An Assessment of the Adoption of Electronic Governance in the Nigerian Civil Service of Edo State

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Abstract
The Edo State government adopted e-governance to enjoy the benefit of efficiency, accountability, and faster and more transparent delivery of public services among others. However, this study became important to find out the extent to which all these have been achieved seamlessly or with challenges. Edo State is currently the only state in Nigeria that has completely shifted from analogue to digital technology with over 20 million files imputed into the e-governance structure and the only state in Nigeria operating 100 per cent e-governance. This paper looked at Electronic Governance adoption in the Edo State civil service. Five research objectives were raised to guide the study. The population of the study comprises Edo State civil servants working in the eighteen ministries. The study utilized the mixed method of data collection and adopted a novel theory of public management serving as the analytical framework. The research outcomes showed that the Edo State government has recently made significant investments in e-governance by, among other things, creating the superstructure necessary for e-governance to flourish in the State. Additionally, the use of ICTs and other electronic devices runs through every aspect of the Edo State. The study concluded that the utilization of ICTs and other electronic devices has brought about efficiency, effectiveness, flexibility, innovation, and creativity in providing government services to all its stakeholders in the Edo State Civil Service. Thus, the paper recommended among others the urgent need for the Edo State Government to speed up actions to bridge the digital gap that exists among its workforce.
Keywords: Civil Service, Electronics, Edo State, Governance.

Introduction

Electronic governance refers to the use of information and communication technology (ICT) to enhance information and transaction exchange's efficiency, effectiveness, transparency, and accountability to provide SMART Government. SMART means Simple, Moral, Accountable, Responsive, and Transparent. (Ayo, 2014). According to UNESCO, Electronic governance is the application of ICTs by the public sector to enhance the delivery of information and services, promote citizen involvement in the decision-making process, and increase the performance, accountability, and transparency of government. Electronic governance entails new leadership philosophies, methods for discussing and selecting investments and policies, methods for getting education, methods for listening to the public, and methods for planning and distributing services (United Nations Educational, Scientific and Cultural Organization (UNESCO, 2004).

The adoption of electronic governance has become a global phenomenon aimed at enhancing the internal efficiency and service delivery of governmental organizations. This has led to a revolution in information and communication technology (ICTS) throughout the previous ten years. Not only has the e-revolution altered people's daily lives, but it has also altered the nature of citizen-government relations. These modifications are also giving rise to new types of government, such as e-

governance. The United States of America, Australia, and a few other European Union (EU) nations, along with other nations implementing New Public Management (NPM), were discovered to be among the first nations to implement e-government initiatives in the 1990s. Consequently, by the year 2000, the majority of nations worldwide, including a few emerging nations, had created their national e-government projects by imitating the world's most industrialized economies. (Ibikule & Sarumi, 2012; Dibie & Quadri, 2018).

Furthermore, the ICT revolution, which began in early 2001, made the adoption of e-governance in Nigeria possible. The aim was to boost national competitiveness, efficiency, productivity, and economic growth by putting government services online. Two important players contributed to the noble goal mentioned above. The founding of the National e-government Strategy Limited (NeGST) in 2004 and the National Information Technology Agency (NITDA) in 2003. As a means to promote the adoption of e-government under the NITDA Act of 2007 through a Public Private Partnership (PPP) with the National e-government Strategy Limited (NeGST), a private entity, NITDA was established under the Ministry of Communication Technology (formerly the Ministry of Science and Technology) in 2004. (Ibikule & Sarumi, 2012; Dibie & Quadri, 2018).

Additionally, Edo State emerged as the overall best in Nigeria in 2021

for e-governance deployment, defeating 35 other states and the Federal Capital Territory (FCT) in the process. This was made possible by the state government's strong determination and commitment to advancing the state through e-governance and ICT to provide efficient and effective government services to its stakeholders year-round. The government also came out on top in Nigeria's ICT Infrastructure Development and Information and Communication Technology (ICT) Human Capital Development categories. (Peter, 2021).

Sequel to the above, Information and communication technology (ICT) is used to operate government, a practice known as electronic governance or e-governance. The Edo State Government is pursuing SMART governance as a result. Global organisations like the World Bank and the United Nations created the idea of "Open Governance" for the different national governments, and it has been embraced to promote governance that takes into account the demands of all societal segments. Essentially, the apparent goal of e-governance is to facilitate openness and allow citizens unrestricted access to public data (Dibie & Quadri, 2018).

Furthermore, the majority of public and civil service duties in Edo State were completed manually before the adoption of e-governance, which made them vulnerable to numerous human errors as well as inefficiencies and ineffectiveness. To address these

issues and revive the civil service in Edo State. Edo State's government has embraced e-governance by modernizing its public and civil services. Since then, a significant amount of money has been invested by the Edo State government in the project's physical and digital infrastructure. The results, which are available to the public, indicate that Edo State's public and civil service is the most digitally advanced in the whole of Nigeria. (The Nigerian Observer, 2023).

Since the Government of Edo State brought its public and civil service into mainstream e-governance. There are still some gaps or teething challenges that need to be closed on the part of the Edo State civil servants who are not too keen on e-governance adoption. For example, most of the civil servants in ministries in Edo State cannot work online nor assess the digitally interlinked ministries, even when civil servants have the expertise to effectively work online. Their operations are often greeted with network challenges. Many public and civil servants are still utilizing the traditional system of service delivery which causes delays and wastage of resources and time, and ultimately inefficiency of the civil servants. Most worrisome is that the majority of civil servants are not digitally inclined, even some of the top bureaucrats like directors and permanent secretaries cannot operate simple laptops. The security of the e-governance infrastructure is another obstacle to the

efficient operation of e-governance. Based on the challenges enunciated above, this study points to a gap that this study intends to close.

In consideration of the aforementioned, the following research questions are addressed in this work: Are there cordial relations between civil servants and citizens due to the deployment of the computer laptop, internet, and other electronic devices by the Edo State Government? How much of government work is carried out online due to the use of computer laptops, the internet, and other electronic device by Edo State civil servants? Has the deployment of computer laptops, the internet, and other electronic devices enhanced the efficiency and effectiveness of Edo State civil servants in doing their routine official tasks? Has the use of computer laptops, the internet, and other electronic devices enabled civil servants to work from home? What are the challenges against the smooth use of computer laptops, the internet, and other electronic devices by Edo State civil servants in doing government work?

Objectives of the study

The following research objectives serve as the study's compass:

i.   ascertain the cordial relations between civil servants and citizens due to the deployment of computer laptops, internet, and other electronic devices by the Edo State Government

ii. determine how much government work is carried out online due to the use of computer laptops, the internet, and other electronic devices by Edo State civil servants.

iii. find out to what extent the deployment of computer laptops, the internet, and other electronic devices has enhanced the efficiency and effectiveness of Edo State civil servants in doing their routine official tasks.

iv. ascertain the degree to which using laptop computers, the internet, and other electronic devices enables Edo State civil servants to work from home.

v.   determine the challenges against the smooth use of computer laptops, the internet, and other electronic devices by Edo State civil servants in doing government work.

To this end, this study did an Assessment of the Adoption of Electronic Governance in the Nigerian Civil Service of Edo State by empirically examining how e-governance has fared since its adoption in Edo State. The study is structured into an introduction and research questions, literature review and theoretical framework, followed by the methodology adopted, discussion of findings, conclusion and recommendations.

Literature Review and Theoretical Framework Conceptual Clarification

The term governance can be described as "the exercise of political, economic, and administrative authority in the management of a country's affairs, including citizen articulation of their interests and exercise of their legal rights and obligations," this is where the idea of electronic governance first emerged (Hassan, 2013). Conversely, electronic governance, to put it simply, is the practice of governing using electronic methods. (Ojo, 2014) in the same vein, Abasilim and Edet (2015) see "e-governance, refers to the use of ICTs in government business operations, is the process of replacing the traditional method of carrying out government activities, which is typically hierarchical, linear, and one-way. Instead, the public can use the Internet to seek information whenever it is convenient for them, without having to visit government offices during business hours. By setting e-governance apart from e-government, it may also be better understood. Most frequently, different academics interchangeably refer to e-governance and e-government. (Kabir & Baniamin, 2011). On the other hand, Grant and Chau (2006) consider e-government as a broad category of initiatives that make use of ICT to provide smooth, integrated, high-quality public services; facilitate efficient constituent relationship management; and assist in achieving the objectives of business, civil society, and citizens at the local, state, federal, and worldwide levels about their economic and social development.

Furthermore, e-governance pertains to the utilization of electronic tools in routine interactions between the government and its constituents, enterprises, and internal operations to simplify and improve democratic governance and its commercial facets. (Backus, 2003). All that electronic government needs to do is transform; it must also create new channels of communication between the governed and the government, offer services with efficiency and effectiveness, and improve citizens' quality of life through civil society and economic growth (Worrall, 2011). These differences demonstrate that e-government is a subset of e-governance, but e-governance is a larger concept. (UNESCO, 2007). Significantly, the initiative is being deployed more widely globally in terms of both research and execution, regardless of whether academics have used the terms interchangeably or not. (Al-Hujran, 2012).

Consequently, e-government or e-governance can manifest in E-recruitment (online application/Computer test); Staff Screening/biometrics; e-payment of salaries; business processes/transaction (e-gov. platform) e.g. workflow, Communication, filing, licensing, and payment of fees and fines; Traffic management Electronic voting; security management among others.

The e-Civil Service and technology vendors are the two main forces behind e-government. Technology providers use their products to advance e-government. Because it is necessary to serve both the population and the ruling government, the civil service has a larger stake in e-government than the other two. (Nnamdi, 2014).

A synopsis of e-governance adoption in Edo State over the period
The use of e-government in the management of governance activities took centre stage in Edo State in 2008 when Adams Oshiomhole assumed office as governor, he found out that Edo State's public and civil service was compounded by a myriad of problems such as bloated and unmotivated workforce, payroll fraud on account of ghost workers, financial mismanagement among others. He decided that the Integration of Information and Communication Technologies (ICTs) in his administration would be the most expedient strategy to confront the challenges quickly. He therefore included a Special Adviser on IT, Miss Olayemi Keri, in his first set of appointments. The creation of the Edo State Information and Communication Technologies Agency (ICTA) was the final result of this. The first of its kind in Nigeria. Its singular mandate was to leverage ICT as a pathway for better governance in Edo State. Ever since the ICT foundation was laid in Edo State by the past government. The government of Godwin Obaseki has embarked on several ICT projects to make the state fully digital and the first e-governance compliance state in Nigeria (Akpan-Obong, 2016).

In addition to the aforementioned, the Edo State Government, led by Governor Godwin Obaseki, launched the e-governance policy on November 1st, 2021 to ensure government operations are conducted digitally. Measures were put in place, including the distribution of laptops and training for workers on various e-governance modules. On 1st September 2023. Edo State government became paperless with the launch of EdoGov's Enterprise Resourcing Platform (ERP) whereby the 94 MDAS in the state are now fully interconnected and on boarded into the platform. The platform provides key functionalities and is designed to be user-friendly. Some of the features of the newly inaugurated functions include memos that allow users to request and receive approval for activities; and mailing systems for real-time communication mechanisms to facilitate cross-departmental dialogue.

It also allows for the monitoring and tracking of the performance of teams and individuals and informs reward and discipline; to access and sign up for distance and in-person training programmes; allows users that is, civil servants to raise and address grievances, book leave, and other vital functions among others (Ajose-Adeogun, 2024).

Empirical Review

Ogu and Chukwurah (2023) explored Nigerian e-governance and public service delivery from 2018 to 2022, using the Anambra State Civil Service as a point of reference. The research was guided by two research questions, and two null hypotheses were examined at the significance level of 0.05. For the study, an adaptation of the survey research design was used. Using Krejice and Morgan's sample size determination table, a sample size of 361 employees was selected from the 6,955 employees in the Anambra State Civil Service that made up the study's population. A questionnaire was the tool utilized to gather data. The frequency, percentages, mean, standard deviation, and t-test were used to analyze the data that were gathered among other things. The study's conclusions showed how heavily the Anambra State Civil Service uses e-governance in the provision of public services. It was also found that the application of e-governance has positively affected public service delivery in Anambra State Civil Service. The Anambra State Civil Service should regularly train and retrain its staff on information and web development technologies through yearly seminars, workshops, and conferences, among other recommendations, to keep them abreast of the latest developments in the field of e-governance application for service delivery. These recommendations were made in light of the findings. The authors are extolled for their brilliant research efforts. However, this study will be centred on how the newly adopted e-governance initiative has fared in Edo State Civil Service.

Adeolu-Akande, Oyedokun and Oyedokun (2023) examined potential obstacles to the effective adoption of e-governance in the Nigerian public sector as well as Nigeria's standing in the world ranking. The study fell under the purview of modernization theory and technological determinism. Following a conceptual and empirical research approach which focuses on examining the secondary data, the study revealed that Nigeria is ranked 5 among countries in West Africa and 141 globally on the UN EDGI 2020. Nigeria faces several obstacles to e-governance, such as insufficient power supply, poor infrastructure, the digital divide, public office corruption, budgeting and financial expenses, and a shortage of human capital. Through the EGDI, the study concluded that Nigeria has not yet reached its full potential in the pursuit of workable, transparent, efficient, and successful e-public services. Next, it was suggested that the infrastructure required for the effective integration of e-governance into Nigeria's public sector be provided by the government of Nigeria. Nigerian public employees also need to demonstrate a high degree of e-readiness in their daily work. The authors are commended for their robust findings that the implementation of e-governance in Nigerian public services is greeted

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with humongous superstructure and ICtT infrastructural challenges. To this end, this study will narrow its focus on Edo State civil service to determine whether the recently adopted e-governance in Edo State Civil Service is faced with any challenges or otherwise.

Vanger and Nicodemus (2021) assess the impact of e-administration on Taraba State Civil Service administrative effectiveness. The survey research design was used in the study. The 4333 employees of the 10 Ministries in Taraba State that were at the forefront of e-administration implementation made up the study population. The study employed a multistage sampling strategy to choose participants. Logit regression analysis and descriptive statistics were used to analyze the data that was gathered According to the study, e-administration improves internal administrative process streamlining by making processes simpler, getting rid of needless bottlenecks, clearly laying out work schedules, and fostering better communication, all of which lead to fewer mistakes, faster work, increased accountability and transparency, higher-quality work, adherence to due process, and higher levels of commitment and morale among employees. Findings show that considering the significant short-term expenses involved, e-administration is inversely correlated with guaranteed cost efficiency. According to the study's findings, the administration of Taraba State has to create a change

management model that can adapt to the quick changes anticipated in the ICT sector and encourage higher employee motivation as technology advances. Further research is necessary to determine how Taraba State's automated administrative procedures affect citizens' interactions with the government. The goal of this study is to determine whether the benefits of e-governance implementation in Taraba State can be transferred to the civil service of Edo State.

Aneker, Bakht, and Desta (2019) their study used the Unified Theory of Acceptance and Use of Technology model (UTUAT) to examine how Nigerian citizens adopted e-government services. 989 Nigerian persons from the public and private sectors participated in the survey, providing data. The empirical results demonstrated that people's behavioural intentions are determined by three factors: social influence, effort expectancy, and performance expectancy. The utilization of e-government services by citizens is also influenced by behavioural intentions, effort expectancy, and enabling factors. Their study came to the appropriate conclusion and suggested that Nigerian e-government developers make sure that e-government saves users time, money, and effort, and that it also makes it easier for citizens to communicate with the government. They should also make sure that high-quality government services are centred on the needs of users and give

citizens an equal platform on which to conduct business with the government among others. The authors' works are valued for their advocacy of the necessity for e-government developers to prioritize the needs of e-government users in the development of all e-government applications.

Theoretical Framework

The theoretical base of this research is the New Public Management Theory (NPM), which is the new model of public sector management that first appeared in the early 1990s. David Osborne and Ted Gaebler (1990) popularized NPM in their book: *Reinventing Government*, which was their response to the challenges posed by globalization, international competitiveness, and technological advancements that were sweeping the globe at the time. The NPM is aimed at promoting efficiency rather than responsible action as well as improving public sector performance as it is in the private sector (Sapru, 2013; Mustapha, Omorede & Okunmahie, 2019). The public choice theory, which examines government from the perspectives of market productivity and managerialism to achieve, among other things, efficiency, effectiveness, creativity, and innovation in governance, is the foundation of the NPM theory. According to Armstrong (1998), the New Public Management theory (NPM) is predicated on the following: signifies a significant change from alternative service delivery (ASD) or new public management to traditional public administration which has strong a bias for the promotion of efficiency, effectiveness, innovation, and creativity among others in governance; a shift from classic bureaucracy to more flexible organizational doctrines, focus on the goals of the firm and its employees that must be met through performance indicator; cost-cutting; capping budgets and seeking greater transparency and accountability in resource allocation and management, entrenching very slim bureaucratic structures against bogus ones among others.

The relevance of NPM to this study is hinged on the fact that the introduction of technology and other electronic devices in delivering government services is the new order of the world that is anchored on the promotion of efficiency, effectiveness, innovation, and creativity among others in government MDAs. NPM has also made us understand that the disaggregation of traditional classic bureaucracy to a modern bureaucracy equipped with cutting edge technology such as personal computers, laptops, internet connectivity that is, hot spots, and wifi networks among others have made the discharge of government task more flexible for civil servants.

Methodology

For this study, the survey research approach was applied. Data creation from primary and secondary sources was required for this. The public servants employed by the Edo State

Government in its eighteen ministries made up the study's population. Moreover, civil personnel in each of the eighteen (18) ministries of Edo State were given closed-ended questionnaires using simple random techniques whereby every 18th respondent on the staff list of each ministry obtained from the Edo State Information Communication and Technology Office was randomly administered with paper-based structured questionnaires during office hours spanning between 8 am to 5 pm in the Civil Service Secretariat Complex of Edo State located along Sapele Road, Benin City the Edo State Capital. This put the total number of sampled respondents to 180 (that is 10 respondents per ministry). In the end, 160 of these questionnaires were meticulously filled and returned. Simple percentages were used in analysing the data that was retrieved from the field. Also, a few senior civil servants from the position of directors and above were interviewed to obtain their perspectives as regards the subject matter of discourse and their responses were corroborated with data obtained from secondary sources such as newspapers, books, and online materials among others. The use of both primary and secondary data became necessary to enable apt, reliable, and robust research outcomes and conclusions to be achieved.

Table 1: Questionnaire Distribution Table

S/N	List of Ministries in Edo State	Distribution of staff across Ministries in Edo State	No of Respondents
1	Communication & Orientation	196	9
2	Education	180	10
3	Housing, Urban, Regional Planning & Development	182	10
4	Agriculture and Food Security	190	10
5	Justice	191	10
6	Health	182	9
7	Local Government & Chieftaincy Affairs	191	10
8	Mines & Energy	182	7
9	Arts, Culture & Tourism	182	8
10	Budget & Economic Planning	185	10
11	Social Development & Gender Issues	183	9
12	Business, Trade & Cooperative	189	10
13	Roads & Bridges	180	10
14	Public Security & Safety	182	10
15	Environmental & Sustainability	183	10
16	Transport	182	10
17	Youths and Sports	181	9

18	Water resources	180	8
	Total	3321	160

Source: EDSICTA & Fieldwork, 2024

Study Question 1: Are there cordial relations between civil servants and citizens due to the deployment of computer laptops, the internet, and other electronic devices by the Edo State Government? Friendly

Table 2

Response	No of Respondents	Percentage %
Yes	100	**63**
No	60	**37**
Total	160	**100**

Source: Fieldwork 2024

Study Question 2: How much Government work is carried out online due to the use of computer laptops, internet, and other electronic devices by Edo State civil servants?

Table 3

Response	No of Respondents	Percentage %
Yes	97	61
No	63	29
Total	160	100

Source: Fieldwork 2024

Study Question 3: To what extent the deployment of computer laptops, the internet, and other electronic devices has enhanced the efficiency and effectiveness of Edo State civil servants in doing their routine official tasks?

Table 4

Response	No of Respondents	Percentage %
Yes	120	75
No	40	25
Total	160	100

Source: Fieldwork 2024

Study Question 4: To what degree to which using laptop computers, the internet, and other electronic devices enables Edo State civil servants to work from home?

Table 5

Response	No of Respondents	Percentage %
Yes	115	71
No	45	29
Total	160	100

Source: Fieldwork 2024

Study Question 5: What are the challenges against the smooth use of computer laptops, the internet, and other electronic devices by Edo State civil servants in doing government work?

Table 6

Response	No of Respondents	Percentage %
Yes	96	60
No	64	40
Total	160	100

Source: Fieldwork 2024

Findings and Discussions

From Table 2 above, it can be seen that 100 representing 63% of respondents answered the question in the affirmative, that there are cordial relations between government officials and citizens due to the deployment of computer laptops, internet, and other electronic devices by Edo State Government, while 60 representing 37% disagreed that there are no cordial relationships between citizens and public servants as a result of the deployment of the computer laptop, internets, and other electronic devices by Edo State Government. The agreed percentage can be seen to be higher than the disagreed percentage. This claim agreed strongly with an interviewee who opined:

> "The use of computers and internet connectivity in Edo State civil service has brought about good rapport between government employees and stakeholders. For example, a few years ago, under the inspirational direction of Dr. Joan Oviawe, the Commissioner of Education, my ministry, the supervisory ministry for education, built a portal where Basic Education Certificate Examination (BECE) and Primary School Leaving Certificate Examination (PLSC) enrolment are done. This singular innovation has not only made us do less paperwork but has enhanced convenient and cordial relations between the staff of my ministry and

heads of private and public schools in Edo State who often in the past flock to our office in hundreds for school enrollment. But this time around, with the abundance of internet connectivity and use of smartphones Principals and HMs of schools can simply enroll their students from the comfort of their office" (Director, Exams and Record Department, Ministry of Education, Edo State, 18th July, 2023).

Similarly, another respondent said:
"We have also deployed the use of an online Google sheet to aid the collation and recording of BECE and PLSC exams. The online Google sheet allows collaboration and multiple users to work independently in real-time, which makes it possible and convenient for examiners to record their subject scores directly into the online sheet that contains the names of the centres and subjects they examined, from the comfort of their homes or schools upon the conclusion of marking exercise, and this will, in turn, be assessed and certified by the various subject officers at the back end" (Deputy Director, Exams and Record Department, Ministry of Education, Edo State, 18th July 2023).

On the other hand, a respondent asserted thus:
"In our contract bidding process, the Edo State Government from time to time publishes contracts to be awarded by the Edo State Government on its website. To me, this does not only increase government presence on the internet but also enable citizens to participate in governance, create fair play and harmonious relationship between citizens and government" (Director, Ministry of Roads and Bridges, Edo State, 19th July 2023).

The aforementioned disclosures align with the results of the collaboration between the Edo State Government and Geniserve Limited, a data centre and ICT infrastructure company. This partnership enabled the majority of Edo State's schools, health facilities, and government offices to be connected to the internet through fibre optic cables installed in the state's eighteen local government areas. (www.thisdaylive.com). Once more,

the digital innovation mentioned above signifies a significant departure from conventional public management that is slow, inefficient, and with bogus bureaucratic structures that are less creative and innovative to the new public management and alternative public service that allows for top-notch approach, creativity, innovation, competition, managerialism among others (Osborne & Gaebler, 1992).

More so, drawing from Table 3 above, it can be seen clearly that 97 representing 61% of respondents responded in a positive light to the research questions that much of government work is carried out online due to the use of computer laptops, internet, and other electronic devices. On the other hand, 63 representing 29% disagreed that much of government work is not carried out online due to the use of computer laptops, the internet, and other electronic devices. It is therefore clear that the agreed percentage is greater than the disagreed percentage. This finding was corroborated by a respondent as follows:

> "In Edo State public and civil service most of Government work is now carried out online. This was intensified during the COVID-19 lockdown when many government officials were asked to work from home. For example, the Edo Best at Home initiative is a virtual online class that enables public school

teachers to teach their pupils online from the comfort of their homes through smartphones and teachers' teaching tablets. As will speak, the governor now approves memos online, and before the end of the year Edo e-governance (e-gov) website will be launched. This will further deepen e-governance operation whereby all MDAs in the State can interact and work together to achieve the MEGA agenda of Edo State Government which is to Make Edo Great Again" (Director, Office of the Head of Service & Director, Ministry of Public Utility and Safety, Edo State, 19th July 2023).

Consequently, the findings above concur with the opinion expressed by Governor Godwin Obaseki of Edo State at the launch of Benin Digital Museum who opined thus:

> "A while back, we proposed creating a record of every piece of Benin art that is dispersed over the globe. Five years later, we now have a digitized archive of 5,246 pieces of Benin and Edo artwork in 131 sites worldwide, which fills me with joy and fulfilment. This is a

noteworthy accomplishment. The world's largest museum dedicated to Benin collections is currently Digital Benin. It is an online museum that provides you with all the information you require on Bini's past, present, and future. Visit the website to view every piece of Benin artwork that is in existence worldwide. The artworks, their significance, and the location are all visible" (Egbejule, 2022).

Again, a respondent expresses his opinion as regards the subject matter and stated thus:

With the use of electronic devices installed with a customized application, our Revenue Collectors (RCs) collect road tax from commercial transport operators by inputting the vehicle number plate and the amount involved into the revenue device which generates a payment receipt for the taxpayer. This device works online and offline and at the close of work, entries inputted into the device are synchronized to a central database that allows different revenue agencies concerned to check the amount of

revenue returned by every RCs at the back end. The whole essence is to promote accountability and transparency in revenue administration (Director Ministry of Budget and Economic Planning, Edo State, 21st July 2023).

The above aligns with the main idea of the theory of new public management, which enunciates the use of cutting-edge technology and promotes transparency, and accountability in resource allocation and management (Amstrong, 1998).

However, looking at Table 4, it can also be observed that 120 representing 75% that the deployment of computer laptops, Internet, and other electronic devices has enhanced the efficiency and effectiveness of civil servants in doing their routine official tasks, while 40 representing 25% disagreed that the deployment of computer laptops, internets, and other electronic devices has not enhanced the efficiency and effectiveness of civil servant in doing their routine official task. It is therefore clear that the agreed percentages are more in number compared to the disagreed ones. Their submission agreed with the comments of a respondent who stated thus:

"Honestly, using ICT (information and communication technology) and other electronic devices in

running governance is the best that has happened to mankind. Years back when we were recruited into the public service newly, most of the tasks that are now computerised were done manually with a low level of efficiency and effectiveness. In Edo State public, every worker employed in the service of the state is subjected to biometric enrolment where the basic information relating to that person is computerized, and a biometric slip is issued to such individual containing basic information like a unique identification number called Oracle number, date of birth, name of MDAs among others. This innovation ensures no ghost workers are found on the payroll and it also checks incessant alteration of age by civil servants. More so, the use of the Edo State Information and Communication Technology Agency (EDOICTA) payment choice platform in line with the Nigeria Inter-Bank Settlement Scheme (NIBSS) has made it possible for bulk payment of Edo State workers' salaries with just a click of a bottom, unlike in the past where payments of state workers' were done manually with a lot of associate risk, inefficiency, ineffectiveness among others. Overall, using the internet, ICT, and other electronics has brought a lot of efficiency, effectiveness, innovation, and creativity in Edo State public and civil service" (Director, Edo State Information and Communication Technology Agency 21st, July 2023).

The aforementioned contribution aligns with the fundamental principles of the New Public Management philosophy, which promotes the utilization of contemporary technologies like computers, the internet, and other electronic devices as a sure way of achieving efficiency, effectiveness, innovation, and creativity among others in public and private service (Osborne & Gaebler, 1992). Furthermore, it will be recalled, that the Edo State Government launched free 24-hour Wi-Fi internet service to all its workers in the various MDAs. This came in the wake of the three-day weekly work at the office and two days from home, leveraging the e-governance platform to ensure productivity and optimal service delivery to Edo people (The Nigerian Observer, 2023).

Additionally, from Table 5, it can be seen that 115 representing 71% agreed with the study question stating that using laptops, computers, the internet, and other electronic devices has enabled civil servants to work from home, while 45 representing 29% disagreed that the use of computer laptops, internets, and other electronic devices has not to enable civil servants to work from home. It can be seen clearly that the agreed respondents are greater than the disagreed ones. And this aligned with the comment of a respondent who opined as follows:

"The reduction of working days from 5 to 3 days by Edo State Government as a way of cushioning the impact of fuel subsidy removal shortly after the government of Tinubu was inaugurated on May 29, 2023, made public and civil servants perform most of their official tasks remotely from home with the use of electronic devices. For example, teachers in basic public schools taught their students and pupils from home to compensate for teaching period lost on account of the new government policy" (Director, Ministry of Orientation and Communication & Director, Ministry Environment and Sustainability, Edo State, 21st, July. 2023).

Consequently, the above claim agrees with Governor Godwin Obaseki's opening remark when the Edo Government signed a memorandum of understanding with Zinox as the state's IT partner for its transformation initiative who asserted that:

"The foundation upon which the reforms we are advancing are based in technology. We intend to guarantee that each member of the public and civil service in Edo State has a minimum of one desktop computer or laptop, which will increase their productivity and facilitate their ability to work remotely." (Alekhuogie, 2021).

In a similar vein, the above views are in tandem with the New Public Management theory as advocated by Osborne and Gaebler (1992) that one of the social benefits of the use of electronic governance is to encourage improved government service delivery most efficiently and effectively and to also make such delivery flexible for its workforce.

Also, looking at Table 6, it can be seen that 96 representing 60% agreed that there are no challenges against the smooth use of computer

laptops, internet, and other electronic devices by Edo State civil servants in doing government work, while 64 representing 40 disagreed that there are challenges against the smooth use of computer laptops, internets, and other electronic devices by Edo State civil servants in doing government work. It can be seen that the agreed respondents are more in number than the disagreed respondents. This concurs with a respondent comment who hinted as follows:

> "The challenge that I can see against the smooth implementation of e-governance has been settled by our proactive governor. All MDAs are now connected to the Ossiomo Power plant which guarantees a 24-hour power supply to all government offices. So, the fear of power outages is a thing of the past in Edo State public and civil service. Also, the challenge of the inability of some Edo State employees to effectively use laptop or PC in performing their official task is gradually being tackled in phases with the training of public and civil servants" (Director, Ministry of Business, Trade and Cooperative & Director, Ministry Mines and

Energy, Edo State, 21st July 2023).

The position of the respondent above was further validated by Governor Godwin Obaseki who asserted as follows:

> "Edo is already running on an e-platform. I now attend files on the e-platform. I will be the last governor to work on manual files in the state. We are leveraging technology because it is the new order of the world and the emphasis now is on using technology. Everyone in the service of Edo who is not able to use computers needs to be trained. If you can't use the computer and you cannot use e-gov, you can't perform optimally. It's a condition for you to grow and develop in the service. For you to earn your promotion, you must be able to work on the Edo State Government portal" (premiumtimesng.com. November 14, 2021, & the Nigerian Observer June 3, 2023)**.**

Conclusion
This paper evaluates e-governance implementation in Edo State civil service. The paper finds out that the utilization of ICTs, internet connectivity, and other electronic

devices permeate all spectrum of Edo State civil service and these have brought about efficiency, effectiveness, flexibility, innovation, and creativity in the provision of public services to all its stakeholders. The foregoing demonstrates how well Edo has absorbed the Alternative Service Delivery (ASD) and New Public Management (NPM) approach that has a strong bias for efficiency, effectiveness, and flexibility among others in running governance (Dibie, 2014).

However, the study further unveiled that the Edo State Government has made a massive investment in recent times towards the digitalization of all public and civil services across the state. For example, the Edo State Government has completed the laying of fibre optics across the 18 local government areas of the State to enhance citizen's use of internet connectivity, train a good number of the public and civil servants who were hitherto unable to use personal computers and laptops, migrate several aspects of government functions from traditional system of administration to new system of administration that involve the use of cutting edge technology in doing government business among others, which are the new order of the world now. A move that helped Edo State Public Service defeat 35 States and the Federal Capital Territory to win the title of most digitalized public service in Nigeria and best overall e-governance implementation in Nigeria

in 2021. The government also came out on top in Nigeria's ICT Infrastructure Development and Information and Communication Technology (ICT) Human Capital Development categories. ((The Nigerian Observer, 2023)). These laudable testimonies speak volumes that Edo State is miles ahead of other States in Nigeria in e-governance adoption.

Recommendations

Following this study's findings, the following suggestions were made:

i. The Edo State Government should speed up actions in bridging the digital gap that exists among its workforce so that, all categories of public and civil servants whether senior or junior can be trained on how to efficiently and effectively use computers to enable them key into the recently launched Edo State e-gov platform.

ii. The Edo State Government should sustain its massive investment in the digital space so that the benefit derived from e-governance so far cannot be short-lived.

iii. The Edo State Government should continue to create the enabling environment and the needed superstructure for e-governance to thrive in Edo State.

iv. The eighteen local governments should domesticate the Edo State e-governance policy, this is

consequent upon the fact that the Edo State Government has provided the needed e-governance superstructure and laid fibre optics across the State to enhance smooth internet connectivity in all the local government areas.

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