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## THE ASSESSMENT OF THE IMPACT OF E-GOVERNANCE IMPLEMENTATION IN ADAMAWA STATE JAMB HEAD OFFICE YOLA NIGERIA

### ABSTRACT

*This Paper sets out to assess the impact of e-governance implementation in Adamawa State JAMB Head Office Yola Nigeria, with a scope from 2015 -2023, By conducting a comprehensive literature review, an in-depth analysis of related public policies and New Public Management (NPM) that gave birth to E-governance application in the JAMB Head Office, the Paper aims to identify the primary factors influencing e-governance implementation in the studied public institution and assess the overall impact of this implementation on the delivery of public services. The research findings are that many public institutions in Adamawa State have embraced e-governance; however, these implementations have been largely unsuccessful in improving public service delivery. The Paper made several recommendations to improve the full implementation of e-governance so as to meet-up with the global benchmark, including increased funding, improved staff training, and more effective monitoring and evaluation mechanisms, that e-governance implementation can be a viable tool for enhancing public service delivery in Nigeria and other African countries. This Paper contributes to the existing literature on the use of e-governance to improve public service delivery and provides a useful insight into the current state of e-governance implementation in Adamawa State.*

**Keywords:** *Assessment, E-Governance, JAMB, Implementation*

### Background to the Study

Technological advancement has changed the way people go about their daily activities globally, be it formal, that's all-official engagement or informal meaning all private and personal engagements. Years back people travel miles away to visits friends and relatives before we see them or hear their voices, we go miles to do shopping we wrote mails that took decades to reach its destination, we carry files from one office to another, voting of our leaders into offices become suspicious, lacks credibility and lack of guarantee no matter the level of love and popularity such candidate may have from the people, we spent hours to write exams that took weeks before the results would be out. Paper and Pen work was then the order of the day, but today with internet, mobile

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communication is growing, and our ability to navigate the World Wide Web is improving dramatically making it easier and fast to reached out to relatives and friends, doing businesses transacts at the comfort of our zone with lesser cost and effort equally payments of taxes are now done without going to the respective offices or banks to spend times on the queue. Today we use the internet to shop on-line, do banking transactions, we e-mail, fast or texts messages with our phones that deliver within seconds or minute. Booked for our flight tickets and makes payment on-line, offices paper works are now becoming paperless activities, we do research on any subject and connect with network, we make conference presentations through zoom and other interactive tools within the comfort of our zone, all These are accredited due to advancement in the information and communication technology which has comes with the introduction and adoption of e-facilities in all administrative and managerial processes.

The European Union in her Report (2007), asserts that ICT brought about enhancing the global democratization processes through e-democracy areas which include among others; e-parliament, e-consultation-participation, e-initiatives, e-petitioning, e-campaigning, e-polling/e-surveying (EOM, 2007). In the advent of these trends, Nigeria has made progress towards the adoption of e-governance in its admission process especially in the area of application and examination that is crucial to education credibility

The JAMB was established by the Act No. 2 of 1978 and empowered to conduct matriculation examinations into the nation's universities (JAMB, 2017). The scope of operation of the board was expanded through the amendment of the decree No. 2 in 1988 to include conducts of examinations into Polytechnics and Colleges of education in the country. In the area of e-governance, JAMB has made remarkable progress. The students' application process, the conduct of the matriculation examinations, the marking and the release of the examination results has been computerized. It is now possible for students to see their Unified Tertiary Matriculation Examination (UTME) results in a matter of day or hours after sitting for their respective examinations, such was not possible in the past when the examination was completely paper-pencil test (PPT) rather than computer-based.

Another important service that JAMB often renders to the admission aspirants is change of course/institution. This service occurs when a candidate voluntarily changes his/her mind about his/her choice of institution having submitted an admission registration form or compelled to do so by circumstance which may relate to not meeting the score requirements of earlier chosen course and/or institution. Previously, this service requires that a candidate purchased a form, fill and do a physical submission at designated JAMB office. Complaints of missing forms, mishandling of forms resulting in names being wrongly spelt etc. were often reported. With the adoption of e-governance, candidates can now easily process the change of course/institution form in the comfort of their home through e-

registration on the JAMB portal and online convenient payment with the use of Automated Teller Machine (ATM). Moreover, the printing of examination slip, the checking of results that often involved long distant travelling with its associated risks, checking of admission status, and printing of admission letters can now be easily done in the confine of a candidates' room on the JAMB portal.

This eliminates unnecessary travelling, queuing and exposure of adolescence that dominate candidacy of JAMB examination to undue risks. This was not so in the past when all these services are enjoyed only by visiting a designated JAMB or Post office. Without doubt, progress has been made by JAMB in the area of e-services as an element of e-Governance

### **Problem Statement/Justification**

Nigeria has an estimated population of over two hundred million people (200, 000, 000) and Nigeria has over 170 universities in which there are: 43 Federal universities, 79 private universities, and 48 State Owned universities, Nigeria, had about 159 Polytechnics and about 152 Colleges respectively: 27 Federal Colleges, 82 private Colleges, and 54 State owned Colleges. Joint Admission and Matriculation Board (JAMB) is the body responsible for conducting examination for admission into these various academic's higher institution of learning. In 2021, an approximation of 1.4 million candidates applied for admission into these various institutions while in the year 2022, an estimated 1.8million candidate has also applied for admission through the Joint Admission and Matriculation Board (JAMB). Traditionally, JAMB had conducted her examinations using the paper-pencil test (PPT) model, this system of examination has been reportedly characterized by inefficiency and inaccuracy, the challenges associated with pen and paper examination model in addition to some of these ranges of problems; delay of the arrivals of examination materials, one has to travel miles to obtained the JAMB form, or visit to nearby post offices, long queue that takes days in awaiting to buy forms and resubmitting of such forms. Change of institutions from the previous interest one is equally done manually.

The inefficiency of the JAMB-PPT Examination was apparent in the wide-scale examination malpractices that often characterized the conduct of the examination in the past, as part of the efforts to curb the widespread examination misconducts, JAMB introduced a customized answer sheets in the year 1994 on which candidate's examination numbers and candidate's subject types are printed and presented at the time of the examination. The examination system was further improved in 1998 involving reshuffling of question types and candidates seat numbers such that candidates sitting in close proximity cannot copy from one another, this newly-introduced measures had reportedly curbed the mass cheating in the examination to some extent (Ojerinde, 2015), although there were recorded problems of inefficiency in grading, corrupt collaborations at the examination centres with some officials to increase candidates points or letting candidates to cheat during exams by some invigilators. This innovation introduced by

JAMB, had reportedly breed cases of missing results, candidates having wrong types of candidate's choice subject given to them as against the type printed on their answer sheets and similar issues leading to frustrations. Apart from the cheating, the release of results could take weeks or months with candidates waiting. This usually put some candidates' life plans on hold as they await the outcome of JAMB to determine their next courses of action.

The situation of JAMB necessitates an archetype shift in strategies towards repositioning the agency for efficiency and effectiveness, there comes the alternative computer-based test (CBT) which replaced the PPT model by the year 2015, though like some of the others, the CBT has its own challenges, these challenges are primarily of the technology failure, this is unlike the problem of the PPT that is shrouded in design (Retnawati, 2015). At first, the idea was a combined exam of PPT, and CBT was formed. Later, the CBT examination mode was fully scale was adopted by JAMB in 2015.

This saw the implementation of e-Governance with its facilities, for example; e-Registration, e-Application, e-Exams etc. which are element of e-Governance, JAMB has extended its use of technology in interacting with other government agencies like NYSC, NUC etc. It's against this background the researcher deem it fit to study the impact of e-Governance implementation in JAMB head Office Adamawa State Nigeria: (2015-2023).

### **Objective of the study:**

**The general objective of this study is to** assess the Impact of e-governance Implementation in Adamawa State JAMB Head Office Yola Nigeria, with a scope from 2015 -2023 while the specific objectives amongst others were to:

- i. Examine the types of e-governance facilities available in JAMB
- ii. Examine the adequacy of these e-governance facilities available in JAMB,
- iii. Examine the challenges of e-governance implementation in JAMB in Adamawa State?

### **Research Questions**

- i. What are the types of e-governance facilities currently available in JAMB?
- ii. To what extent are the available e-governance facilities in JAMB adequate for achieving its organizational objectives?
- iii. What are the challenges faced in the implementation of e-governance in JAMB in Adamawa State?

### **Research Hypotheses**

The study hypothesized that:

*H0<sub>1</sub>: There is no significant impact of e-governance implementation on public service delivery in Adamawa State's JAMB head office Yola*

## **Methodology**

This study adopts a survey research design to assess the “Impact of e-Governance Implementation in Adamawa’s JAMB Head Office State Yola” The study uses quantitative data sources and methods to examine e-Governance Implementation and its impact, and how its processes influence or ease admission into tertiary institution. The study used empirical evidence and policy recommendations that help to address the problem associated with e-Governance Implementation in Adamawa’s JAMB Head Office Yola.

## **Study area and subjects:**

The study area covers Impact of e-governance Implementation in the Adamawa State Joint Admissions and Matriculation Board (JAMB), Head Office covering the period from (2015-2023). Adamawa State is one of the North eastern states in Nigeria created in 1991 from former Gongola state and occupies about 36,917 square kilometres. It is bordered by the states of Borno to the northwest, Gombe to the west and Taraba to the southwest. Its eastern border also forms the national eastern border with Cameroon. It is a mountainous land crossed by the large river valleys; Benue, Gongola and Yedzaren. It has 21 local government areas with a population of 3,737,223 as of the year 2006.

Yola is the capital of Adamawa State and is split into 2 distinct parts, the oldtown of Yola where the Lamido resides is the traditional city but the new city of Jimeta is the administrative and commercial centres. Generally, the term Yola is now used to mean both. To the North of Yola are the Mandara mountains and the South are the Shebshi mountains. The population of Yola was 88,500 as of the year 2006.

The study will select a representative sample of JAMB Officials from each unit using a multi-stage sampling technique. The sampling technique will involve stratifying the JAMB Officials by their main hierarchy and line-schedules then randomly selecting respondents from each stratum. The sample size will be determined by using a Taro Yamani Formula

## **Data collection:**

The study used both primary and secondary data collected from various sources. The primary data was collected through head office surveys. The secondary data was collected from hard and sort copy

documents through library and internet sources, such as policy documents, committee reports, and previous studies etc

The study surveys will use structured questionnaires to collect quantitative data on the e-governance implementation, their e-governance implementation status, their exposure on e-governance implementation, and their coping strategies. The questionnaires will be administered face-to-face by trained enumerators who e-governance implementation. The questionnaires will be pre-tested and validated by means of pilot study before the actual data collection.

### Method of data analysis

The data gathered through the questionnaire were analysed using Relative Important Index (RII) and simple percentages, while the regression was used to test the hypotheses.

### Result presentation and discussion

The research provides empirical evidence and policy recommendations that can help to improve e-governance implementation in Joint Admissions and Matriculation Board (JAMB). The research will also contribute to the existing literature and practice on e-governance implementation in Nigeria.

**Table 1.1: Relative Importance Index of Types of e-governance facilities/equipment**

Socio-Economic-Effects	5	4	3	2	1	TWV	RII	RANK
Internet	292	178	06	11	05	2223	4.51	1 <sup>st</sup>
Intranet	267	187	16	08	14	2161	4.39	2 <sup>nd</sup>
Website	269	181	21	10	11	2163	4.39	2 <sup>rd</sup>
Extranet	266	190	09	14	13	2158	4.38	3 <sup>th</sup>
Wireless network	261	185	16	14	16	2137	4.34	4 <sup>th</sup>
Computers	259	189	18	11	13	2130	4.32	5 <sup>th</sup>
Television	259	189	18	11	13	2130	4.32	5 <sup>th</sup>
Telephone	259	189	18	11	13	2130	4.32	5 <sup>th</sup>
Data Base	187	176	07	17	13	1707	3.46	6 <sup>th</sup>
Radio	187	176	07	17	13	1707	3.46	6 <sup>th</sup>

Source: *Field Work, 2024*

From table 1.1 above, on the types of e-governance facilities/equipment available in the jamb office, 292 respondents ticked strongly agreed that there is the availability of Internet service, while 178 respondents ticked agreed on the availability of Internet service, only 06 respondents ticked undecided on the availability of Internet service, 11 respondents ticked disagreed on the availability of Internet service and

only 05 respondents ticked strongly disagreed on the availability of Internet service. this gave to the RII 4.51, ranking 1<sup>st</sup> of the availability of Internet service in jamb head of Yola.

Intranet (inter offices connection) in the jamb office, 267 respondents ticked strongly agreed that there is the availability of Intranet service, while 187 respondents ticked agreed on the availability of Intranet service, only 16 respondents ticked undecided on the availability of Internet service, 08 respondents ticked disagreed on the availability of Intranet service and only 14 respondents ticked strongly disagreed on the availability of Intranet service. this gave to the RII 4.39, ranking 2nd of the availability of Intranet service in jamb head of Yola.

Website availability is present as 269 respondent's responds to the question on the types of e-governance facilities/equipment available in their organization, 181 respondents ticked agreed on the availability of Website, only 21 respondents ticked undecided on the availability of Website, 10 respondents ticked disagreed on the availability of Website and only 11 respondents ticked strongly disagreed on the availability of Website. this placed the availability of Website to the RII 4.39, ranking 2nd give it equal position with the availability Intranet service in jamb head of Yola.

Extranet availability is present as 266 respondent's responds to the question on the types of e-governance facilities/equipment available in their organization, 190 respondents ticked agreed on the availability of Extranet, only 09 respondents ticked undecided on the availability of Extranet, 14 respondents ticked disagreed on the availability of Extranet and only 13 respondents ticked strongly disagreed on the availability of Extranet. this position Extranet availability to the RII 4.38, ranking 3<sup>rd</sup> of the availability of Extranet in jamb head of Yola.

Wireless network availability in the jamb office, 259 respondents ticked strongly agreed that there is the availability of wireless network, while 189 respondents ticked agreed on the availability of wireless network, only 18 respondents ticked undecided on the availability of wireless network, 11 respondents ticked disagreed on the availability of wireless network and only 13 respondents ticked strongly disagreed on the availability of wireless network. this gave to the RII 4.39, ranking 4<sup>th</sup> of the availability of wireless network in jamb head of Yola.

Computers availability in the jamb office, 259 respondents ticked strongly agreed that there is the availability of Computers, while 189 respondents ticked agreed on the availability of Computers, only 18 respondents ticked undecided on the availability of Computers, 11 respondents ticked disagreed on the availability of Computers and only 13 respondents ticked strongly disagreed on the availability of Computers. this gave to the RII 4.32, ranking 5<sup>th</sup> of the availability of Computers in jamb head of Yola.

Television availability in the jamb office, 259 respondents ticked strongly agreed that there is the availability of Television, while 189 respondents ticked agreed on the availability of Television, only 18 respondents ticked undecided on the availability of Television, 11 respondents ticked disagreed on the availability of Television and only 13 respondents ticked strongly disagreed on the availability of Television. this gave to the RII 4.32, ranking 5<sup>th</sup> of the availability of Television in jamb head of Yola.

Telephone availability in the jamb office, 259 respondents ticked strongly agreed that there is the availability of Telephone, while 189 respondents ticked agreed on the availability of Telephone, only 18 respondents ticked undecided on the availability of Telephone, 11 respondents ticked disagreed on the availability of Telephone and only 13 respondents ticked strongly disagreed on the availability of Telephone. this gave to the RII 4.32, ranking 5<sup>th</sup> of the availability of Telephone in jamb head of Yola.

Data Base availability in the jamb office, 187 respondents ticked strongly agreed that there is the availability of Data Base, while 176 respondents ticked agreed on the availability of Data Base, an insignificant number of 08 respondents ticked undecided on the availability of Data Base, 17 respondents ticked disagreed on the availability of Data Base and only 13 respondents ticked strongly disagreed on the availability of Telephone. this gave to the RII 3.46, ranking 6<sup>th</sup> of the availability of Data Base in jamb head of Yola.

Radio availability in the jamb office, 187 respondents ticked strongly agreed that there is the availability of Radio, while 176 respondents ticked agreed on the availability of Radio, only 07 respondents ticked undecided on the availability of Telephone, 11 respondents ticked disagreed on the availability of Radio and only 13 respondents ticked strongly disagreed on the availability of Telephone. this gave to the RII 3.46, ranking 6<sup>th</sup> of the availability of Radio in jamb head of Yola.

## Testing of Hypothesis

### Analysis of Variance (ANOVA)

**Table 1.2: Showing Regression Analysis: e-governance versus facilities**

Source	Degree of freedom	Adj SS	Adj MS	F-Value	P-Value
<b>Regression</b>	1	1893.4	1893.4	1.63	0.031
<b>Facilities</b>	1	1893.4	1893.4	1.68	0.031
<b>Error</b>	8	9008.2	1126.0		
<b>Lack-of-Fit</b>	7	8040.2	1148.6	1.19	0.011



**Table 1.3: Model Summary**

S	R-Squared	R-Squared (Adjusted)	R-Squared (Prediction)
33.5564	77.37%	67.04%	0.00%

**Simple Linear Regression**

**Regression Equation: e-governance = 123.0 + 0.224 facilities**

**Interpretation:** the Analysis of Variance (ANOVA) above indicates that the data can be used to predict the future use of e-governance as the R-Squared value is 77.37% this shows that the model E-governance = 123.0 + 0.224 facilities have a coefficient of determination and predictions of the both facilities available in organization and its effect on e-governance. While the probability (Chances) of using any of the facilities for proper e-governance is 0.031 under the confidence intervals there is 97% confidence that the facilities can have greater impact on e-governance.

**Table 1.4: Rating of e-governance applications**

e- egov apps	Values
Twitter	43
Facebook	61
WhatsApp's	39
Skype	19
Email	131

**Expected Count**

Pearson Chi-Square = 1242.914, DF = 44, P-Value = 0.000

Likelihood Ratio Chi-Square = 1430.510, DF = 44, P-Value = 0.000

**Interpretation:** The above chi-square of Pearson shows that the calculated value is 1242.9 while the tabulated value of the chi-square is 34.8 indicating that the chi-square calculated is greater than chi-square tabulated (1242.914>34.8) therefore we do reject the null hypothesis which means:

That there is significant impact of e-governance implementation on public service delivery in Adamawa State's JAMB head office Yola

**Summary:**

The assessment of the impact of e-governance implementation in Adamawa State JAMB Head Office of Nigeria, with a scope from 2015 -2023, reveals a substantial positive impact on administrative efficiency and accessibility to admission and admission related services.

Technological advancement saw Internet usage grows, and the use of technology in general grows, so too does the use of technology and Internet by government. E-governance is the term used to describe the government's use of technology in performing its multiple responsibilities and public service delivery. E-governance in the Public Sector or rather refers to Electronic Governance or E-administration is very relevant in the discourse on modern usage of technology in the world of public administration

The digitization efforts have streamlined JAMB processes, reduced bureaucratic hurdles and enhanced transparency in the admissions and matriculation procedures. Despite notable progress, challenges such as digital literacy gaps and infrastructure limitations persist, necessitating targeted interventions to ensure broader inclusivity.

Overall, the e-governance initiatives have significantly improved admission-related services in the ripen insurgency region, laying the foundation for continued admission accessibility with strategic interventions.

## Findings

Below are findings from the study

- (i) Government fails in building trust with the citizens as number of respondent's response 83
- (ii) Lack of intranet office connectivity that is connection within the departments as only 36 respondent's response to the question and 78 of respondent's response to not adequate of adequacy of intranet office connectivity
- (iii) Lack of extranet office connectivity that is connection with other departments as only 16 respondent's response to the question and 101 of respondent's response to not adequate of adequacy of intranet office connectivity
- (iv) Lack of wireless network service, as only 61 of the respondent's response to the question and 112 of respondent's response to not adequate of adequacy of wireless network connectivity
- (v) Lack of enough computers, as only 109 of the respondent's response to the question and 91 of respondent's response to not adequate of adequacy of computers
- (vi) Lack of effective twitter account as only 61 of the respondent's response to the question and 108 of respondent's response to not adequate of adequacy of twitter account
- (vii) Lack of effective Facebook account as only 39 of the respondent's response to the question and 133 of respondent's response to not adequate of adequacy of Facebook account

- (viii) Lack of effective WhatsApp's account as only 61 of the respondent's response to the question and 108 of respondent's response to not adequate of adequacy of using WhatsApp's
- (ix) Lack of effective Security as only 82 of the respondent's response to the question and 82 of respondent's response to not adequate of adequacy of Security in using e-governance for public service delivery
- (x) Lack of starboard as 117 of respondent's response to not adequacy of starboard in using e-governance for public service delivery
- (xi) Lack of Instagram as 113 of respondent's response to not adequacy of using Instagram in for public service delivery
- (xii) Lack of Electricity as only 82 of the respondent's response to the question and 121 of respondent's response to not adequacy of electricity in using e-governance for public service delivery

## Recommendations

From the findings of the study, the researcher recommends the following:

- i. Government should improve in building trust with the citizens as number of respondent's response only 83 having trust with government activities
- ii. There is need for full implementation of e-governance, so as to meet-up with the global benchmark, including increased funding, improved staff training
- iii. Government need to encourage the use of extranet office connectivity that is connection with other departments as connection will Fast-tract activities outside the departments and will help in fast communication
- iv. There is need for Government to improve on the adequacy of wireless network service
- v. It must provide enough computers, so as to meet up with global ranking of egov implementation
- vi. Government needs to encourage the use of twitter account as only 61 of the respondent's response to the question and 108 of respondent's response to not adequate of adequacy of twitter account
- vii. Government must make sure there is adequacy Facebook account so that people can have free access to information

- viii. Effective WhatsApp's account is necessary for effective e-governance implementation for public service delivery as most public are using WhatsApp's
- ix. There is need for effective Security in using e-governance for public service delivery. Government must make sure there is adequacy security
- x. Government must make sure there is adequacy of Qualified Personnel for proper implementation of e-governance for efficient public service delivery
- xi. Government should encourage the use of Instagram for public service delivery
- xii. Government must make sure that there is stable Electricity supply for effective e-governance implementation and public service delivery
- xiii. There is need for government to protect the integrity of the machine from hacking for efficient public service delivery in JAMB office

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