

# Appraisal Of Communication Technology And Its' Administrative Efficiency Bombsighting Anambra State Ministry Of Information And Public Enlightenment (2010-2019)

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**Abstract:** *This study is an appraisal of Communication Technology and Its' Administrative Efficiency Bomb-sighting Anambra State Ministry of Information and Public Enlightenment (2010-2019). Hence, the study was anchored on Rogers' Diffusion of Innovation Theory to explain the need and how a new idea or new method of doing things diffuses (or spreads) via specific social system and the people adopt the new innovation. The study involved a survey in which the entire population (232) of the Ministry was sampled to serve as the basis of the investigation. A structured questionnaire with 18 items was used for data collection, while percentage distribution and Chi-Square statistical tool were used to analyze the data collected for the study and test the hypotheses respectively. Results showed that information communication technology plays a significant role in accessing and managing information for timely decision making in the Ministry; that information communication technology helps in the storage and processing of data relevant for efficient administration in the Ministry; and that lack of staff with requisite skills is a challenge to the use of information communication technology for administrative efficiency in the Ministry. Based on the findings, the study among others, recommended that training and timely re-training of staff on information communication technology should be prioritized and encouraged so as to have enough staff with requisite skills and knowledge on the technical and operational know-how on the use of information communication technology to perform administrative works efficiently.*

**Keywords:** Administrative Efficiency, Diffusion of Innovation, Information and Communication Technology, Public Enlightenment.

## Introduction

The revolution in information communication technologies has transformed the system of administration around the world. It has viewed in the global context, as a means of enhancing quality service delivery and achieving efficiency in administration. The trend of globalization has become widespread that nations of the world have become interconnected and communicate freely beyond national boundaries in a competitive manner. This was made possible by revolution in information and communication technology. In order to move along with this trend, nation-states, organizations and businesses are encouraged to maximize the benefits that come from these technologies while minimizing its negative sides. Thus, efforts are being made by governments and private organizations to develop, adapt and utilize these new technologies, as well as change their mode of operations in order to keep abreast with the current practices and to effectively face the constant changing challenges experienced in the world. These changes and challenges go along with the dynamic nature of the competitive world, which is the key determinant factor of the success and failure of any government administration or business. In the light of this dynamic nature of world, people have a lot of expectations to be served better (Bach, Belardo, Bajwa, Kantharaju, and Prasanth, 2011).

According to Blurton (2002), information and communication technology is defined as a diverse set of technological tools and resources used to communicate, and to create, disseminate, store and manage information. These technologies include computers, the Internet, broadcasting technologies (radio and television) and telephone. Thus, the information and communication revolution has ushered in a new way of doing things in the society and when appropriately applied has the potential tools for enriching the traditional means of administration for administrative efficiency and effectiveness leading to improved delivery of public services and high productivity necessary for national economic development (Oni, Ayo, Mbarika, Gberevbie and Folarin, 2014).

In this modern world, information and communication technology is a vital element in developing one economy, no positive impact can be sustained today without an adequate and consistent information and communication. Nigeria is not left out in th is trend; the impact of information and communication technologies in development of Nigeria economy covers various aspects of the nation's socio-economic life especially in the areas of public administration, information and communication, educational

sector, banking sector, government and private sectors. Within the Nigeria overall context information and communication technology is seen as one of the fastest growing sectors of the economy-growing on average of 37.5 percent yearly (National Bureau of Statistics, 2006). The emergence of this new global economy has serious implications on the governance and efficient administration of the economy.

The development of Information and Communication Technologies (ICT) and the implication it portends for enhancing the administration of the public service, i.e., the agencies involved in providing public goods and services for and on behalf of a government, constitutes one of the major concerns in many countries and is at the forefront of political debate (Kampen, Walle & Bouckaert, 2006; Gega & Elmazi, 2012; Tan, Benbasat & Cenfetelli, 2013). This is because the public service of any country is a major pillar in determining the development and stability of such country. Information and communication technologies has transformed its system of administration and has been viewed in the global context, as a means for achieving good governance and for enhancing quality service delivery to the public (Zouridis & Thaens, 2003). It is in recognition of the importance of information and communication technologies use in the modern administration that the European Union advocates the elimination of constraints to e-administration at all levels of governance, including local level authorities, as well as between public administrations, businesses, and citizens, through which the principle of good governance and administrative efficiency should be achieved (Hodos, 2014). While governments of the developed countries are already utilizing the growth in the information and communication technologies to enhance the efficiency and effectiveness of its administration, the spread of the benefits of information and communication technologies to resource poor and less developed countries like Nigeria is still very low (Akpan & Udoh 2015). In fact, the efficiency of the public service is a principal determinant of the effectiveness and productivity of any government. The efficiency and effectiveness of the administration in public service delivery is pivotal to the attainment of the sustainable development goals by any country which requires effective application of information and communication technologies (Kemoni & Ngulube, 2008).

Ab initio, works in organizations are done manually, taking greater amount of energy and longer time and days in performing simple tasks of drafting memos or signing documents. Information is stored in hard copies that are mostly voluminous and disseminating of such are always a tedious task. Most at times, searching for documents involves serious manual labour such as unpacking stacks of file and peeping into them one after the other which is really a strength-sapping exercise, thus, resulting in delays in accomplishing tasks and decision making. However, with information and communication technologies inventions, tasks are made easier. Based on technological accomplishment, people in management and administration can now manage information effectively and make timely decisions. Generating, processing, storing and retrieving data which are serious part of managerial functions are done faster and easily with utmost accuracy (Odum, 2012). Therefore, for any organization – whether government or privately owned, like “Ministry of Information and Public Enlightenment Anambra State”, to be effective and successful in their operation, there must be availability of adequate and reliable information and communication technology base.

The dynamics of social change and the pivotal role of the public service to Nigeria’s development inform the various reforms aimed at reinvigorating it in order for it to be able to efficiently and effectively administer its responsibility. Like most African governments, the country has attempted improving the administration of its public service through various reforms with the ultimate goal of boosting its capacity towards ensuring administrative efficiency for quality public service delivery and effective performance of core governmental functions regarded as pivotal to sustainable socioeconomic development of Nigeria (ECA, 2010). Thus, information and communication technology were seen as a catalyst in the reform for efficient administration of the public service in Nigeria.

In line with this, the Federal Executive Council approved the National Information Technology Policy in March 2001 and the implementation started in April with the establishment of the National Information Technology Development Agency (NITDA), in charge of the mission to make Nigeria an information and communication technology-capable country in Africa and a key player in the Information Society, while using information and communication technology as a catalyst for sustainable development and global competitiveness (ICT4D Nigeria Annual Report, 2007). In the new policy draft document 2012, the vision and mission statements of the information and communication technology policy are as follows: Vision: [To make] Nigeria as a knowledge-based and globally competitive society; and Mission: To fully integrate Information and Communication Technologies into the socioeconomic development of Nigeria in order to transform the country into a knowledge-based economy (Federal Ministry of

Communication Technology-FMCT, 2012). The famous long-term strategic development plan of Nigeria, "Vision 20-2020" contains elaborate goals for the information and communication technology sector. The increasing globalization driven by information and communication technology makes it imperative for Nigeria as an emerging market to irreversibly consider the application and promotion of information and communication technology strategy to facilitate its rapid growth and development. (FMCT, 2012).

Corollary to the above, Ministry of Information and Public Enlightenment, Anambra State, as a public organization which formed part of the Nigerian economy is not left behind in this trend as its core functions of making genuine information available and timely communicating same to and enlightening the general public on the happenings in the society, predisposes it into utilization of information and communication technology for efficient and effective service delivery (Information Department of Min. of Info. and Pub. Enlightenment, 2019). The aim is to help the staff and Ministry expand access to information globally, responsive to managing information and molding public perception and perspective, deploying the appropriate strategies and communication channels for implementing and realizing its objectives as well as to improve the administration and workings of the Ministry.

Thus, many countries, according to World Bank (2002), now regard understanding information and communication technology, and mastering the basic skills, as well as using those skills to perform our daily operations in the workplace as the core part of administrative efficiency in public service. Against this background, however, information and communication technology seem to be central and critical to the efficient administration of Nigeria's public service today. This therefore explains the reason why different governments and experts in Nigeria continue to lay emphasizes on information and communication technology as a way of transforming its public service. However, in spite of all the efforts aimed at repositioning it for effective and efficient administration through information and communication technology, Anambra State Ministry of Information and Public Enlightenment remains inefficient in administration and its quality of services to the public are below expectation. There are still some lapses as regard the quality of its administrative services, performance of workers, inability to access information and communicate properly as a result of computer breakdown, poor networks, epileptic power supply, inadequate working facilities, staff lack of skills and interest to learn and use it, etc. Based on the above defects, the researcher deemed it fit to assess the impact of information communication technology on administrative efficiency with special focus on Anambra state Ministry of Information and Public Enlightenment, (2010-2016).

### **Research Hypotheses**

The following Research Hypotheses will guide this study

1. Information communication technology does not play any role in accessing and managing information for timely decision making in the Ministry of Information and Public Enlightenment.
2. Information communication technology does not help in the storage and processing of data relevant for efficient administration in the Ministry of Information and Public Enlightenment.
3. Lack of staff with requisite skills is not a challenge to the use of information communication technology for administrative efficiency in the Ministry of Information and Public Enlightenment.

### **Information Communication Technology (ICT)**

ICT is an acronym that stands for information and communications technology. It encompasses all the uses of digital technology that already exist to help individuals, businesses and organizations, use information. Information and communication technology covers any device that can store, retrieve, manipulate, transmit or receive information electronically in a digital form, e.g., personal computers, digital television, email, robot. Blurton (2002) defines information and communication technologies as a diverse set of technological tools and resources used to communicate, and to create, disseminate, store and manage information. These technologies include computers, the Internet, broadcasting technologies (radio and television) and telephony. Information and communication technology when appropriately applied has the potential tools for enriching traditional means administration and enthrone efficiency in service delivery.

Information Communication Technology is concerned with the effective use of equipment's and programmes to access, store, convert, retrieve, organize, manipulate and present data. Information technology integrates both computer and communication technologies. It incorporates all kinds of electronic systems that are used for broadcasting, telecommunications and all kinds of computer mediated communications. Nwosu (2008) defined information and communications technology as the means of acquisition, processing, storage and dissemination of information by combination of computer and telecommunication tools and techniques. At the core of technology is the computer. The computer plays a vital role in information processing, generation, storage and transmission.

Information Communication Technology is a network which offers a steadily expanding range of new services that have major economic consequences for the standardization of information in universities (Nwafor, 2005). It is computer-based tools used by organization personnel in the processing of their information and communication needs. It encompasses the computer hardware and software, the network and several other devices, e.g., audio, video, photography, camera, etc., that convert information and so on into Information Communication Technologies in the management of Education common digital form (Yusuf, 2005). Njoku (2006) identified three categories of information and communication technology somewhere to be processed information (computer systems), disseminated information (telecommunication systems), and represented information (multi-media systems). Thus, information and communication technology are an electronic application of computing, communication, telecommunication and satellite technology. The prevalence and rapid development of information communication technologies (ICTs) has transformed human society from the information technology age to the knowledge age (Johnson, 2007).

The rapid growth in information and communication technologies has brought remarkable changes in our contemporary society. The use of information and communication technology is already indispensable in the area of administration in both private and public organizations as it helps in minimizing suffering and making administrative tasks easier. Information and communication technologies are the technologies used in conveying, manipulating and storing of data by electronic means. Since the last two decades, a lot of dynamic changes have taken place in the areas of socioeconomic, cultural, political, and educational and by extension diplomatic and international relations development. Information and communication technology is being envisaged as possessing the potential to transform society and impact positively on the lives of people, particularly the have-nots. People get empowered with information, but when they lack it, they often become isolated and ignorant about their rights and choices. That is to say, they could be lack of the basic knowledge about the political and developmental processes that shape their lives in society. Singh (2006) noted that information and communication technology is a powerful tool when used in the right way as part of overall development strategy. In the same vein, Boating (2007) opined that information and communication technology may not be a panacea to the world's problems but it can be a powerful tool to facilitate and enable affordable solutions to basic human developmental problems. It is widely accepted by intellectuals that information and communication technology has become an integral part of the social, economic and political paraphernalia of social interactions; hence countries all over the world are taking to information and communication technology for various developmental initiatives (Moghaddam and Khatoon-Abadi 2013; Gnaniyah, Yeo, Songan, Zen, and Ab-Hamid, 2004). As such, it can be argued that in the 21 century the role of information and communication technology in transforming the world into a better place for all (or at least for many) cannot be over-emphasized. Nowadays many people especially the poor and the uneducated more than ever before can have access to basic information and communication technology services like mobile communication, mobile banking, e-administration/ government, online transactions and sending emails to donor agencies and receiving instant feedback (Ebeling, 2003). The basic thing therefore is that information and communication technologies at various stages help man in adapting to his changing environment, increasing the value of life by successfully contending with the forces of nature and administering his environment to his advantages and growth.

### **Administrative Efficiency**

Administration entails the management of human and material resources for the actualization of set goals. It is aimed at efficient allocation of resources, policy analysis, identification of options, and implementation of programmes, taking into cognizance the non-static nature of organizational goals and the environment where the action is taking place. These actions take place within the context of organizations, which could either be in the public or private realms (Odum, 2008). Public administration is therefore the type that takes place within the public sphere. We see it as the machinery or process that drives the government towards

actualizing its set goals. It is a patterned instrument through which the government regulates, drives and manages all aspect of the society as well as provides essential goods and services to the general public, i.e., the citizens (Iwuoha, 2012).

Eghe (2002) defined public administration as the fulfillment or enforcement of public policy as declared by the competent authorities. It deals with the problems and powers, the organization and techniques of management involved in carrying out the law and policies formulated by the policy-making agencies of the government. Public administration is law in action; it is the executive side of government. Public administration is the machinery as well as the integral processes through which the government performs its functions (Nnoli, 1986).

While public administration shares many attributes of generic administration, it also exhibits its own distinct characteristics of public character, public interest component and a philosophical content. Public administration does not produce a single product or service. It is a multi-product, multi-service organization (Uchendu, 2001).

We understand efficiency to mean the act of getting the most output from the least number of inputs, sometimes referred to as “doing things right”. Using resources wisely and with a minimum of waste (Nwachukwu, 2006). It is the quality of doing things well or performing specific activities so that they are completed with no waste of time, money, energy or resources. Efficiency which is concerned with the maximization of profit, concerns itself with the capacity to produce optimally with a minimum of waste, a minimum of expense and of unnecessary efforts. It is primarily concerned with the high ratio of outputs to inputs (A kpan & Udoh, 2015).

Efficiency in public administration or administrative efficiency therefore, is basically doing things right. Public administration is essentially concerned with the management of organizations in pursuit of designed public goals and objectives. The ultimate goal of public administration is how to maximize the efficiency and social effectiveness of public administrative institutions (Obikeze and Obi 2004).

All administrators or managers strive to achieve efficiency. According to Robbins and Coutler (2002), administrative efficiency is the process of coordinating work activities in an organization so that they are completed through other people with careful use of resources and with a minimum of waste. It is the process by which administrators or workers in the organization achieve quality results for the organization or get the most output from the least number of inputs; which according to Drucker (1978), it is concerned with doing things right. Thus, administrative efficiency can be measured in terms of organizational survival, business status, profit or growth and expansion.

In view of the complex nature of the public administrative system in carrying out the activities and functions of government through established institutions designed to efficiently achieve the objective interests and welfare of the public, there is every need to make effective use of modern information and communication technologies if its goal must be realized.

#### Information, Communication Technology and Access to Managing Information for Timely Decision Making

Effective integration of information and communication technology in administrative organizations would call for a whole organization to be networked to ensure access to multimedia and administrative processes via the organization's Intranet and the Internet wherever the employees and management are, in or out of the organization. The computer labs and departmental computers need to be sufficient in number to allow ready access by staff and management in most operations across the organization. A wide range of peripheral and remote working devices, including video-conferencing, is provided and integrated into the framework (Singh, 1993).

The flow of information is central to every public administration system. It is the basis of efficient administration. Because of the criticality of information to an organization, ability to interpret such information correctly is very important. The Nigerian public administrative system can only achieve efficiency in its public administration if and only if workers in public organizations are skillful, properly educated and trained on the use of information communication technology.

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Perhaps, one of the greatest impacts that had a revolutionary force, which technology has made on public administration, is in the area of information management. Based on this technological accomplishment, people in administration can now access and manage information effectively and make timely decisions (Odum 2012).

According to Pathak, Naz, Singh, & Smith (2010), the use of information and communication technology, besides enhancing the efficiency and effectiveness of governmental administration for improved service delivery, has the potential of empowering administrators by making available to them an interactive access to and use of information. The last decade has witnessed a marginally improved information and communication technology adoption in public organizations in Nigeria. The sporadic diffusion of information and communication technology and its increasing acceptance and usage in Nigeria (Oni, Oni & Gbervbie, 2014) signals the potentials for the application of information and communication technology in Nigeria's administrative setup. Following the promulgation of the Telecommunications Act in July 2003 which further democratized the telecommunications space in Nigeria, the diffusion of mobile technologies has continued unabated (Owens-Ibie, 2004). The telecommunication landscape is steadily changing with the introduction of GSM (Global System for Mobile communication) services, which has increased accessibility and provided opportunity for people to connect. In early 2014, over 125 million of the population have subscribed to mobile technologies (Budde, 2014). This has transformed and improved administrative service quality, policy making and governance in the country (Oni, Ayo, Mbarika, Gbervbie & Folarin, 2014). There is therefore an urgent need to employ electronic mediated administration in all public agencies in view of prevailing concerns about the quality-of-service delivery in Nigeria.

Information and Communications Technology has been seen as an important tool for empowerment of public institutions for improvement in administrative efficiency. This is because of the potentials of information and communication technology to enhance consultation, openness, information, transparency, participation, accessibility, accountability, availability, timeliness and convenience as well as effective management of information, all which have been identified as key components of administrative processes (OECD, 1996). The development of information and communication technology - based public administration system nomenclature electronic administration or e-administration means that information and communication technology having an increasing effect on public institutions, which are heavily involved in the development of network infrastructures and related services (Hodos, 2014). For Batta, Sethi & Kaur (2012), e-administration is the use of information and communication technology to improve administrative processes and the internal working of departments within an organization. Olson and Lucas (1982) however, see the concept as the method of automating key administrative functions using information communication technologies. In e-administration therefore, information and communication technology are engaged for the support of administrative operations, for engaging citizens and for providing government services to the public (Saxena & Sharma, 2012).

The adoption of e-administration has the potentials of improving the internal workings of the Nigeria public service. This is because efficiency is a key success criteria of government involvements and information and communication technology driven processes increase the efficiency of government administration. This is a direct result of the replacement of the traditional bureaucratic approach by electronic information devices largely characterized by citizen-centric approach (Nam, 2014; Kohlborn, 2014). In this regards, e-administration enhances an interactive policy and decision-making process for efficient administration and good governance in Nigeria.

The various operations of e-administration include e-services (aimed at improving the delivery of public services, e.g., providing public documents online (such as birth certificates, driving licenses, vehicle registration etc.), obtaining information, electronic filing systems, making online payments, e-procurement systems, online time sheets and expense account, electronic memo (e-memo), electronic application submission and approval (e.g. annual leave, sick leave, etc.), word processing for generating correspondence, person-to-person communication via electronic message systems, teleconferencing services, facsimile transmission, on-line calendar systems, links to corporate files and outside services, decision support systems, the use of information and communication technology for work-related tasks. It also includes e-participation by enabling citizens to expose their opinion through public discussion in the law drafting processes as well as in various forms of debate conducted at specialized web portal of the government and a host of other activities via the World Wide Web (Olson & Lucas, 1982).

The use of information and communication technology in administration is becoming a common practice in the business world as more professionals use electronic mail, word processing, and social media networking. This electronic mail for instance, has been

used in the public organizations as a way of speeding the transmission of text messages within the organization as a substitute for internal messenger systems and perhaps, even for the services offered by the post office. The use of electronic mail has resulted in achieving effectiveness and efficiency in Nigerian public administration through information communication technology, a reduction in the number of telephone calls made and in the volume of letters that come through the post office. The argument is that the substitution of text messages for telephone calls should be a major characteristic of electronic mail systems within the Civil Service. Apart from helping to overcome some of the traditional drawbacks of the telephone such as the high percentage of wasted calls, constantly interrupting the receiver of the call, the use of the system to transmit one-way-information and so on, electronic mail fits nicely into the public administration culture. The messages are in text which is the medium with which public servants are most comfortable. Messages can be stored in the system thereby, providing a permanent record and an opportunity of searching stored record by using keywords and so on. There is the possibility that electronic mail system could be used to build up logical files being created by asking for all correspondences relating to a particular subject, say subject 'x' for instance. Images processing are not intrinsically alien to the culture of the public service. The power of a chart or a graph enhances effective presentation of a case. This would prove more attractive especially if the information technology system creates the image at the touch of a button. In this regard, a critical component of e-administration is its communication functions. Communication technology is the most significant factor in the redesigning of organizations through e-administration. These electronic methods of communication allow people to share information, documents and records seamlessly via the Internet instead of waiting for traditional mail and courier services. The use of information and communication technologies, especially the Internet to enhance the provision of information and interactive and accessible services over different channels, is thus, the foundation of e-administration. Public servants need to become skilled in the use of images in the same way they are using texts if optimum benefits are to be derived from it. This will certainly enhance efficiency and productivity in the public service (Akpan and Udoh, 2015).

#### Challenges Associated with the Use of Information Communication Technology in Administration

It is a known fact that modern technology produces high tech equipment's and devices that can be very helpful in public administration when applied properly. Truly, improper application of any device or machine is most likely to produce results different from what it was originally intended to. We have seen in the preceding sections that information and communication technology can be very helpful to public administration in so many ways. Among others, it can reduce suffering, enthrone efficiency, and give a sense of accomplishment to public servants. However, these gains can only be made possible if – all things being equal (Odum, 2012). Thus, the gains go with the challenges.

Evident abounds that it is the skill and attitude of public administrators that determines the effectiveness of technology integration into the system. Once employees are exposed to the right skills on information and communication technology usage, they could begin to find ways to integrate and apply same in their daily administrative operations. According to Odum (2012), the notion of applying a modern technology in public administration suggests that the old methods of doing things will be dropped for new ones. As such, new skills will be required under the circumstance. What this means is that in order to apply the new skills properly, there is need to re-train existing members of staff that have been used to the old methods or recruit new ones that already possess the requisite skills. But one of the problems being encountered in applying new technologies to public administration in developing countries like Nigeria is that the government does not usually take staff (re)training seriously. Without training the staff and making them adapt to the new skills, any machine or device acquired will be useless and may end up not enhancing service delivery. Also, ability and willingness of the staff to learn new skills and ideas most times constitute serious threat to the application of modern technologies to public administration. There is no doubt that some workers in the developing societies are adamant to change. Having been used to their old ways, they would rather prefer to continue with it than try something new.

Every public administration system especially in a developing country like Nigeria has for decades been faced with the problem of ghost workers arising from the inability of the system to ascertain the actual number of government employees. This problem could not have arisen if government had responded swiftly to the global trend of making effective use of information communication technology which would have made it possible to know the correct number of staff in the employ of government and as contained in the payroll as well as their identities in the computer systems. Also, there are persistent delays in public service delivery which is popularly referred to as "red-tapism" resulting from none or ineffective use of information communication

technology in the Nigerian public administration. In most reported cases, official files are misplaced or damaged in organizations. This would not have happened if the Nigerian public service has adapted fully to the use of information communication technology which would have provided an opportunity for information to be stored in the computer systems with networking facilities for security and easy access.

The information and communication technology infrastructure requirement for e-administration takeoff in Nigeria is still rudimentary despite its increased diffusion in the country. The cost of internet usage in Nigeria remains on the high side for majority of the people. The high costs of internet usage must be brought down in order to enable the people for whom the government is going online for to be able to benefit from it. Moreover, the epileptic power supply in Nigeria poses a great hindrance to e-administration in the country. For example, the state of power supply in Nigeria creates a problem for the application of all devices that require power to operate because in most cases power is not available. Very few of the teeming population have access to electricity as the power sector operates far below its capacity. Electricity consumption in the country is one of the lowest in sub-Saharan Africa. A decisive step must therefore be taken by the government to address the issue of power supply in Nigeria to enhance the implementation of e-administration for efficient public service delivery.

In the observation of Hodos (2014), however, the adoption and the successful application of information and communication technology in the operation of any government will depend on the awareness and understanding of the high cost involved and the assurance of continued funding that result from a careful analysis of its opportunity costs. This follows that the Nigerian Government must be genuinely committed to funding the adoption of information and communication technology in its agencies. It is pertinent to state that the paucity of committed leadership with the capacity to articulate broad e-government vision and also galvanize the necessary resources needed to implement e-government in Nigeria (Oni, Anyo, Mbarika, Gberevbie & Folarin 2014), constitutes great hindrance to e-administration adoption. Furthermore, as observed by Oni, Anyo, Mbarika, Gberevbie & Folarin (2014), e-governance and by implication, e-administration, is not just about the deployment of information and communication technology tools, the successful application of e-administration also depends on its usefulness and usability as well as proper maintenance of the devices. The poor maintenance culture that characterizes developing nations like Nigeria can also constitute threat to the application of modern technology to public administration. Facilities belonging to the government are often allowed to waste or put out of use on the simple reason that they developed faults, which are often minor faults.

Many laudable projects in Nigeria public service die at the instance of corruptive practices among government officers and e-administration can suffer the same faith. The spate of embezzlement of public funds is alarming in Nigeria. There are loopholes for embezzlement of funds allocated for projects, particularly, e-administration projects in public service, while the agencies for curbing corruptive practices are not properly constituted and empowered for objective tackling of corrupt cases. In most cases, they are the product of corrupt appointments and recruitments prevalent in developing countries (Kiragu 2002).

In view of these envisaged problems that have constituted a great challenge to the successful application of information and communication technology on public administration which in turn have led to poor service delivery and inefficient administration, Therefore, for any organization – whether government or privately owned like “Ministry of Information and Public Enlightenment Anambra State”, to be efficient and successful in their operations and meet the need of efficient service delivery, there must be availability of adequate, reliable, functional and efficient information and communication technology base; efficient and knowledgeable people with the technical and operational know-how on the use of the facilities; efficient and conducive infrastructures for the adaptation of information and communication technology; and efficient, supportive, visionary, corrupt-free and technological adept leadership.

#### Methodology and Analysis

Hypothesis One Information communication technology does not play any role in accessing and managing information for timely decision making in the Ministry of Information and Public Enlightenment.

This hypothesis was tested with tables 1, 2, 3, 4, 5, and 6.

#### Observed Frequency (FO) Table



Table	Response					Total
	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
<b>1</b>	140	51	9	15	5	<b>220</b>
<b>2</b>	109	91	0	11	9	<b>220</b>
<b>3</b>	80	100	10	20	10	<b>220</b>
<b>4</b>	75	59	31	29	26	<b>220</b>
<b>5</b>	100	81	19	10	10	<b>220</b>
<b>6</b>	66	115	15	15	9	<b>220</b>
<b>Total</b>	<b>570</b>	<b>497</b>	<b>84</b>	<b>100</b>	<b>69</b>	<b>1,320</b>

Expected Frequency (Fe) Table

Table	Response					Total
	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
<b>1</b>	95	82.8	14	16.6	11.5	<b>220</b>
<b>2</b>	95	82.8	14	16.6	11.5	<b>220</b>
<b>3</b>	95	82.8	14	16.6	11.5	<b>220</b>
<b>4</b>	95	82.8	14	16.6	11.5	<b>220</b>
<b>5</b>	95	82.8	14	16.6	11.5	<b>220</b>
<b>6</b>	95	82.8	14	16.6	11.5	<b>220</b>
<b>Total</b>	<b>570</b>	<b>497</b>	<b>84</b>	<b>100</b>	<b>69</b>	<b>1,320</b>

Calculation of Chi-Square (X<sup>2</sup>)

Fo	Fe	Fo-Fe	(Fo-Fe) <sup>2</sup>	(Fo-Fe) <sup>2</sup> /Fe
140	95	45	2,025	21.32
51	82.8	-31.8	1,011.24	12.21
9	14	-5	25	1.79
15	16.6	-1.6	2.56	0.15
5	11.5	-6.5	42.25	3.67
109	95	14	196	2.06

91	82.8	8.2	67.24	0.81
0	14	-14	196	14
11	16.6	-5.6	31.36	1.89
9	11.5	-2.5	6.25	0.54
80	95	-15	225	2.37
100	82.8	17.2	295.84	3.57
10	14	-4	16	1.14
20	16.6	3.4	11.56	0.70
10	11.5	-1.5	2.25	0.20
75	95	-20	400	4.21
59	82.8	-23.8	566.44	6.84
31	14	17	289	20.64
29	16.6	12.4	153.76	9.26
26	11.5	14.5	210.25	18.28
100	95	5	25	0.26
81	82.8	-1.8	3.24	0.04
19	14	5	25	1.79
10	16.6	-6.6	43.56	2.62
10	11.5	-1.5	2.25	0.20
66	95	-29	841	8.85
115	82.8	32.2	1,036.84	12.52
15	14	1	1	0.07
15	16.6	-1.6	2.56	0.15
9	11.5	-2.5	6.25	0.54
$X_C^2 =$				<b>152.69</b>

**Table Value Chi-Square (X<sup>2</sup>)**

Degree of Freedom = (R-1) (C-1)  
 = (6-1) (5-1)  
 = 5 x 4 = 20

Level of Significance at 20 Degree of Freedom at 0.05 is 31.41.

### Hypothesis Two

Information communication technology does not help in the storage and processing of data relevant for efficient administration in the Ministry of Information and Public Enlightenment.

Tables 7, 8, 9, 10, 11, and 12 were used to test the hypothesis.

### Observed Frequency (FO) Table

Table	Response					Total
	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
7	120	80	13	7	0	220
8	100	101	0	19	0	220
9	75	91	19	15	20	220
10	150	55	15	0	0	220
11	140	51	9	15	5	220
12	91	109	11	9	0	220
<b>Total</b>	<b>676</b>	<b>487</b>	<b>67</b>	<b>65</b>	<b>25</b>	<b>1,320</b>

### Expected Frequency (Fe) Table

Table	Response					Total
	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
7	112.67	81.17	11.17	10.83	4.17	220
8	112.67	81.17	11.17	10.83	4.17	220
9	112.67	81.17	11.17	10.83	4.17	220
10	112.67	81.17	11.17	10.83	4.17	220
11	112.67	81.17	11.17	10.83	4.17	220
12	112.67	81.17	11.17	10.83	4.17	220
<b>Total</b>	<b>676</b>	<b>487</b>	<b>67</b>	<b>65</b>	<b>25</b>	<b>1,320</b>

### Calculation of Chi-Square (X<sup>2</sup>)

Fo	Fe	Fo-Fe	(Fo-Fe) <sup>2</sup>	(Fo-Fe) <sup>2</sup> /Fe
120	112.67	7.33	53.73	0.48

80	81.17	-1.17	1.37	0.02
13	11.17	1.83	3.35	0.30
7	10.83	-3.83	14.67	1.35
0	4.17	-4.17	17.39	4.17
100	112.67	-12.67	160.53	1.42
101	81.17	19.83	393.23	4.84
0	11.17	-11.17	124.77	11.17
19	10.83	8.17	66.75	6.16
0	4.17	-4.17	17.39	4.17
75	112.67	-37.67	1,419.03	12.59
91	81.17	9.83	96.63	1.19
19	11.17	7.83	61.31	5.49
15	10.83	4.17	17.39	1.61
20	4.17	15.83	250.59	60.09
150	112.67	37.33	1,393.53	12.37
55	81.17	-26.17	684.87	8.44
15	11.17	3.83	14.67	1.31
0	10.83	-10.83	117.29	10.83
0	4.17	-4.17	17.39	4.17
140	112.67	27.33	746.93	6.63
51	81.17	-30.17	910.23	11.21
9	11.17	-2.17	4.71	0.42
15	10.83	4.17	17.39	1.61
5	4.17	0.83	0.69	0.17
91	112.67	-21.67	469.59	4.17
109	81.17	27.83	774.51	9.54
11	11.17	-0.17	0.03	2.69
9	10.83	-1.83	3.35	0.31
0	4.17	-4.17	17.39	4.17
$X_C^2 =$				<b>193.09</b>

**Table Value Chi-Square (X<sup>2</sup>)**

$$\begin{aligned} \text{Degree of Freedom} &= (R-1) (C-1) \\ &= (6-1) (5-1) \\ &= 5 \times 4 = 20 \end{aligned}$$

Level of Significance at 20 Degree of Freedom at 0.05 is 31.41.

**Hypothesis Three**

Lack of staff with requisite skills is not a challenge to the use of information communication technology in the Ministry of Information and Public Enlightenment.

Tables 13, 14, 15, 16, 17, and 18 were used to test the hypothesis.

**Observed Frequency (FO) Table**

Table	Response					Total
	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
<b>13</b>	66	66	40	24	24	<b>220</b>
<b>14</b>	75	59	31	29	26	<b>220</b>
<b>15</b>	81	100	10	19	10	<b>220</b>
<b>16</b>	130	70	10	10	0	<b>220</b>
<b>17</b>	80	100	20	10	10	<b>220</b>
<b>18</b>	95	55	40	19	11	<b>220</b>
<b>Total</b>	<b>527</b>	<b>450</b>	<b>151</b>	<b>111</b>	<b>81</b>	<b>1,320</b>

**Expected Frequency (Fe) Table**

Table	Response	Total
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	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	
<b>13</b>	87.83	75	25.17	18.5	13.5	<b>220</b>
<b>14</b>	87.83	75	25.17	18.5	13.5	<b>220</b>
<b>15</b>	87.83	75	25.17	18.5	13.5	<b>220</b>
<b>16</b>	87.83	75	25.17	18.5	13.5	<b>220</b>
<b>17</b>	87.83	75	25.17	18.5	13.5	<b>220</b>
<b>18</b>	87.83	75	25.17	18.5	13.5	<b>220</b>
<b>Total</b>	<b>527</b>	<b>450</b>	<b>151</b>	<b>111</b>	<b>81</b>	<b>1,320</b>

Calculation of Chi-Square (X<sup>2</sup>)

Fo	Fe	Fo-Fe	(Fo-Fe) <sup>2</sup>	(Fo-Fe) <sup>2</sup> /Fe
66	87.83	-21.83	476.55	5.43
66	75	-9	81	1.08
40	25.17	14.83	219.93	8.74
24	18.5	5.5	30.25	1.64
24	13.5	10.5	110.25	8.17
75	87.83	-12.83	164.61	1.87
59	75	-16	256	3.41
31	25.17	5.83	33.99	1.35
29	18.5	10.5	110.25	5.96
26	13.5	12.5	156.25	11.57
81	87.83	-6.83	46.65	0.53
100	75	25	625	8.33
10	25.17	-15.17	230.13	9.14
19	18.5	0.5	0.25	0.01
10	13.5	-3.5	12.25	0.91
130	87.83	42.17	1,778.31	20.25
70	75	-5	25	0.33
10	25.17	-15.17	230.13	9.14
10	18.5	-8.5	72.25	3.91

0	13.5	-13.5	182.25	13.5
80	87.83	-7.83	61.31	0.70
100	75	25	625	8.33
20	25.17	-5.17	26.73	1.06
10	18.5	-8.5	72.25	3.91
10	13.5	-3.5	12.25	0.91
95	87.83	7.17	51.41	0.59
55	75	-20	400	5.33
40	25.17	12.83	164.61	6.06
19	18.5	0.5	0.25	0.01
11	13.5	-2.5	6.25	0.46
$\Sigma C^2 =$				<b>142.63</b>

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**Table Value Chi-Square (X<sup>2</sup>)**

Degree of Freedom =	(R-1) (C-1)
=	(6-1) (5-1)
=	5 x 4 = 20

Level of Significance at 20 Degree of Freedom at 0.05 is 31.41.

### The Theory

Rogers' Diffusion of Innovation Theory originated from communication to explain how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behavior, or product. Adoption means that a person does something differently than what they had previously (i.e., purchase or use a new product, acquire and perform a new behaviour, etc.). The key to adoption is that the person must perceive the idea, behaviour, or product as new or innovative. It is through this that diffusion is possible (Rogers, 1962).

Rogers (2003) conceptualizes an innovation as an idea, practice, or object perceived as new by an individual. According to Putzer & Park (2010), innovation is reflected in novel outputs: a new good or a new quality of good; a new method of production; a new market; a new source of supply; a new managerial technique; or a new organizational structure. Thus, an innovation of interest in a given situation can be an information and communication technology such as a smartphone; the innovation could be an application of the internet in a specific area such as the library; government offices; or social communication.

Rogers (2003) sees diffusion as a process in which an innovation is communicated through certain channels overtime among members of a 'social system', where a social system is a set of interrelated units that are engaged in joint problem solving to accomplish a common goal. The members or units of a social system may be individuals, informal groups, organizations and or subsystems. In other words, a social system is an organization of interest. Rogers (2003) asserts that "diffusion is a special type of communication in which messages are about a new idea. This newness of the idea in the message content gives diffusion its special character". He further stresses that diffusion is a kind of social change, defined as a process by which alteration occurs in the structure and function of a social system. Thus, when new ideas are invented, diffused, and adopted or rejected, leading to

certain consequences, social change occurs. Therefore, according Rogers, "adoption" is the decision to make full use of an innovation as the best course of action available.

Adoption of a new idea, behaviour, or product (i.e., "innovation") does not happen simultaneously in a social system; rather it is a process whereby some people are more apt to adopt the innovation than others (Kelleher & Sweetser, 2012), when promoting an innovation to a target population, it is important to understand the characteristics of the target population that will help or hinder adoption of the innovation. According to Rogers (2003), the theory relates innovation diffusion and/ or adoption to three categories of correlates, namely the characteristics of the individual potential adopter, how the adopter perceives the innovation, and the characteristics of the social system or organization where the potential adopter is. Regarding the individual characteristics of the potential adopter as correlates of innovation diffusion and/ or adoption, Rogers stipulates that an individual's propensity to adopt or use any innovation such as information and communication technology depends on the individual characteristics of that person. Such individual adopter characteristics include the extent to which that person interacts with the change agents of relevance to the innovation in question; the level of training of relevance to the innovation the person has received; how cosmopolitan (i.e., urban influenced or non-conservative) the person is; how old the person is; the gender and the income level of the person. If the person interacts much with the change agents of relevance to the innovation in question, then that person will have a high propensity to adopt the innovation. If the person has a high level of training of relevance to the innovation, then that person will have a high propensity to adopt the innovation. If the person is cosmopolitan, then that person will have a high propensity to use the innovation. The older a person becomes, the less that person will be attracted to adopt innovations. In terms of the gender, the males are usually more apt to use innovations than the females. The wealthier a person becomes, the more able that person will be to acquire and hence to adopt innovations.

With respect to the perceived characteristics of the innovation as correlates of innovation adoption, Rogers' theory stipulates that an individual's propensity to adopt or use any innovation, depends on the way that individual perceives the innovation in terms of such issues as its relative advantage, compatibility, user friendliness and 'observability'. If the individual perceives the innovation to have relative advantage over similar products or services say in terms of speed of performance, then that individual will have a high propensity to adopt the innovation. If the individual perceives the innovation to be compatible with the individual's work and interests, then that individual will have a high propensity to adopt the innovation. If the individual perceives the innovation to be user friendly, then that individual will have a high propensity to adopt the innovation. If the individual perceives the innovation to be observable, that is to have observable impact on the work of colleagues, then that individual will have a high propensity to adopt the innovation (Bakkabulindi, 2014).

Lastly, on the nature of the social system or organizational characteristics as correlates of innovation diffusion and/ or adoption, Rogers (2003) stipulates that an individual's propensity to adopt or use any innovation depends on the organization where that individual is. That is whether the social system or organization is ready for change; whether the social system or organization has a good culture that facilitates change; whether the size of the social system or organization is fit for change; whether the leader of the social system or organization is for change and facilitates change. The more positive the answers to these questions, the easier it will be for an individual in that organization to adopt change.

Thus, according to Buaben-Andoh (2012), the theory is very important in that it is the original theory that guides studies on the diffusion and/ or adoption of innovation. It is also more relevant and elaborate in so far as it considers the technological, individual, organizational and institutional factors when examining innovation adoption.

### **Findings**

The focus of this study was to assess the impact of information communication technology on administrative efficiency: a study of Ministry of Information and Public Enlightenment, Anambra State, 2010-2019. Hence, following a careful study and analysis of data obtained, the following findings as summarized below were made, viz:

- Full application of Information communication technology is significant to accessing and managing information for timely decision making in the Ministry of Information and Public Enlightenment. This is because it will encourage effective and timely performance of administrative functions by making information easily accessible.



- The application of Information communication technology will augment manual operations and filing system of information storage and processing of data relevant for efficient administration in the Ministry. With ICT application, information can be easily sourced, stored, processed and disseminated. It improves the management of the Ministry's activities and staff's data, accounts, and records in the form of electronic filing systems, online payments, e-procurement systems, online time sheets and expense accounts for efficient administration and service delivery.
- Lack of staff with requisite skills is a challenge to the use of information communication technology for administrative efficiency in the Ministry of Information and Public Enlightenment. This is because staff are not properly exposed to the right skills and knowledge on information communication technology usage which affects its proper integration and application in their daily administrative works. Also, inadequate training and timely re-training of staff as well as paucity of staff with the requisite technical and operational know-how on the use of information communication technology to perform administrative works hinder efficient service delivery in the Ministry.

### Conclusion

It is a well-known fact that the revolution in information communication technology has ushered in a new paradigm of administrative efficiency leading to improved delivery of public services. Through the study, we understand that the adoption of information communication technology in the administration of public services in Nigeria especially in the Ministry of Information and Public Enlightenment, Anambra State, has been seen to improve the quality of public services provided by the Ministry and other government institutions and agencies to the citizens in an efficient, cost-effective and convenient manner and make the processes of governmental administration more transparent and accountable to the public. Hence, in order to ensure efficient administration and effective service delivery in the Ministry's core functions of making genuine information available and timely communicating same to and enlightening the general public on the happenings in the society, predisposes it into the adoption of information and communication technology.

### Recommendations

Following the completion of this study and the findings made therein, the following recommendations were made for an improved administrative efficiency through information communication technology in the Ministry and other public organizations.

- Training and timely re-training of staff on information communication technology should be prioritized and encouraged so as to have enough staff with requisite skills and knowledge on the technical and operational know-how on the use of information communication technology to perform administrative works efficiently.
- There is urgent need for re-orientation of the Nigerian employees as some of them are adamant to change and adopt a new method of doing things in the changing world. They should be encouraged to change their attitude, learn new skills and ideas of the modern technology and its application in their daily operations which is necessary for efficient public service delivery.
- Government should show genuine commitment to funding the adoption of information communication technology in its agencies as well as providing enabling environment/ infrastructures for its successful adoption and application. This will give a sense of accomplishment to the public servants and enhance the implementation of e-administration for efficient administration.

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