
EFFECT OF E-GOVERNANCE ON ICT SKILLS DEVELOPMENT IN SOUTH EAST NIGERIA (2015–2020)

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Abstract

The study was on effect of e-governance on ICT skills development in South East, Nigeria (2015–2020). The objective of study was to ascertain how e-governance affected ICT skills development in the Public service of South East Nigeria. The population of the study was 2004 with a sample size of 1908 determined by the use of Taro Yamane statistical formula. The study employed the descriptive survey research method. Primary and secondary sources were used to generate data which were analyzed by simple percentages and mean scores, while z-test was used for test of hypothesis. Presentation of data was by means of frequencies. The finding was that e-governance had significantly affected ICT skills development in South East, Nigeria. It was recommended that the governments of South East, Nigeria should engage permanent ICT skills trainers to ensure cheaper, consistent, regular training and retraining of public officials in ICT skills.

Keywords: *e-governance, ICT skills, modernization, public sector, Quality public service delivery.*

Introduction

The original concept of governance evolved from a word in Greek language that conveyed the meaning “to steer”. The term governance scales high above ordinarily the existence of government. In human relationship all over the world, people practice governance in their interactions and businesses.

In this regard, governance can be taken metaphorically to be the steering of a ship, which is necessary to move the ship from one location to another by means of skilled seamanship responsible for this movement. Therefore, one can understand that it is a process by which people are steered towards development (Mistracca, 2017). What is more, governance is the ability of government to direct, steer or move people towards determined objectives for development (Kjar, 2018).

In order to avoid authoritarianism and self-centred governance, modern governance advocates democracy which entails people’s participation in the process of decision making and allocation and management of resources. The World Bank (1992) asserts that “governance implies the management of social, political and economic affairs for sustainable development”. Three fundamental elements of governance were identified by World Bank, namely “the nature of the political regime, the strength and ability of the government to effectively formulate, implement and discharge responsibilities, and the way and manner the regime in power manages the social and economic resources for development. Governance, therefore, requires the creation of an institutional environment for effective interaction of the political actors and the society at large in participatory process of making decision. This makes for responsible, responsive, transparent and judicious application/deployment of resources available for development, in an all inclusive manner within the ambits of the law (UNESCO, 2018).

In accordance with the discussions above, the transformation brought about by the digital revolution throughout the world draws a boundary between the ancient and the modern outlook of governance that has introduced the use of information communication technologies (ICTs) in public affairs. E-governance as a concept, emerged in the public sector at the beginning of the 21st century, bringing with it, a paradigm shift from traditionalism to modernism” in government. E-governance is, therefore, a radical approach to doing businesses in government all over the world. It paved a new path of using e-services in public affairs. Thus, increasing the impact of government services in society (Kjar, 2018).

Over the years, performance of the Nigerian public sector has been unsatisfactory and unacceptable as it was incapable of meeting the demands and expectations of the citizenry. The public sector in Nigeria rendered poor quality services considered inefficient and ineffective (Eze, 2019). Nkwede (2018), asserts that public institutions represent “indispensable and dynamic structures for the implementation/translation of government policies and programmes into public service delivery that will promote growth and sustainability of the nation’s development”. Unfortunately, most of government institutions including Ministries, Departments and Agencies (MDAs) have stuck to their traditional nature and character of incompetence, self-centredness, insensitivity towards public complaints and bureaucratic delays (Okon, 2008 in Oyodele, 2018). It has been perceived that the frameworks and systems of administration in Nigeria were inadequate to handle the demands of an increasing population facing the challenges of complex global economies (Adeyomo, 2018).

It has been acknowledged that technological advancements have played significant roles in the globalization of commerce, communication, economics, politics, customs, traditions and life styles. More especially, modern communication technologies or information and communication technologies (ICTs) is not only a means of improving effectiveness and efficiency in service delivery in the business world but an avenue for improving the standard of living of the global citizens.

E-governance is the application of information and communication technologies (ICTs) by government to move away from the traditional bureaucratic, slow, anti-democratic processes in order to achieve optimal performance with speed, accuracy, transparency, accountability and efficiency, satisfying citizens desires in a democratic

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government. This view was supported by Uba and Ukomadu (2018) who stated that the coming into being of e-governance in the 21st century has introduced a paradigm shift in modern public administration and governance. Adeyemo (2018) observes that most Ministries, Departments and Agencies (MDAs) embraced the use of computer to facilitate their business. Between 2008 and 2010, many MDAs in the South East of Nigeria joined the computer world in their business.

Statement of the Problem

The experience of a high level of efficiency and accountability in the private sector by the adoption of ICTs raised the hopes and expectations of the public sector in Nigeria that the adoption and implementation of e-government initiative through ICTs was the right step for improved service delivery (Christina et al, 2019). In this modern age, no organization or country of the world can afford to be overtaken and left behind in a competitive environment of multitude of business interactions conducted with maximum efficiency through the use of internet or the world wide web. Any organization wishing to keep afloat and continue to remain in business is bound to join the banwagon and apply the use of the latest ICTs (Obi et al, 2020)

Nigeria has always posed a paradox to the international community particularly when its level of development is compared with its economic potentials (Adeyemo, 2018). The unfortunate thing about the e-government initiative in Nigeria is that the project focused on the interests of the government, the service providers, the funding groups and donors, without regard to the interests of the citizens who are the principal beneficiaries (Ojo, 2019). The satisfaction of citizens' expectations of a more flexible, result-oriented public service propelled by electronic governance, properly manned by personnel adequately trained in ICTs skills, was not taken into consideration.

Objective of the Study

The objective of the study was to ascertain how e-governance affects ICT skills development in the public service of South East, Nigeria.

Research Question

How does e-governance affect ICT skills development in the public service of South East Nigeria?

Research Hypothesis

E-governance has not improved ICT skills development South East, Nigeria.

Review of Related Literature

Conceptual Review

E-governance in Nigeria: An Overview

With the introduction of democratic governance in Nigeria at the wake of the 21st century, e-governance was brought into existence in Nigeria, by the establishment of websites for easy communication between government and the citizens (Adiele in Eze, 2019). Like many developing countries, Nigeria joined the Worldwide. Movement of Information Communication Technologies (ICTs) at the level of personal computers and digital electronics (Akunjili, 2008). The ICT crusade in Nigeria bounced into implementation in the past three decades when government activities embraced electronic interaction among citizens, business enterprises and government (Ojo, 2018).

The evolution of e-governance in Nigeria started in 2001 when the Nigerian National Policy for Information Technology (NNPIT) was formulated with the aim of ensuring transparency, accountability and efficiency in the process of government. E-governance was meant to improve performance in all ramifications of public administration and to create channels that will facilitate accessibility to information and interactions between government and the society. E-governance is equally intended to realign government with citizens, businesses and society at large so as to integrate all IT opportunities into the system in a conducive atmosphere that would

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encourage “better governance, improved trade, commerce and administrative effectiveness” (NNPIT, 2019). Abasilim et al in Eze (2019) observe that e-governance was introduced in Nigeria sequel to the promulgation of the Nigerian National Policy for Information Technology in 2001. The principal goal then, among others was:

“To improve the accessibility of public administration for all citizens bringing transparency in government to the doorsteps of people by creating virtual forum and facilities to strengthen accessibility to government information and facilitating interaction between the government and the governed leading to transparency accountability, and the strengthening of democracy. And also by utilizing IT opportunities to restructure government, citizens and business interface for better governance and administrative effectiveness” (NNPIT, 2019).

To show that government recognized the place of the public sector as partners in the IT venture, a joint conglomeration “called National e-Government Strategies Limited was established. The structure of the venture ownership was made up of Government (5%), Consortium of Banks (15%) and Strategic Planners (80%). The joint venture had the responsibility for creating a practical strategy and single architecture to guide the evolution of digital government solution with consisted standards, operating platforms and application across agencies and government systems”.

The first project carried out by Ne-GIST in Nigeria is the e-registration of teachers in May 2006 (Adeyemo, 2017). Before this event, various public organizations were responsible for ICT development and coordination at various levels and respects, in order to pursue the e-government project in Nigeria. Then in 2011, the Federal Ministry of Communications Technology was established and was responsible for coordinating ICT development in pursuit of Nigeria’s e-government agenda. Omeire and Omeire in Eze (2019) inform that information and communication technology, among other things, is a veritable tool for transformation and facilitation of government processes for greater and improved speed and efficiency. Organization for Economic Cooperation and Development (OECD) cited in Eze, (2019) lays emphasis on the importance of ICT to both the public and private sectors of the economy, for useful optimal performance. Ezeodili and Omebe (2018) assert that the project came on board as a pilot scheme involving some agencies of government at various tiers of government beginning at the federal level and spreading to the lower levels in a bandwagon process. E-governance now has a household acceptance worldwide, Nigeria being no exception. In order to reposition and transform the public sector for result oriented performance, the National Information and Technology Development Agency (NITDA) was established by the Federal Government and placed under the supervision and coordination of the Federal Ministry of Science and Technology in April, 2001. The National Information Technology Development Act, 2007 mandated the NITDA “to create a framework for the planning, research, development, standardization, application, coordination; monitoring, evaluation; and regulation of Information Technology practices, activities and systems in Nigeria” (Abasilim et al, 2017). This injunction has attracted several scholarly expressions on e-governance in Nigeria culminating in the statement by Ambai (2018) to the effect that e-governance facilitates access to information, contributes to freedom of expressions, ensures efficiency, productivity and strengthens social interactions”.

Most recently, it has been thumbs up for e-governance nationally in recognition of the great strides achieved, through ICT in making the public sector performance oriented sector of the Nigerian economy. As opined by Olufemi (2018), Nigeria has thrown itself up for inclusion among the first 20 leading economies of the world by 2020. This vision appears a mirage notwithstanding Nigeria’s aspiration. Various techniques applied by the government of Nigeria to boost e-government implementation have leaned towards ensuring that Nigeria’s telecommunications and ICT sector becomes the fastest growing market. In Africa (Aneke, 2018). This fact was acknowledged by the United Nations Survey Report (2008; 2018) but he still lamented over the low ranking of Nigeria in the global e-government survey, particularly as Nigeria was placed behind Cape Verde in African. Ala in Eze (2019) was right in emphatically stating that in spite of the great number of strategies and initiatives

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employed by the global community to achieve ICT connectivity for highest performance in public service delivery, the case of Nigeria fundamentally remains a different disposition. The United Nations E-Governance Survey Report (2018) still ranks Nigeria at 141 out of 193 countries in the application of e-governance.

Olufemi in Eze (2018) agrees that Nigeria has actually started the crusade for e-government implementation but there is no evidence that an appropriate framework has been adopted and fully complied with by government. This is because major sectors of the economy and society need to feel the full effect of e-governance in the Nigerian context. Yusuf (2019) expresses pain over the poor state of e-governance in Nigeria. He is worried that most government websites have not exceeded the publish stage and some have not afforded the citizens opportunity for interactive activities of making requests and sending feedbacks. He stresses that most of them remain at the transact stage. On their part, Mundi and Musa (2017) and Olufemi in Eze (2019) assert that 20% of Nigeria's websites could be said to have definitely reached the second stage of e-government while 70% still remain at the publish stage. This is unacceptable and demands explanation from the Nigerian government authorities. For giant of African to remain at just the second stage of a five-stage project and deny the citizens opportunity of interactive communication in the processes of governmental administration is denial of participation and is fraught with suspicion as to the real intention of government in its operations. This does not make for transparency and accountability and would not guarantee efficiency as enunciated by the principles of e-governance.

Prospects of ICT as a Means of Quality Public Service Delivery in Nigeria

Oshiona and Aman (2017) opine that ICTs make sure that the public sector is accessible to all. Similarly, ICTs have great positive effect on personnel performance, guarantees improved documentation and better systems of filing. Many studies have indicated that ICTs have given opportunities for efficient and effective public service delivery, reducing corruption and increasing citizen's participation in governance. We examine hereunder some of the prospects and benefits of ICTs application:

Related Cost of Administration

The application of ICTs in the public sector of Nigeria significantly reduces the cost of handling information. The process permits faster sharing of information than hitherto by manual processes which cost more as a consequence of travel costs added to other allowances and accidental expenses.

As opined by Ndou (2019); if e-government frameworks are applied by developing countries consistently, ineffectiveness in processes would drastically be reduced by faster sharing of data among Ministries, Departments and Agencies of government. This, therefore, contributes to reduction or total elimination of human error occasioned by manual operations.

Improved, Fast and Accurate Service Delivery

The Nigerian public sector is bureaucratic and slow in delivery of services to the public. It is, therefore, necessary to drop the traditional style and apply ICTs to reduce waiting time and the redtape to allow a faster and more accurate system of service delivery. Organizations in the public sector of Nigeria such as the National Youth Service Corps (NYSC), Joint Admissions and Matriculations Board (JAMB), Abuja Geographical Information System (AGIS) and many such organizations have used the application of ICTs to services to the citizens more convenient, faster and accurate. For example, JAMB processes over one million candidates' examination scripts using the computer that updates the results within seven working days, unlike in the past when it took nearly eight weeks. These results are delivered to the candidates with little or no mix-ups or delays, as was the case with manually marked scripts. (Nweke, 2017).

As can be seen for the JAMB example, ICT enhances improved, faster and more accurate public service delivery. ICT eliminates delays, corrupt practices and loss of documents which appear as the norm in the

traditional style of the public sector. ICT application eliminates the repeated visits from far distances and also allows services beyond the usual official hours (Nweke, 2017). Agreeing with this view, Ndou (2019) observes that e-government initiatives reduce bureaucratic bottlenecks by putting government services online and being accessible 24 hours a day for fast and convenient quality services, both for intergovernmental relations; and international communication. This is manifest in the use of e-mails that have overtaken letters and other surface mails. Other e-government initiatives which have made the public service smatter include electronic chatting, e-conferencing/video conferencing, etc. These initiatives allow interactions between both the public and private sector agencies while at various distances and yet run their offices without the risks of travelling.

Creates Access to Transparent, Accountable and Participatory Governance

The e-government efforts have shown a wonderful capacity for enabling citizens gain more access to public sector information in Nigeria thereby improving citizens' participation in public sector management. The results from the interaction between citizens and public officials, that increases transparency, information dissemination and transactions which were hitherto classified, have become accessible to public servants and citizens alike. This enables the public sector to generate more data by the process of feedback through various types of online communication between public officials and beneficiaries of public services. This reduces corruption and enhances "transparency, accountability and participatory governance (Akunyili, 2008).

Enhances Networking and Inter-Governmental Relations

Relationships between government, customers, businesses, employees and other organizations are generated and improved by ICTs. To use and diffuse ICTs successfully in the public service requires a coordinated interdisciplinary and flexible learning process (Maxwell and Welm, 1998 in Ndou, 2018). Agencies in Nigeria such as NECO, WAEC, NOUN, NYSC, JAMB, etc have complied extensively with e-practices in their service delivery. According to Ndou (2018), networking is the function of e-government in order to combine energies in "skills, knowledge, technologies and information that cut across the boundaries of different governmental agencies" when e-government is applied, the practice of Enterprise Resource Planning (ERP) is enhanced because it is an integrated business system that coordinates enterprise functions like finance, human resource management/development, etc into a common database.

In the views of Westcot et al, cited in Nweke (2017), ERP may be integrated with the internet and work flow, ERP provides the civil service with better systems of "financial management, human resource management, materials management, etc." An integrated online network will enhance data sharing and also facilitate feedback in the civil service system. The Organization of Economic Cooperation and Development (OECD) argues along this line and note that fortifying the interactions between the public sector and the society at large will enhance the quality of service because government would then be able to gain broader sources of information for easier solution to challenges of policy making in a complex society (OECD, 2015). Additionally, services such as attachment mails, delivery of scanned files online, etc eliminate public sector bureaucratic delays in service delivery. E-government initiatives have reduced to the barest minimum, red-tapism and other lapses inherent in the traditional ways of public service delivery. Above all, the application of e-government initiative in the public sector makes it possible for interaction between civil servants and to transact and communicate with all the stakeholders including businesses and citizens. Government should, therefore, endeavour to apply some measure of urgency in ensuring the use of ICTs tools and applications for "development of new forms of citizens' participation in the public sector".

Improves Competitiveness which Ensures Responsive Service Delivery

The digitalization of operations and services in Nigeria's public service brought the public sector into a healthy competitive atmosphere with the private sector in terms of qualitative and productive services to the society. ICTs application boosts service delivery in the Nigerian public service in a competitive and responsive manner. This is a gladdening position to attain in comparison with the private sector which was ahead in ICTs

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application in Nigeria. Nweke (2017) informs that “Automated Custom Data, Electronic Immigration Passport/Visa Application, Nipost Post Cash, and other similar initiatives are examples of e-government potentials in reforming public administration for increased productivity and competitiveness.

In the view of Mansell and Welm in Ahman and Aigbe (2019) e-government has a role to play beyond just market-led limitations, but to facilitate capacity building and coordinate the transactions of interested stakeholders. The use of ICTs enables structural mediation between the public sector and the citizens. This means that using digital information communication technologies in the public service ensures that we have active citizens, connected, informed and participating. This enhances productive and responsive service delivery.

Enhancing Service Delivery through ICTs

Information Communication Technologies System is a well articulated means of collection, organized storage, and dissemination of information. It has to do with integrated networks between people and different organizations for collecting, filtering and distributing data methodologically for easy “retrieval, systems analysis and design, and system control” (Aderomonu, 2017).

Aderomonu, Adagumodo and Akande (2017) observe that previously “banks could not process payments, government could not collect taxes, hospitals could not treat patients, and super markets could not stock their shelves” but these days, with the support of information communication technologies, these services have been made feasible. In every sector of the economy, particularly the public sector, ICTs have become the backbone of enhancing quality of service delivery. Indeed, ICTs constitute a vital property of transformation in the processes of governance in terms of managing resources and other services for efficient, effective and accountable satisfaction of the people (Heeks, 2017).

The organization for Economic Cooperation and Development (2018) states that “information technology is a tangible resource in form of equipment that comprises all methods of technology used to build, store, influence, manage, transmit, interchange or receive information in its numerous forms”. On the other hand, public service delivery is concerned with providing services of public interest to society. These services include “health care, qualitative education, energy, water, good roads, transportation, and security of life and property”. Public service delivery in the opinion of Orasanye (2018) is the process of meeting the needs of citizens through prompt and efficient procedure”. This connotes timely provision of citizens needs through participatory interactions between government and the people who are “key in public service delivery”.

Public Sector

Public sector is that section of the economy charged with the function of providing public services. What makes up the public sector differs country by country. However, in a majority of countries, the military, police, care of public roads, public education, along with health care and those working for government itself” are included in the public sector (Barlow et al, 2018). The public sector is the principal segment and the driver of the macro socio-economic infrastructure for policy formation. The public sector is also the artist that creates the conducive atmosphere for national development. Public sector management encompasses areas of management of human, financial and other resources. Activities like “planning, formulation and implementation of decisions, provision of goods and services to the citizens through a number of government and quasi government constitutional arrangements” are included in Public Sector Management (Barlow et al, 2018).

Service Delivery

Service delivery is the discharge and fulfillment of responsibilities assigned to individual (s) in an organization for benefit of society at large. Organizations assess the level of fulfillment or satisfaction derived from such services by the public, as well as measure the output in relation to the input with regards to attaining the objectives. This determines the level of productivity in the organization. In the view of Byars and Rice cited in

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Obi et al (2020), service delivery refers to the extent to which an employee accomplishes given assignments towards achieving organisation's objectives.

El Rufai (2018) succinctly summarized service delivery as “the degree of an organisation's or employee's performance output or productivity in the discharge of their responsibilities within the available time, money and other resources towards the achievement of overall goals of the organization. The success of service delivery is determined by the performance of employees in achieving organizational goals and satisfying the public” (El Rufai, 2018).

The researcher views service delivery as the achievement of targets (performance output productivity) of the responsibilities assigned to the organization or employees within a given period. It entails performing duties assigned by the legitimate authorities in order to achieve the strategic goals of the organization as well as satisfy the public.

Conceptual framework

Independent Variable	Dependent Variable
E-governance Awareness creation, Regular training and retraining in ICT skills.	<u>ICT Skills Development:</u> - Efficiency in Service Delivery - Improved Public Administration - Improved opportunities for savings in cost - Improved growth and economic development

Source: Author's conceptualization

Theoretical Framework

Diffusion of Innovation Theory

Jones and Jeffrey (2018) inform that Diffusion of Innovation Theory was developed in 1962 by Rogers, E.M. This theory stands as one of the earliest theories in social sciences. It developed in communication to clarify how a new idea or product, within a space of time, gains acceptance by a given population or a social system.

The key tenets of diffusion of innovation theory are innovation, channels of communication, time, and social system (Rogers in Onyinye, 2022). Diffusion of innovation is a social process that takes place when people respond in pursuit of internalizing a new idea or product. A classical understanding of diffusion entails an innovation communicated through particular channels over time between people who belong to a social system. The ultimate result of diffusion is that the members within a social system assimilate and adopt the new idea, behavior or product (Jones and Jeffrey, 2018). Adoption, according to Rogers (1962), means that something is now being done differently by someone or group of persons. The principle of adoption is that the idea or product has to be seen and understood as something new or innovative. This understanding is what makes diffusion possible (Toews, 2018). Both e-governance and ICT skills development are new and innovative and should be diffused and adopted.

Modernization Theory

The modern man needs change because he believes that a new thing or product or idea will be better and most likely to produce a more purposeful and improved result (Ojo, 2018). Modernization theory goes further to explain the transformation of traditional institutions to modern ones. This theory tries to compare the level of modernity between countries of the world as they shift from the most traditional to the most modern ones. (Rostow, 1956). Modernization involves the social changes and modern administrative processes that are now taking place in the Western World and have also started happening in developing countries including Nigeria. Such most recent trends include e-governance and ICT skills development.

Empirical Review

Adiele (2017) investigated “The Emerging Role of E-governance in Promoting Service Delivery in the Nigerian Public Sector”. The research approaches for applying ICTs for improving quality of services in the public

service. Sectional Survey research design was employed in the study, and random sampling was applied for sample size determination. Data generated with questionnaire on a Likert five-point scale was subsequently analyzed using the descriptive inferential statistics. Chi-square was used in testing the hypothesis. In its findings, the study saw that the application of e-governance improved productivity in the Nigerian Public Service. It also discovered that without e-governance practices, effectiveness of the public sector would be seriously reduced. Strict compliance with e-governance principles was recommended to government. To this effect, measures should be taken to raise funds for sustenance and improvement of ICT infrastructure and facilities in Nigeria.

Ajibade, Ibietan and Ayelabola (2017) undertook a study on “E-governance Implementation and Public Service Delivery in Nigeria: The Technology Acceptance Model (TAM) Application”, The study examined the extent implementation of e-governance in Public Service delivery had gone in Nigeria. Qualitative research was applied Secondary sources were used in gathering data. These sources include books, journal articles and the internet. The study discovered that some obstacles blocked the full acceptance and application of e-governance from rendering qualitative services in the Public Sector of Nigeria. For this reason, it was recommended that both the civil servants and society at large should be sensitized on the critical needs of adopting e-governance in the administrative processes so as to guarantee effective public service delivery.

In a study “Electronic Governance and Service Delivery in Selected Ministries in Ebonyi State” Ezeodili and Omebe (2018) applied the descriptive research design and used the questionnaire for data collection. The study examined the extent the adoption of e-governance helped in keeping records, improved accountability and enhanced efficient delivery of services. The findings showed that the application of e-governance was useful in bringing about effective service delivery by public officials. It improved record keeping, reduced corrupt practices as well as promote transparency and accountability. The study recommended that e-governance should be adopted and sustained to ensure effective formulation of strategies for implementation of projects and programmes that would guarantee accountability and transparency.

Ofurum, Amaefule, Okonya and Henry (2018) empirically examined the “Impact of E-Governance on Nigeria’s Revenue and Economic Development: A Pre-post Analysis”. The study focused on determining how the use of e-taxation affected tax revenue and tax-to-GDP ratio in 2015. Data were sourced through secondary means from Federal Inland Revenue Service (FIRS) and Central Bank of Nigeria (CBN) Statistical and Economic Reports on quarterly basis from the second quarter of 2013 to fourth quarter, 2016. Data were analysed by means of paired sample t-test and simple regression. The findings from the analysis revealed that the use of electronic taxation has not significantly improved tax revenue, federally collected revenue, or tax-to-GDP ratio in Nigeria. Among others, the study recommended that Federal Inland Revenue Services should do enlightenment workshops in all the 36 states and 774 local governments in Nigeria to create awareness and increase citizens knowledge of electronic services on the platform. The study exposed the ineffectiveness of the application of e-governance in all the ministries, though e-governance made it possible for database sharing, reduced cost of service delivery and cut down time for transactions processing, thereby improving management records, easing procedures and increasing productivity. The study equally found out that the Ministries were overcrowded and that citizens did not have access to online services, since they had no facilities. The study recommended the establishment of management team with policies regulating the implementation team of e-government so as to ensure improvement of online facilities for both the citizens and public servants. Equally, reduction of overcrowding in Ministries was recommended.

Nosiri & Ndoh (2018) on “E-governance an imperative for Good Governance in Nigeria”, observed that the achievement of good governance in these hopeless times needs a seriously functional drive of e-governance. In the opinion of the researchers, adequate and proper application of ICT services remain a catalyst for efficient service delivery, quick response (feedback), and account of stewardship in transparency. The methodology of the study is quantitative in nature, with case study and logical reasoning. Based on this, the paper urged that e-governance is an effective means of realizing “good governance that ensures accountability, effective and efficient service delivery, fights security threat, and reduces corruption”. The paper further recommended the

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provision of adequate funds and infrastructure, reduction of the digital gap in access, and political will, to encourage the success of e-governance.

Sokim, Xlaolin and Dong (2018) investigated “E-governance: Combating Corruption” and opined that in this period of globalization, interactive communication and relationship is without limits. Each country continuously seeks to transform and innovate for effective global competitiveness, which requires the proactive involvement of government for its achievement. Therefore, all the factors that can limit the success of e-governance such as “administrative burden, corruption, poverty, bureaucracy and others” must be addressed if e-governance must succeed. Innovation through application of ICTs provides opportunity for data centralization and analysis, thereby reducing or eliminating occurrence of corrupt practices and contribute in the promotion of good public service delivery. Some innovative uses of ICTs through e-governance include “e-service, e-procurement, e-taxation, e-judiciary, e-voting, e-catalogue, etc. The study used content analysis and agreed that e-government greatly contributes to modernization and reformation of state, increase governmental competences and lawfulness in public administration”.

Neclesh, (2018) assessed “E-government in India: its Benefits Acceptability in India and its impact on Developing Countries”. Using primary and secondary data, the paper concluded that in spite of poor infrastructure, poverty, illiteracy, language difference and all the other reasons, India enjoys a host of award winning e-government projects. Provision of quality services was buoyed up by effective promotion schemes and the citizens agree that there has been a reduction of corruption by 81% while 90% find cost of e-governance affordable, and 75% favour fast, efficient and effective delivery of services. The study, therefore, recommended that transparent government devoid of corruption, should be sustained in India and other developing countries for quality services to their citizens.

The UN Global E-government Report, (2018) is of the view that imperative of contemporary government is to employ information communication technologies (ICTs) to create a level playing ground for all competitors. However, articulation of the full value of the gains of the worldwide community will survive only when all the nations of the world share the opportunity equally. But the apparent gap of the opportunity by a select group of nations has worsened the gap between the haves and have-nots, thereby reinforcing the inequalities in existence. The UN E-government Readiness Report (2018) is an assessment of existing disparities in access to, and use of ICTs worldwide, found that many countries further strengthened their online presence, and have moved to higher and better levels of service delivery. More participatory features have been brought in by many. There has been an increase to 179 of the number of countries online, representing about 94% of the United Nations Member states. Most developing countries are encouraging citizens access to government policies and programmes as well as making available on the websites their approaches and strategies. Serious efforts are being made to bring the stake-holders to participate in decision making for all inclusive interaction online. According to the report, the e-government Readiness Ranking in 2018, the United States (0.9262) is the world leader, followed by Denmark (0.9058), Sweden (0.8983) and the United Kingdom (0.8777). E-government should expand to e-inclusion, E-inclusion goes beyond e-government. It means utilizing modern ICTs to solve access-divide issues and promote the empowerment of all citizens socially, economically and possibly politically. The report, therefore, recommended that governments should recognize the great potential and benefits of ICTs, if the development of human capital is embarked upon. There is therefore need for commitment of the political leaders to an ICT-led development agenda for equality which is a prerequisite.

Using the topic “Improving Productivity in the Public Sector Through e-Governance Programmes”. Adiete (2019), explored the “emerging role of e-governance in promoting service delivery in Nigerian Public Sector”. The cross-sectional survey research design was used on random sampling. The closed-ended 5-point Likert scale questionnaire was used for eliciting data from respondents. The data were analyzed using both descriptive and inferential statistics. Descriptive statistics (frequencies and percentages) were used to analyze the demographic information. Similarly, chi-square test was used to test the research hypothesis. The study concluded that if effective public service delivery must be successfully achieved, certain measures should be

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applied to ensure proper implementation of the ICT process to serve the citizens better. The paper, therefore, recommended that Nigerian government embrace e-governance by promoting the use of ICT facilities among the citizens and government agencies in order to achieve efficiency and effectiveness in the public sector.

Ahnam & Aigbe (2019), investigated “The Application of Information and Communication Technology in Revitalizing Public Service Delivery in Nigerian Public Sector: An assessment of the Prospects and challenges,” and argued that ICTs provide great opportunities to improved Public Service Delivery in Nigeria’s Public Sector through the customary problems of service delivery in the country. The study pointed out that many obstacles such as “Poor leadership commitment, low ICTs literacy and usage, the problem of digital divide, Nigeria’s epileptic power supply, lack of trust in e-governance, etc” obstruct the potentials of ICTs for service delivery in the public sector in Nigeria. The study recommended the provision of the appropriate ICTs infrastructure, improving online service and citizens’ access to these services, and improving the skills and literacy levels of both the civil servants and the citizens. More effort should be directed to improving the epileptic power supply. Equally, more resources should be committed to human capital development, address the digital divide between the literate and illiterate citizens while the government websites should be integrated, reviewed and made e-service compliant within the context of a national portal.

Adah, (2019), in her study of “The Status and Nature of e-Governance in Nigeria” observed that the world has become a global village in which all countries of the world, including Nigeria, are striving to attain a high pitched electronic governance, that functions by means of information communication technology for public services. With Nigeria’s population of 200 million, it has the fastest growing market in information and communication technologies in the African continent, and yet the high pitch it is said to have attained is not resonating. Rather, Nigeria suffers a poor ranking in provision of electronic service to the citizens. The study argues that numerous problems such as lack of political will of the government to accept a two-way communication approach, have impinged on the effective development of Nigeria’s e-governance status. One of the suggestions proffered by the paper is that Nigeria and other sub-Saharan countries should strive to be abreast with technical innovations that would enable speedy growth of e-governance in the region. In its methodology, the paper analyzed data quantitatively through content analysis.

Oruigbo & Eme (2019) examine “Electronic Governance and Administration in Nigeria: Prospects and Challenges.” The study highlights key elements of electronic governance and administration and went further to look out for how technology-driven government can be a solution to problems of administration in Nigeria. The paper did an analysis of secondary data collected through desk approach, and discovered that the liberalization of the communication sectors by the Nigerian government and the proliferation of smart phones have intensely, deepened online access in the society. Further to this development is the profuse availability of social media sites such as the Facebook, Youtube, Wikipedia, Google plus, Tumbler, Instagram and Twitter among many others. Banks have undertaken to enlighten their customers on this development in order to achieve seamless results. Governments should do the same. The paper further recommended that governments should maintain partnership with organizations in either the private sector or non-profit oriented enterprises. Conversely, poor coordination between central, regional and local agencies may lead to ineffectiveness of e-government in application of ICTs in public service delivery.

Ojo (2019) in his study titled “E-governance and Anti-corruption War in Africa: The Nigerian Experience” employed content analysis to examine the problem. He found out that the e-governance initiative of applying ICTs in managing public affairs is indeed an effective mechanism to complement in the public sector”. These other measures include “Treasury Single Account (TSA), internet banking, Government Integrated Financial Management Information System (GIFMIS), cashless policy, among others” These strategies were used to drastically reduce corruption in Nigeria. The paper, therefore, recommended the training and retraining of staff handling ICTs for effective public service delivery in Nigeria.

Jadi and Jie (2019) investigated “Implementation Strategy of e-Government System for Emerging Countries” and opined that government needs to play vital role in public service delivery as well as in the adoption of ICTs implementation. E-government, without doubt, is the most crucial development mechanism for productivity and progress in the developing countries. Any delay in adopting and implementing e-government brings with it added cost. The study applied a methodology of research anchored on two factors. The first is examining and choosing the most matching model for implementing e-government. The second factor involves the different categories of government interactions namely, GBC (G for Government, B for Business and C for Customers).

Methodology

The study employed the descriptive survey research design. Tuckman in Obasi (2008) defines survey research as “a process of deriving data from a target population through either a questionnaire or interview instruments, and subjecting such data to statistical analysis for the purpose of drawing conclusions”. The area covered by the study includes Enugu and Abia States of South East, Nigeria, using Office of Head of Service, Ministry of Works/Science and Technology and Board of Internal Revenue. The population of the study comprises all the staff of these three institutions numbering 2004. A sample size of 1908 was determined using the Taro Yamane formula of:

$$n = \frac{N}{1 + N(e)^2}$$

Where, n = Sample size

N = Population (2004)

e = acceptable margin of error (2.5%)

I = constant

The instrument used for data collection was the questionnaire in a five-point Likert scale structured form whose validity and reliability were established by the pilot test and test-re-test methods respectively. Data was analyzed through the descriptive statistics of frequencies, percentages and mean scores, while the z-test was used in the test of hypothesis with the aid of SPSS statistical tool.

Data Presentation and Analysis

Research Question One:

How does e-governance affect ICT skills development in South East, Nigeria?

Questions on “Open Administration” (Citizens Awareness and ICT skills development)

Table 4.2.1

S/No	Statement of Service Delivery Content	Response					Total	Mean	Std Deviation	Decision
		SA	A	UN	D	SD				
1	The governments of South East, Nigeria created awareness of e-governance adoption to the citizens	407	1003	281	97	92	1880	3.82	1.00	Accepted
2	Public servants in South East, Nigeria are aware of e-governance adoption by the government	567	751	344	155	63	1880	3.85	1.04	Accepted
3	Public servants in South East, Nigeria have been regularly trained and retrained in ICT skills	751	659	252	189	29	1880	4.02	1.03	Accepted
4	Almost all public servants in South East,	218	441	252	688	281	1880	2.80	1.28	Rejected

	Nigeria are computer literate									
5	The public services of South East, Nigeria, have employed qualified information and communication technology (ICT) trainer	407	92	218	135	848	1880	2.41	1.59	Rejected
	Grand Mean							3.38	1.18	

Source: Field Survey, 2023

The mean scores in Table 4.2.1 revealed as follows:

Item No.3 obtained the highest mean of 4.03 followed by item No.2 with a mean of 3.85, while item No.1 obtained a mean of 3.82. Items No.4 and 5 obtained 2.80 and 2.41 respectively. However, with a grand mean of 3.38, it shows that e-governance improved ICT skills development in Enugu and Abia States.

Test of Hypothesis

To facilitate the inferential analysis, the study adopted the z-test statistics. The mean scores of the respondents as well as standard deviation were presented in the table.

Test of Hypothesis One

Decision Rule: The rule in the use of z-test criterion is to accept the alternate hypothesis if the z-score calculated is greater than z-criterion score at 0.05 level of significance.

Restatement of Hypothesis One

E-governance has not significantly improved ICT skills development in South East, Nigeria.

Table 1: Normalises z-score for mean responses

S/N	Item	N	Mean	STD	Z-score	Z criterion	Significant P value	Rule for Hypothesis
1	E-governance has not significantly improved ICT skills development in South East, Nigeria.	1880	3.38	1.18	32.7	1.64	0.05	Accepted

Source: Field Survey, 2023

Table 1 above shows that z-score calculated value of 32.7 is greater than z-criterion value 1.64 at 0.05 level of significance. The analysis indicates that e-governance has significantly improved ICT skills development in South East, Nigeria.

Decision: As seen in Table 1 above and subsequent analysis result of the computed z-score (32.7) for the statement exceed the z-score value (1.64) at 0.05 level of significance. Therefore, we accept that e-governance has significantly affected ICT skills development in South East, Nigeria.

Discussion of Result

E-governance and ICT Skills Development

The objective of the study is to ascertain how e-governance affects ICT skills development in South East, Nigeria. The finding shows that e-governance has significantly improved ICT skills development in South East, Nigeria. This finding is in agreement with the observation of Sorin and Cristina et al (2019) that it is necessary to bridge the gap between knowing the latest processes and skills for a suitable development of human

resources in the public service and appropriate enlightenment of the citizens. This objective is best achieved by intense development of ICT skills of the public servants in the employ of South East, Nigeria.

Summary of Finding

With $z\text{-cal } 32.7 > z \text{ } 1.64$, e-governance has significantly affected ICT skills development in South East, Nigeria.

Conclusion

In respect of ICT skills development, e-governance had significantly proved to be a veritable tool in creation of citizens' awareness, and training and retraining of public servants in ICTs skills. This notwithstanding, a lot more needs to be done by government to improve on the ICT skills of public servants.

Recommendation

The governments of Enugu and Abia States, South East, Nigeria, should employ permanent ICT skills trainers and discard the use of consultants so as to reduce the exorbitant cost of intermittent engagement of consultants. This will ensure cheaper, consistent, regular training and retraining of public officials in ICT skills. This should be followed up by the provision of laptops/computers to staff for one-on-one regular contact with ICT trainers to create fully computer literate public servants that will prosper e-governance.

Contribution to knowledge

The study contributed immensely to knowledge by showing the necessity of improving ICT skills of public officials as a vehicle for effective communication between government and all stakeholders. The researchers finding and recommendation are critical to ICT practitioners in the public services of South East, Nigeria and indeed the entire country, for improved service delivery and enhanced performance through e-governance.

Suggestion for Further Study

The study suggests further focus on "effect of digital maturity or performance of public sector in Nigeria". This will act as a further push on ICT skills development in Nigeria's public sector.

References

- Adeyemo, A.B. (2018). E-government implementation in Nigeria: An assessment of Nigeria's global e-governance ranking. *Journal of internet and information system. 2(1). Academic Journals.*
- Adiele, G.N. (2017). Improving productivity in the public sector through e-governance programmes. *Covenant University conference on e-governance in Nigeria. CUCEN 2017.*
- Adiele G.N. (2017). Governance and public service delivery in Nigeria: The role of information and communication technologies. *Department of Political Science and International Relations Journals CUSEN.*
- Agboola T. (2018). Service compact and service delivery in Nigeria: An empirical study. *International Journals of Politics and good government. 7(3).*
- Agboola, T. (2018). Effectiveness of integrated personnel and payroll information system in addressing ghost worker syndrome in the Nigerian public sector. *Global Journal of Human Social Sciences: Interdisciplinary, 18(2).*
- Agboola, T. (2018) Service compact and service deliver in Nigeria: An empirical study. *International Journal of Politics and good governance. 7(3).*
- Ahmed, A.(2019). The treasuring single account (TSA) as an instrument of financial prudence and management: Prospects and problems *Research journal of finance and accounting. 7(4)*

- Akunyili, D. (2010). ICT and e-government in Nigeria: Opportunities and challenges. *An address presented at the world congress on information and technology*. Amsterdam, the Netherlands, on 23rd – 27th May. 210.
- Atta, A.A (2020). An assessment of e-government implementation in Nigeria. *Journal of internet and information system*. 2(1).
- Arjin de Juger (2018). E-government in digital era: Concept, practice and development. *National Thailand Institute of Development Administration*.
- Ambali, A.R. (2018) E-government in the public sector policy implementations and recommendations for policy makers. *Journal of faculty of administrative sciences and policy studies*, 7(3)
- Aminu, H.J. (2018). An e-readiness survey of selected federal ministries in Nigeria for freedom of information (FOI) and e-government implementation. *Researching journal of mass communication and information technology* 4(1)
- Ayoola, T. (2018). *A review of the performance of the Nigerian public bureaucracy. Issues in Nigerian government and politics*. Dekal publishers.
- Atuanya, Shimowo, Sanni, Arogundade, Ogunwale (2022). Digital currencies. *International Journal of trend in scientific research and development. (IJTSRD)*, 6(2).
- Amarabeh, T., & Abu-Ali, A. (2019). A general framework for e-government definition maturity challenges, opportunities and success. *European journal of scientific research*, 39 (1).
- Aneke, F. (2019). Tackling telecommunication in Nigeria. Dynamic export, retrieved from www.dynamicexport.com.
- Ajayi, G.O., (2018). E-government in Nigeria's-strategy. *The fifth annual African computing and telecommunications summit*. Abuja, Nigeria.
- Ademiran A. (2019). Anti-corruption strategies for balanced development. *Advanced journal of social sciences*.3(1).
- Arjin de Juger, (2018). E-governance in the developing world in action. The case of the district net in Uganda. *The journal of community informatics*. 4(2).
- Bachus, M. (2019). E-governance and developing countries: Introduction and examples. *HCD Research report No. 3*.
- Backus M. (2019). E-governance in developing countries. Online, *HCD Research Brief* (1).
- Bhoi, N.K. (2019). Use of information communication technology (ICT) and library operation: an overview. *An international conference on failure statistical institute*, 15-17 November, 2017.
- Chikodi, O.C. & Inyama, H.C. (2018). *A model of e-governance system for Nigeria*. Nnamdi Azikiwe University, Nigeria.
- Danfulani, D. (2018). The failure of e-government in developing countries. *The electronic journal of information system in developing countries*. 26(7).
- European Commission (2007). *Use of information and communication processes to reinforce internal administrative skills*.
- El-Rufia, N.A (2018). *The accidental public servant*.

- Eze, F.O, & Eze, P.D.C. (2018). Effect of corporate governance on organizational effectiveness: A survey of some selected government organizations in Anambra State, Nigeria. *IDOSR Journal of Humanities and social sciences*. 3(3).
- Eze, F.O, (2018). *Human resources management: Strategy, theory and applications* Chameks Enterprises, Nigeria.
- Ezeodili, W & Omeke, M.A. (2018) electronic governance and service delivery in selected ministries in Enugu State. *International Journal of academic management science research*. 2(11).
- Eze, C.P, Chang, K., & Berry,, F.S. (2017). Testing the development and diffusion of e-government and e-democracy: A global perspective. *Public administration Review* 7(3).
- Ebrahim Z, & Irani, Z,(2018). E-government adoption architecture and barriers. *Business process management journals*, 11(5).
- Mcflesh, et al (2018) Liu Huang (2019) in Ali A. Al-Wazir & Zlao (2021). Factors influencing e-government implementation in least developed countries. A case study of Yemen. Provided by International Institute of Science, Technology and Education (HSTE), *E-Journals, developing Countries Studies*, 4(7).
- Mustafa, A., Anita A., Sare-Gul, S., Eda, Y., Murat K.G. (2018). An e-government project management approach with e-transformation perspective. *International journal of e-business and government studies*, 6(1).
- Mohammed, S. et al (2018). E-governance in Nigeria. A catalyst for national development. *Paper presented at the fourth international, conference on development studies*. University of Abuja, FCT, Nigeria. 14-15. April, 2019.
- Ndou, V. (2019). E-government for developing countries. Opportunities and challenges. *The electronic journal of information systems in developing countries*. 1(8).
- National Information Technology Development Agency (NITDA, (2019). *Nigeria e-government Interoperability Framework (Ne-GIF)*. Release Vol. 2, July, 2019.
- Nosiri, U.D, and Ndoh, J.A, (2018). E-governance: An imperative for good governance in Nigeria. *South East journal of political science*. 4(2).
- Nweke, E.N. (2017). Reinventing administrative governance in Nigeria: can information and communication technologies (ICTs) make a difference. *African journal of political and administrative studies*. 3(1).
- Olisa, J.O, Odita, A.A. (2019). The bureaucratic failure in Nigeria. A critical analysis of the Nigerian. Government bureaucracy, *international association of statistic in humanities*, 8(1).
- Obi H.O., Uzor O.A, Chukwurah, D.C. Jnr (2020). E-governance and service delivery in the Nigerian civil service. *World Journal of Innovative Research (WJIR)*. 9 (3).
- Ogidan, J., Adekola O., Emmanuel G. Okogun, O. (2018). ICT for good governance and socio-economic development in Nigeria. *World scientific news, WSN* 72(217).
- Onuigbo, R.A., and Eme, O.I, (2019). Electronic governance and administration in Nigeria: prospects and challenges *Arabian journal of business and management review*. 5(3).

- Owino, H.O, Otieno, S., and Odoyo, F.S, (2017). Influence of information and communication technology on revenue collection in country government in Kenya. *International journal of Academic research in accounting, finance and management*, 6(3).
- Organization for Economic and Cooperative Development, OECD (2018). *E-government Imperative*. Paris, OECD.
- Sorin B., Cristina A., Marcela M., and Maria-Lordeana, P. (2019). Sustainable e-governance and human resource development. *European journal of sustainable development* (2019), 8 (5).
- Uba U.B and Ukomadu C. (2018). An appraisal of the development of e-governance in the fight against corruption in Nigeria's public service, 1999-2012. *IOSR Journal of humanities and social sciences* 23(7).
- United Nations e-governance Survey Report (2018). *From e-government to connected governance*. United nations department of economic and social affairs/division of public administration and development management ST/EAS/SERE/112/New York.
- United Nations e-governance survey report (2014). *Overview paper in support of the Export Group Meeting (EGM) in New York, USA*, 4-5 December. 2012.
- United Nations e-government survey (2014). *E-government for the future we want*. United Nations department of economic and social affairs/division public administration and development management.
- UN e-government survey (2008). *From e-government to connected governance*. United Nations Department of economic and social affairs. Division of public administration and development management. New York.
- World Bank Development Report (2018). Quality and Quantity of public goods and services in developing countries. <https://web/worldbank.org>.
- Wikipedia (2014). *Definition of e-government*. Online retrieved 16/82021.