the successful implementation of an e-Government project (Kamal., Hackney, & Sarwar, 2013). Unfortunately, Governments, in general, are hesitant to provide financial assistance to start e-Government projects in government organizations/agencies, which is one of the roadblocks to progress.

Another critical major inhibitor to e-governance implementation is the lack of training and ICT infrastructure. With regards to training and ICT experience, Kamal., Hackney, & Sarwar, (2013) identify citizens' lack of skill set to use available e-Government services and digital infrastructures, such as the Internet and laptop access as basic barriers to e-governance implementation. IT standard, IT infrastructure, national information infrastructure, collaboration and security are some of the most important ICT factors studied in the e-government literature affecting the implementation of e-governance (Altameen et al; 2006). Others include network infrastructure (LAN, server, Internet, internet, extranet), IT skills, and personnel (Ebrahim and Irani, 2005). The main challenge of e-government in the Nigerian public sector, according to Abdel-Fattah and Galal-Edeen (2008), is a lack of trained and qualified personnel to manage and operate the infrastructure. Ayo and Ekong (2008) corroborate the foregoing when they emphasized the lack of skilled workers to handle various ICT services and applications as hurdles to e-governance adoption and implementation. The foregoing shows that the adoption and implementation of e-governance is truncated by several factors. Thus, this study unravels empirically barriers to e-governance adoption and implementation in the university of Abuja.

Research Design

The study is an empirical investigation of inhibitors to the adoption and implementation of e-governance in the University of Abuja, Nigeria. The survey research design was used for the study. The survey research design was considered to be appropriate because it is capable of getting the direct views and opinions of individuals or representatives in the study. It also has the ability to reach a large number of populations within a short period.

Population/Sample Size of the Study

The population of the study is 2,372 comprising Academic Staff (631) and Non-Academic staff (1741) of the University. (University of Abuja Establishment Unit, 2018). A total of 342 respondents constitutes the sample size. Stratified and random sampling techniques were used to get the participant from the Academic and Non-Academic staff. To get the sample size for each stratum, the formula suggested by the University of California at Davis was utilized. The formula states that:

The sample size of the strata=size of entire sample /population size x layer size

Since the sample size = 342

Population = 2372

Layer size = number of people in strata. See the formula applied in the table below.

Table 1.1: Sample Size for each Stratum

S/N	DEPARTMENTS (ACADEMIC & NON-ACADEMIC)	POPULATION	WORKING	SAMPLE SIZE
1	Academic Staff	631	342/2372x631=90.9	91
2	Non-Academic Staff	1741	342/2372x1741=251.0	251
3	Total	2372		342

Source: Researchers Computation, 2018

The choice of selecting the respondents using the simple random sampling technique is because it is a method of determining a sample from a population in which all population members have an equal chance of being chosen.

Reliability of the Study

The study adopted the Split-halves method of reliability test to assess the reliability of the survey instrument with aid of SPSSv24. A pilot study of 30 participants was used for the test. participants were divided into half, and copies of the questionnaire were administered to each half of the group. The result indicates that the instrument is reliable given that R-values are above .70 as suggested by (Creswell, 2003). The table below shows the work.

Table 1.2: Reliability of the Instrument using Split Halves Method

			Grp1	Grp2
Spearman's rho	Grp1	Correlation Coefficient	1.000	.768*
		Sig. (2-tailed)	.	.037
		N	30	30
	Grp2	Correlation Coefficient	.768*	1.000
		Sig. (2-tailed)	.037	.
		N	30	30

*. Correlation is significant at the 0.05 level (2-tailed).

Methods of Data Analysis

The study used both inferential and descriptive statistics for the study. Z-test and multiple regression were used for testing the hypotheses with the aid of the Statistical Package for Social Science (SPSSv25).

Data Presentation

The survey data for the study were collated and presented using simple percentages. Out of a total of three hundred and forty-two (342) questionnaires distributed, a total of two hundred and ninety (290) representing 85% were retrieved.

Table 1.3: Respondents' Opinions on Personnel Training & ICT Experience

S/N	Personnel Training & Experience on ICT	SA (5)	A (4)	U (3)	D (2)	SD (1)	Mean
1	Inadequate trained and experienced ICT personnel	86 (30%)	158 (55%)	29 (10%)	10 (3%)	7 (2%)	4.06
2	Poor ICT knowledge by staff	92 (32%)	145 (50%)	32 (11%)	10 (3%)	11 (4%)	4.02
3	Inadequate training and retraining on ICT best practices.	49 (17%)	148 (51%)	62 (21%)	26 (9%)	5 (2%)	3.72
4	Inadequate training on current ICT facilities	111 (38%)	139 (48%)	30 (10%)	8 (3%)	2 (1%)	4.20
	Grand Mean						4.00

Source: Field survey 2020

The descriptive result in Table 1.3 shows that 86(30%) and 158(55%) participants strongly agreed and agreed respectively that the university experiences inadequate trained and ICT personnels, while 10(3%) disagreed and 7(2%) strongly disagreed respectively that the university does not experience inadequate trained and experienced ICT personnels. Respondents represented by 92(32%) and 145(50%) strongly agreed and agreed respectively that the university staff have poor ICT knowledge, while 10(3%) and 11(4%) disagreed and strongly disagreed respectively that staff have poor ICT knowledge. On training and retraining on ICT best practices, 49(17%) and 148(51%) respondents strongly agreed and agreed respectively to acknowledge the inadequacy of training and retraining on ICT best practice. Contrarily, 26(9%) and 5(2%) are of the opinion that there is adequate training and retraining of staff on ICT best practices. Similarly, 111(38%) and 139(48%) respondents strongly agreed and agreed that staff have been undergoing training on current ICT facilities, while 8(3%) and 2(1%) disagreed and strongly disagreed with their views. The grand mean value of 4.00> 2.50 likert benchmark shows that there is high rate of acceptance that personnel training & experience on ICT is inadequate.

Table 1.4: Respondents' Opinions on the Awareness on E-governance

S/N	Questions Items	SA (5)	A (4)	U (3)	D (2)	SD (1)	Mean
1	Inadequate awareness of the existence of e-governance services	74 (25%)	164 (57%)	40 (14%)	9 (3%)	3 (1%)	4.02
2	Poor awareness campaign on the existence of e-governance services	70 (24%)	148 (51%)	51 (18%)	17 (6%)	4 (1%)	3.91
3	Low maintenance culture of University of Abuja ICT facilities	98 (34%)	149 (51%)	30 (10%)	8 (3%)	5 (2%)	4.13
4	There is sufficient knowledge on the relevance of e-governance.	84 (29%)	156 (54%)	32 (11%)	14 (5%)	4 (1%)	4.04
5	Our institution encourages e-governance platforms usage in all functional and operational activities.	71 (24%)	140 (48%)	54 (19%)	20 (7%)	5 (2%)	3.87
	Grand Mean						3.994

Source: Field Survey 2020

The descriptive result in Table 1.4 shows that 74(25%) and 164(57%) respondents strongly agreed and agreed respectively that there is inadequate awareness of the existence of e-governance services, while 9(3%) and 3(1%) were of the contrary opinion that there is adequate awareness of the existence of e-governance services. Regarding poor awareness campaign on the existence of e-governance services, 70(24%) and 148(51%) respondents strongly agreed and agreed respectively that awareness creation on the existence of e-governance is poor, while 17(6%) and 4(1%) were of the disagreeing opinion. In the same vein, 98(34%) and 149(51%) respondents were of the agreeing opinion that that University of Abuja has low maintenance culture of its ICT facilities, while 8(3%) and 5(2%) disagreed and strongly disagreed respectively. However, overwhelming majority of the staff agreed that they have sufficient knowledge on the relevance of e-governance as depicted by 84(29%) and 156(54%) respondents who are on the agreeing sides respectively. Insignificant number of the staff represented by 4(5%) and 4(1%) respectively affirmed that there is insufficient knowledge of the relevance of e-governance by the staff. On whether the institution encourages e-governance platforms usage in all functional and operational activities, majority of the respondents represented by 71(24%) and 140(48%) affirmed that e-governance platform usage is encouraged by the institution, while 20(7%) and 5(2%) disagreed and strongly disagreed with their opinions. The grand mean value of 3.994> 2.50 likert benchmark however, shows that staff awareness of e-governance is still shallow in the University of Abuja.

Table 1.5: Respondents' Opinions on Resistance to Change

S/N	Questions Items	SA (5)	A (4)	U (3)	D (2)	SD (1)	Mean
1	Unwillingness to change from manual method to digital method of administration	68 (23%)	136 (47%)	54 (19%)	28 (10%)	4 (1%)	3.81
2	Existence of digital divide on the use of ICT by staff	59 (20%)	157 (54%)	51 (18%)	19 (7%)	4 (1%)	3.86
3	Inadequate enforcement from manual to digital use of ICT	80 (27%)	165 (57%)	26 (9%)	14 (5%)	5 (2%)	4.04
4	Resistance to implementation of regulations and framework of ICT	65 (22%)	149 (51%)	49 (17%)	20 (7%)	7 (3%)	3.84
	Grand Mean						3.888

Source: Field Survey 2020

The descriptive result in Table 1.5 shows that 68(23%) and 136(47%) of the respondents attested to the unwillingness of the staff to change from manual method to digital method of administration, whereas, 28(10%) and 4(1%) disagreed and strongly disagreed with regards to their views. In the opinion of the respondents regarding the existence of digital divide among staff, 59(20%) and 157(54%) respectively affirmed the existence of digital. Whereas, 19(7%) and 4(1%) contrastingly agreed that digital divide on the use of ICT does not exist among the university staff. 80(27%) participants strongly agreed and 165(57%) agreed while 14(5%) disagreed and 5(2%) strongly disagreed that there is inadequate enforcement from manual to digital use of ICT. 65(22%) participants strongly agreed, 149(51%) agreed, while 20(7%) disagreed and 7(3%) strongly disagreed that there is resistance to implementation of regulations and framework of ICT. The grand mean value of 4.156 > 2.50 likert benchmark strongly shows that the university staff are resistant to e-governance change.

Table 1.6: Respondents' Opinions on Political Will and Corruption

S/N	Questions Items	SA (5)	A (4)	U (3)	D (2)	SD (1)	Mean
1	Misappropriation of funds allocated for ICT development	175 (60%)	111 (39%)	1 (0%)	0 (0%)	3 (1%)	4.57
2	Lack of trust on security of personal information whenever e-governance services is engaged	99 (34%)	183 (63%)	1 (0%)	7 (3%)	0 (0%)	4.29
3	Lack of political will and commitment	89 (31%)	147 (51%)	39 (13%)	11 (4%)	4 (1%)	4.06
4	Divergent views by individuals, pressure groups on the efficacy of the implementation of e-governance	91 (31%)	138 (48%)	35 (12%)	19 (7%)	7 (2%)	3.99
5	Lack of transparency and accountability on the use of funds allocated for e-governance	56 (19%)	164 (57%)	50 (17%)	12 (4%)	8 (3%)	3.86
	Grand Mean						4.154

Source: Field Survey 2020

According to Table 1.6, 175 (60%) and 111 (39%) respondents strongly agreed and agreed, respectively, that funds allocated to ICT are misappropriated, while 3 (1%) strongly disagreed. When asked if they had confidence in the security of personal information when using e-government services, 99 per cent (34%) and 183 per cent (63%) agreed, while 7% disagreed. Lack of political will and commitment were cited as impediments by 89 (31%) and 147 (51%) respondents who strongly agreed and agreed, respectively, whereas 11 (4%) and 4 (1%) disagreed and strongly disagreed with the majority's views, respectively. Concerning divergent views on the efficacy of e-governance implementation held by individuals and pressure groups, 91(31%) and 138(48%), respectively, strongly agreed and agreed that views on the efficacy of e-governance implementation vary among individuals, while 19(7%) and 7(2%) disagreed and strongly disagreed with the majority's views. In terms of e-governance fund towards 56(19%) of respondents strongly agreed that e-governance funds lack transparency and accountability, while 8 (3%) strongly disagreed that transparency and accountability are observed during and after funds are allocated for e-governance projects. Similarly, 164 (57%) agreed that allocating funds to e-government projects lacks accountability and transparency, while 12 (4%) disagreed. The grand mean value of 4.154> 2.50 likert benchmark indicates that a lack of political will and the presence of corruption in the university were widely accepted.

Table 1.7: Respondents' Opinions on Extent of Funding in the University

S/N	Questions Items	SA (5)	A (4)	U (3)	D (2)	SD (1)	Mean
1	Inadequate budgetary allocation to ICT development	138 (47%)	80 (28%)	38 (13%)	26 (9%)	8 (3%)	4.08
2	Old and outdated ICT infrastructures available	139 (48%)	96 (33%)	40 (14%)	13 (4%)	2 (1%)	4.23
3	Irregular financial audit of funds allocated for e-governance services	86 (30%)	109 (38%)	53 (18%)	27 (9%)	15 (5%)	3.77
	Grand Mean						4.027

Source: Field Survey 2020

From the descriptive findings in Table 1.7, 138 (47%) participants strongly agreed, 80 (28%) agreed, 26 (9%) disagreed, and 8 (3%) strongly disagreed that there is the insufficient budgetary allocation for ICT development. It was found that available ICT infrastructures are old and outdated as depicted by 139 (48%) and 96 (33%) participants that strongly agreed and agreed respectively, while 13 (4%), and 2 (1%) refuted their opinion. There is a lack of regular financial audit of funds allocated for e-governance services as shown by 86(30%) participants strongly agreeing and 109(38%) agreeing, whereas, 27(9%) disagreed and 15(5%) strongly disagreed with their views. The grand mean value of 4.027> 2.50 Likert benchmark indicates that most people agree that university funding is insufficient.

Hypothesis one: Adoption and Implementation of E-governance are Significantly Influenced by Some Barriers.

Table 1.8. Normality Statistics Result on whether adoption and Implementation of E-governance are Significantly Influence by Some Barriers

		Implementation of e-governance	Barriers of e-governance
N	Valid	290	290
	Missing	0	0
Skewness		.947	.554
Std. Error of Skewness		.229	.129
Kurtosis		2.667	2.196
Std. Error of Kurtosis		.142	.256

Source: Field Survey 2020 Level of significance (α) = 0.05

The data were tested for normality using the skewness and kurtosis test. All responses used for this analysis met the required and normal skewness value of being less than 1. The result for the variables indicates that they are normal given the kurtosis values at the range of ± 2 as suggested by Creswell (2003). The skewness and kurtosis values for the variables are within the ranges. As such parametric analysis of Z-test was carried out to testhypothesis one.

Table 1.9: Z-Test Statistics Showing Results on whether Effective Implementation of E-governance in the University of Abuja is Significantly Affected by some Barriers.

Variable	Test of$\mu = 2.50$ vs $\mu \neq 2.50$; assumed sigma = 1.29					
	N	Mean	Std.	SE Mean	Z-stat.	Sig.(2-tailed)
Mean Response	5	1.982	0.242	0.577	0.90	0.040

Source: Field Survey 2020

Decision Rule: Reject H_o if p-value < 0.05 otherwise do not accept.

Table 1.9 above is a Z-test that was used to ascertain whether effective implementation of e-governance in the University of Abuja is not significantly affected by some barriers. The Z-test result shows a statistic value of 0.90 and associated probability value of 0.040 < 0.05 indicating that effective implementation of e-governance in the University of Abuja is significantly affected by some barriers. The researcher therefore upholds the alternate hypothesis that effective implementation of e-governance in the University of Abuja is significantly affected by some barriers and rejects the null. This result is in consonance with the factor analysis result that identified some factors relative within the scope of the study.

Hypothesis Two

The perceived barriers to e-governance adoption and implementation have no significant impact on the university's performance.

Table 1.10 Model Summary on Perceived Barriers to adoption and Implementation of E-governance Effect on Performance of the University

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.817[a]	.667	.661	.49672	1.060

a. **Predictor: (Constant), Funding, Personnel Training & Experience on ICT, Political will, Corruption**, Awareness on E-governance and Resistance to Change

b. Dependent Variable: University Performance

Source: Field Survey 2020

The results of a multiple regression analysis of perceived barriers to e-governance adoption and implementation and their impact on university performance are presented in Tables 1.8, 1.9, and 1.10. All the assumptions for multiple regression were met. The dependent variable (university performance) and the independent variables (personnel training and experience, awareness of e-governance, resistance to change, political will, corruption, and funding) have a correlation of .817, according to table 1.9. Given the correlation value of 81.7, it can be concluded that perceived barriers to e-governance adoption and implementation and their impact on university

performance have a positive and strong relationship. The coefficient of determination between the independent variables (e-government awareness, resistance to change, political will, corruption, and funding) and the dependent variable (university performance) is 0.667. This means that changes in the independent variable (personnel training and experience, awareness of e-governance, resistance to change) account for 66.7 per cent of the variations or changes in the dependent variable (university performance).

Table 1.11: ANOVA on Barriers to adoption and Implementation of E-governance and the impact on the Performance of the University

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	140.469	5	28.094	113.866	.000[b]
	Residual	70.070	284	.247		
	Total	210.539	289			

a. Dependent Variable: University Performance
b. Predictors: (Constant), Funding, Personnel Training & Experience on ICT, Political Will and Corruption, Awareness on E-governance, Resistance to Change

Source: Field Survey 2020

The model fit assessment result is shown in Table 1.9, indicating that the model is fit and statistically significant. The alternative hypothesis is accepted based on the F-value (113.866) and P-value of 0.05, implying that perceived barriers to e-governance adoption and implementation have a significant impact on the university's performance.

Table 1.12: Coefficients of Barriers to adoption and Implementation of E-governance and their impact on the Performance of the University

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.229	.125		9.832	.000		
	Personnel Training & Experience on ICT	1.030	.292	.024	3.527	.002	.485	2.060
	Awareness on E-governance	1.142	.183	.105	6.240	.000	.311	3.219
	Resistance to Change	2.106	.154	.088	13.675	.000	.310	3.230
	Political Will and Corruption	.025	.131	.015	1.908	.058	.520	1.924
	Funding	1.688	.141	.706	16.623	.000	.649	1.540

a. Dependent Variable: University Performance

Source: Field Survey, 2020

The coefficients of the variables are shown in Table 1.9, with the variable having the greatest effect on the dependent variable highlighted. Other variables, with the exception of political will and corruption, were found to be significant. The most significant barrier to e-governance adoption and implementation that affects the University of Abuja's performance was found to be funding (=.706, t = 16.623, p<0.05), followed by e-governance awareness (=.105, t = 6.240, p<0.05).

Discussion on Findings

The following sub-themes, which correspond to the research problem statement and hypotheses developed, guide the discussion.

Barriers to adoption and Implementation of E-governance in the University of Abuja

The hypothesis investigated whether there are any barriers to adoption and implementation of e-governance at the University of Abuja. In this regard, the Z-test revealed a

statistic value of 0.90 and a probability value of 0.040 < 0.05, indicating that some barriers ranked according to their significance, which is funding, awareness of e-governance activities, resistance to change, personnel training and experience with ICT, political will, and corruption, have a significant impact on effective e-governance implementation at the University of Abuja. As a result, the study lends support to the alternative hypothesis that the University of Abuja is struggling to implement effective e-governance due to a number of challenges such as lack of staff training and experience, awareness of e-governance, resistance to change to e-governance, political will, corruption, and insufficient e-governance funding. This is consistent with the findings of Torgby and Asabere (2014), who discovered that e-governance implementation is hampered by a lack of staff training and experience, awareness of e-governance, resistance to change to e-governance, political will, corruption, and insufficient e-governance funding. In this regard, Chima (2022) suggested training and retraining for effective implementation of e-governanc.

Implementation of E-governance and Performance of University of Abuja

The second hypothesis was on how the perceived barriers to effective implementation of e-governance affect the performance of the university. The result provided further insight, as the barriers showed a positive and strong relationship (81.7%) with the performance of the university. The model on e-governance implementation was fit and statistically significant. This indicates that the perceived barriers to effective implementation of e-governance have a significant impact on the performance of the university. It follows that the performance of the University will partly improve when adequate funding is given to e-governance activity, awareness campaigns are carried out on the importance of e-governance as well as the training and retraining of staff on current e-governance practices. Finally, the result shows that all the individual variables indicated were significant, except for political will and corruption which were not significant. Funding is the most significant of the barriers to e-governance adoption and implementation in the University of Abuja that affects the performance of the institution. This is followed by an awareness of e-governance. The study of Nkwe (2012) further supports that funding is a major tool in achieving effective e-governance implementation as it also confirmed that awareness, resistance to change and the human resources perspective such as training and employee experiences are critical to e-governance implementation.

Conclusion and Recommendations

Conclusion

The purpose of the study was to investigate respondents' perception of the factors that influence e-governance adoption and implementation, as well as how those factors influenced the University of Abuja's performance. Emerging findings show that a number of obstacles hamper the University of Abuja's adoption and implementation of e-governance. Inadequate funding for e-governance activities, a lack of awareness of e-governance activities among staff, and resistance to change are all factors that stymie e-governance adoption and implementation, as well as the University's performance, resulting in a jumbled administrative system. Other factors, but not too critical as compared to factors listed above that influence the adoption and implementation and by extension performance of the university include personnel training and experience, political will, and corruption. As a result, the paper concludes that funding, raising awareness, and overcoming resistance to change are critical success factors for the adoption and implementation of e-governance in the university. Drawing from the foregoing, the paper recommends the following to improve e-governance adoption and implementation, and by extension the university's performance.

A. Funding

i. Adequate attention should be paid to the funding of ICT within the University, with significant funds designated in the budget for the University's ICT facilities. This will make it easier to provide the necessary ICT infrastructure and other resources to the University of Abuja to support e-governance. This can be accomplished using the methods listed below:

ii. Inviting Nigerian stakeholders, banks, non-governmental organizations, and multinational corporations to form partnerships in order to secure adequate funding for the acquisition of ICT facilities at the University of Abuja for effective e-governance adoption and implementation.

iii. Effective consultation and encouragement of the University of Abuja Alumni and other associations within the University to see the need in contributing to the funding of e-governance activity of the University.

iv. Scholars and students in the Departments of Engineering, ICT, and Computer Science should be encouraged to create software applications and ideas that will help the University adopt and implement e-governance effectively.

B. Awareness Creation

i. There should be an awareness campaign carried out by the University where staff and students will be enlightened on the importance of e-governance. This will create more awareness of e-governance activities, end the resistance to change by those who do not wish to use e-governance as a means of administration and improve staff performance in the university. Below are the processes through which this can be achieved;

ii. Regular seminars and workshops on the importance of e-governance should be encouraged in the University of Abuja's faculties, departments, and units to raise awareness about e-governance.

iii. Posters and billboards emphasizing the importance of e-governance in the university should be displayed on school premises and on the university's website.

iv.

C. Personnel

Only qualified and professional ICT staff should be hired and trained on a regular basis for the University's ICT unit. This will keep them current on ICT best practices. The procedure is outlined in the section below.

i. On a regular basis, students and staff should be given the opportunity to rate the University's e-governance implementation and performance in order to get feedback on what is and is not working.

ii. The University of Abuja should make good ICT knowledge a hiring criterion for non-academic and academic staff. This will enhance effective adoption and implementation of e-governance.

iii. To drive e-governance policy and implementation, a strong and committed ICT leadership team should be put in place to work in collaboration with university management that is also committed to effective e-governance implementation.

iv. The university should put strategies in place to enforce adoption and implementation of e-governance. To achieve this, it should be made mandatory for all staff to be tested on basic e-governance skill sets before they are promoted or get some important entitlements from the university.

D. On a regular basis, the University should audit the ICT department and those responsible for ensuring effective e-governance. This will help people understand how e-governance funds are spent, the obstacles encountered, and how they can be surmounted. The following are some strategies for achieving the aforementioned objectives:

i. The administration of the university should form an e-governance monitoring team to collect data on e-governance practices and track how funds set aside for e-governance activities are spent.

ii. External auditors should be hired by the university to assist in auditing the funds allocated for e-governance activities.

iii. Technical and financial bids for ICT infrastructure and e-government equipment should be conducted with the best and most reasonably priced contractor being awarded the contract.

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