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Effects of the Use of ICT on Public Administrator's Service Delivery: A Study of Edo Specialist Hospital Benin City, Edo State, Nigeria

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Abstract: The study focused on effect of information and communication technology (ICT) on service delivery in Nigerian public service industry using Edo State Specialist Hospital as a Case Study. The study is empirical and data were collected through questionnaire which was conducted among 102 respondents. The research work investigates the effects of Information and Communication Technology (ICT) on public service delivery in Nigeria. The data generated were analyzed using frequencies and simple percentages and the hypothesis tested via Chi-square (X^2). The study is situated on public choice theory and Weber's bureaucratic model. The study reveals that the availability of technological facilities within the study area significantly improve the Quality of Service Delivery in the Edo State Specialist hospital. Also, the respondents indicated that technology has significantly affected service delivery in the study area, reduced mortality and fatality rate and, improved customer service, in the usage of the various available technological facilities. Consequently, the research recommends that hospital workers should improve on their skills on the handling of new technological equipment and facilities and also ensure the effectiveness and efficiency of these facilities. Managements of the study area should ensure regular maintenance of these technological facilities in order to ensure maximization. The study concludes that power is a major factor affecting use of ICT in the hospital.

Keywords: Hospital, public service delivery, information communication technology, power

I. Introduction

The impact of information and communication technology (ICT) on public administration service delivery cannot be overstated. The hub of public service delivery is public administrators. Every aspect of society is affected by it. Its reach extends from the womb to the tomb, and it embraces every component of society, including agriculture, transportation, government, administration, engineering, finance, health, and so on. According to Omotosho and Ayegba (2019), the use of ICT in many areas of the world economy has been beneficial, and it is believed that the application of computers and technology would improve good health care at an inexpensive rate.

It is important to highlight that some sectors in Western nations have embraced the use of ICT in socioeconomic growth, including the health and education sectors. Meanwhile, health care is a key concern in underdeveloped countries. While the health and education sectors have benefited from the implementation of ICT policies, fundamental problems within the healthcare sector, particularly in Nigeria, have hurt organizations and people. A good evaluation of the impact of ICT application in the health sector is likely to aid in the advancement of ICT policy and its timely implementation.

The term technology has several definitions; it comes from the Greek word "techne," which means "actions by which man seeks to adapt to his surroundings." Hornby (2012) defined technology as scientific knowledge that is applied in practical ways, particularly in the design of new machinery, machines, and equipment. Information and communication technology (ICT) is defined as the use of digital devices for corporate functions and operations. Cooper, Fletcher, Fyall, Gilbert, and Wanhill (2013) define ICT as the use of software, net ware, hardware, groupware, telecommunications, and academic ability, also called as human ware, to design programs and maintain tools. The health sector is one of the most important sectors of public service delivery that has a direct influence on citizens.

A healthy nation is a prosperous nation, according to common belief. It goes without saying that the health sector has traditionally relied on technology. WHO (2004) believes that the use of technology is necessary for the prevention, diagnosis, and treatment of illness and disease. According to Daly (2003), if the necessary resources, policies, organizations, and institutions are in place, information and communication technology (ICT) may be a powerful weapon in the hands of people working to improve health

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care. As a result, the purpose of this study is to investigate the essential challenges related with healthcare delivery in Nigeria in light of the usage of ICT in the health sector.It is appropriate to point out that one of the most important aspects of development is easily available and high-quality health care. This paper's nexus is formed by these and many more factors.

II. Statement of the Problem

There is no doubting that service delivery in Nigeria's health sector has been terrible. Because of the poor, delayed, insufficient, and inefficient service delivery in the health sector, many Nigerians, large and little, have sought health treatment overseas. Many Nigerians perished from diseases that may have been readily recognized and treated with effective ICT deployment. Most hospitals are under-equipped and lack sufficient technology, which may have assisted in the sector's effective and efficient service delivery. Because of a lack of proper ICT technology, outbreaks of communicable or infectious illnesses or epidemics are difficult to communicate by health sectors. This has sparked global debate on the potential of ICTs to improve the health and well-being of the poor and underprivileged in society. ICTs have enormous promise as instruments for increasing information flows and spreading evidence-based knowledge, as well as for empowering individuals. Despite these advantages, ICTs have not been widely used to enhance equal health care access in Nigeria. These, and many other factors, shaped the core of this study.

Objectives of Study

The main objectives of the study are to:

i. ascertain whether there is a link between the usage of ICT and effective service delivery in Edo State Specialist Hospital in Benin City.

ii. determine whether there is a favorable association between the usage of ICT and a decrease in mortality and fatality rates at Edo State Specialist Hospital.

iii. determine if Edo State Specialist Hospital's ICT facilities are appropriately deployed.

iv. recommend ways to strengthen the application of ICT in the Nigeria health sector.

Research Hypotheses

Hypothesis 1

Ho: There is no link between the use of ICT and effective service delivery in Edo State Specialist Hospital Benin City.

Hypothesis 2

Ho: There is no favourable association between the use of ICT and the decline in mortality and fatality rates in Edo Specialist Hospital.

Hypothesis 3

Ho: There is no effective deployment of ICT facilities in Edo Specialist Hospital Benin City.

The concept of ICT in the Health Sector

ICT in the health sector can also refer to e-health or health information technology, which includes telemedicine and medical informatics. Adesoji, Bankole, and Josephine (2002). The concept of transitioning our health-care system from paper-based record keeping and reference reasons to a computer-based approach is widely acknowledged. According to Burger, Eaton, and Hess (2017), the benefit of this is thatit will help to safeguard patient information, especially from fire outbreak or from rodents.

Oyegoke,(2013). opined that, in addition to providing easy access to medical records and prescriptions in a timely manner without having to search through files on shelves, the e-health method can also alleviate problems such as patients' time spent waiting for their turn, missing cards and files of patients, a lack of information, and so on. This will result in improved service for the patient, increased survival chances, and proper treatment for individuals because there is more knowledge about them, which will speed up the doctor's job in order to please the patients.

It is worth noting that ICT has recently become a veritable medium of expression for health-care employees such as medical laboratory scientists, radiologists, doctors, and nurses. ICT has been integrated into the healthcare delivery system, particularly in developed countries where doctors can hardly perform their duties without relying on ICT tools such as computers or network facilities for disease and injury prevention, promotion of healthy living, relief of pain and suffering, treatment of persons with disorder, prevention of premature death, and so on (Olorode, &Oladunni, 2019).

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According to Ndukwe (2004), health professionals may build up internet facilities for intense patient monitoring services, allowing doctors to watch their patients from afar, check their vital signs in real time, and give appropriate treatment suggestions. In addition to the foregoing, several health professionals rely on ICTs for information sharing. It simplifies and improves surgery by allowing doctors to view the region of the body that will be the topic of the operation using an endoscope, scanned pictures of tumors, or other technology instruments to facilitate surgical interventions with minimal problems.

However, it is vital to note that inadequate ICT in the health sector would not only impede individual social and economic advancement, but may also have a detrimental impact on national economic prospects, particularly in emerging nations such as Nigeria. The latest Covid 19 epidemic in the world has caused an economic slowdown and has nearly halted economic activity globally. Mimbi and Bankole (2015). Thus, in order for Nigeria's healthcare services to achieve global standards, there is a need for an upgrade in medical treatment through the use of Information Communication Technology (ICT) to healthcare delivery systems. This is owing to the increased number of life-threatening disorders, some of which have defied treatment (Idowu, Amusan, &Ozoya, 2013).The use of ICT to the Nigerian health system would encourage electronic health (e-health), which may significantly contribute to healthcare delivery by providing excellent health services with simple access at a reasonable cost.

Despite this, the Nigerian government recommended a wide and unifying Health ICT strategy that may be used to drive demand for better quality health services and the adoption of appropriate IT solutions in the health sector. One means to accomplish this goal is through the development of the National Health Promotion Policy in 2016, which established an ICT department to help the health sector electronically by digitizing and automating different healthcare operations. The Policy also includes robust infrastructure and technical support for solutions from the Federal Ministry of Communication, the Federal Ministry of Science and Technology, the Federation's Office of the Head of Service, and the National Information Technology Development Agency.

It is legitimate to assert that competent IT equipment is required for the dissemination of health information throughout Nigerian society. (Quy 2000; Tamrat &Kachnowski, 2012; Ducut &Fontelo 2008). These social networks have evolved into a powerful tool for raising awareness in the event of an epidemic. The employment of information technology tools has enabled social inclusion and civic involvement. ICT is used in a variety of healthcare delivery settings (Asiabaka 2010; Asian 2007; Babalobi, 2010; Babalobi, Westhuizen, & Croft 2006; Chiemeke& Longe 2007).

ICT and Effective Service Delivery in the Nigeria Public Sector

The public sector has had difficulty accepting and implementing technical innovations, as well as utilizing ICT (Onifade, 2009; Ifinedo, 2012). Furthermore, Agbatogun, (2011) argued that the global economy has increasingly relied on the implementation of ICT to obtain, process, and disseminate information, and that public servants in developing countries make up a sizable portion of their developing economies, from which they continue to benefit from ICT services.Edward and Charles (2014) noted differences in ICT adoption by developing and developed countries, with poorer countries lagging behind as a consequence of issues impeding them. According to a study done by Brynjolfsson, and Hitt . (2000), ICTs ensure that the public sector is at the service of everyone; the study shows that ICTs have a positive impact on human resource performance, improved documentation processing, and an efficient filling system. In fact, extant literature is replete with the great opportunities of ICTs as an efficient and effective means of public service delivery.

The cost of processing information can be greatly reduced with the use of ICTs in Nigeria's governmental sector. By facilitating quicker information sharing, this procedure lowers the frequency of data collection when it is handled manually. Due to travel fees and other allowances and expenses, manually obtained data is more expensive. Edward andCharles (2014)assert that if developing nations consistently implement e-government frameworks, it will significantly reduce the incidence of process inefficiencies by allowing data and file sharing across government agencies and departments, which helps to eliminate human errors from manual procedures and permits quick and straightforward transactions. According to Ewuim , Igbokwe and Nkomah(2016), e-government projects put government services online, decreasing bureaucratic bottlenecks. They also provide 24/7 accessibility, quick and convenient transactions, and undoubtedly improve the quality of service.

III. Theoretical Framework

This research work will be anchored on the new public administration theory, Marx Weber's bureaucratic model, that formed the fulcrum of classical theory of administration in late twentieth century, which left Wilson's political and administrative dichotomy and Taylor's scientific approach to management a new paradigm that included a post-bureaucratic understanding (O'flynn, 2007: 354). This paradigm shift has greatly influenced public administration. In late 1970's, the failure of the classical theory in public administration to meet the changing circumstances has precipitated the restructuring efforts in public administration.

Dieffenbach, argued that the new approach to public administration is a paradigm shift from classical understanding and innovation in management. The aim is to enhance organizational productivity by giving priority to individual and institutional performance and motivation issues through innovation and technology. (Diefenbach, 2009: 899). The rationale of the approach is

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the application of tools and methods such as information communication technology to achieve the profit motive of the private sector, while attaining the social objective in public sector. The theories of economics and the business sense of business administration in the discipline of public administration and supporting them politically with the new right ideology. In the emergence of the new public administration, as Hood suggests, a combination of two theories seems to be in question.

The first of these is the "business enterprise" concept called "new institutional economy" in which public choice, transaction cost and responsibility theory are involved and the other is the implementation of a private sector-oriented public administration.The term new public management encompasses a wide range of techniques and perspectives that are intended to overcome the inefficiencies inherent in the traditional model of public administration. Robert Behn defines the New Public Management as the entire collection of tactics and strategies that seek to enhance the performance of the public sector.

IV. Methodology

This study used a descriptive survey approach, and oral interviews with chosen members of the administration and employees at Edo Specialist Hospital in Benin City were undertaken. 38 respondents from the study's environment's (102) respondents made up the sample size. This result was obtained by applying the Taro Yamane formula**.**

The study First use the simple random sampling lottery/physical mixed method to select Edo State Specialist Hospital Benin, Benin city, Edo state Nigeria. Secondly, stratified sampling technique was use to separate the employees of the hospital into their rank or level that is the Senior Management Staff, Junior Management Staff, AdministrativeStaff,Doctors, Nurses and AuxiliaryStaff.To ensure content validity, the researcher carry out a review of the items in order to identify the items required.The measurement of the concept of ICT and the effect on public administrator's service delivery in Nigeria was done. In order to examine and distinguish the necessary elements of this study, the instrument also have an additional section of questions relating to those factors as hypothesized in the local context of this study. the variables in the questionnaire were termed to be reliable judging by the fact that it varies between 0 and 1 and the nearer the result is to 1-, and preferably at or over 0.8- the more internally reliable is the scale. The data collected through questionnaire were analyzed using frequencies and simple percentages and the hypothesis tested via Chi-square (X^2).

Table 1: Distribution of respondents by socio-economic characteristics:

Socio-economic characteristics	**Frequency**	**Percentage**
Sex		
Male	20	52.9
Female	18	47.1
Age		
20- 30 years	15	39.2
30- 40 years	17	46.1
40 and above	6	14.7
Education Qualification		
SSCE/ND/Nursing	15	39.2
BSC/HND	10	27.4
MBBS	9	23.6
No Formal Education	4	9.8
Position in the Hospital		
Medical Doctors	5	11.8
Administrators	7	17.7
Nurses	12	32.3
Labouratorist	3	8.8

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Drivers	4	9.8
Cleaners	5	11.8
Security	2	7.8
Working Experience		
1-5years	26	67.6
5-10years	12	32.4
Total	38	100

Sources: field survey 2023

Table 2: shows the deployment of ICT facilities in Edo Specialist Hospital

Technological facilities	**Available**		**Not Available**	
	Frequency	Percentage	frequency	Percentage
Mechanical lift	27	26.5	75	73.5
internet service	102	100	-	-
Thermometer	98	96.1	4	3.9
Stethoscopes	98	96.1	4	3.9
Syringe pump	94	92.2	8	7.8
Ambulances	102	100	-	-
Hem cytometer	19	18.6	83	81.4
Oximeter	16	15.7	86	84.3
Oxygen Concentrator	94	92.2	8	7.8
ECG Caliper	20	19.6	82	80.4
Ultrasonic Nebulizer	75	73.5	27	26.5
3D Mini shaker	82	80.4	20	19.6
Printer and fax machine	102	100	-	-
Functional computers	99	97.1	3	2.9
Computer based staff record	82	80.4	20	19.6
Personal Digital assistance	86	84.3	16	15.7
Carts	75	73.5	27	26.5
CCTV Cameral	86	84.3	16	15.7

Source: Field Survey 2023

Table 2 shows the technological facility available in the hospital. 73.5% of the respondents said that there is no mechanical lift while 26.5% of the respondents said there is in the hospital. Also from the table 100% of the respondents said internet service is available in the hospital. It can also be seen from the table below that 96.1 % of the respondents said the hospital have Good and functional thermometer and stethoscopes. The table also revealed that 100% of the respondents said the Hospital have functional computer, printer and fax machines and ambulances while 18.6% of the respondents said Hermacetometer is available in the hospital. The table also reveals that the majority of the technological facilities available for use in the study areas include CCTV cameras (84.3%), Computer based records (80.4%), Oxygen concentrator 92.2%, Personal Digital Assistance (84.3%), 3D Mini shaker (80.4%), ultrasonic Nebulizer (73.5%), Carts (73.5%). Majority of the respondents said there is effective deployment in Edo specialist hospital.

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Table 3: The correlation between ICT and public service delivery in the study area

Perception statement	SA		A		U		D		SD	
	freq	%	freq	%	freq	%	Frequency	%	Freq.	%
The use of technology has increase performance in the hospital	3	2.9	99	97.1	-	-	-	-	-	-
There is no effective deployment of ICT facility in Edo specialist hospital	10	9.8	17	16.7	3	6.9	40	39.2	28	27.4
The mortality and fatality rate has reduced drastically since the application of ICT	15	14.7	40	39.2	17	16.7	20	23.6	10	9.8
The use of ICT has increase awareness in the Study area	3	2.9	25	24.5	30	29.4	23	22.5	21	20.5
The use of ICT has made our work less stressful	20	23.6	48	47.1	4	3.9	17	16.7	13	12.7

Source: field survey 2023

Table 3 shows the correlation between information communication technology and public service delivery in Nigeria. The table reveals that 97.1% of the respondents agreed that the use of technologies has increase workers' performance in Edo State Specialist Hospital while 2.9% of the respondents strongly agreed respectively. Also from the table 66.6% of the respondents disagreed that there is no effective deployment of ICT facilities in Edo Specialist Hospital, 26.5% agree that there is no effective deployment of ICT facilities in Edo Specialist Hospital while the remaining 6.9% where undecided .It was further revealed that 39.2% of the respondents agree that mortality and fatality rate at the hospital drop drastically since the application of the information communication technology equipment, 14.7 % strongly agree, 23.6% Disagree, 9.8 strongly disagree while the remaining 16.7 % were undecided . 47.1 % of the respondents in the study area agree that the use of ICT has made their work load less stressful ,23.6 strongly agree ,16.7% Disagree, 12.7 % strongly disagree and 3.9 percent were undecided. Majority of the respondent said there is positive correlation between ICT and Service delivery in Edo Specialist hospital.

Table 4: challenges militating against the application of ICT in the study area

Challenges	Very serious			Serious			Not Serious	
	freq	%		Freq	%		Freq	%
Erratic power supply	75	73.5		3	2.9		24	23.5
Network problem (poor internet coverage)	2	2.0		36	35.3		64	62.7

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Lack of adequate Skill and personal	40	39.2		47	46.1		15	14.7
Inability to maintain the equipment	-	-		3	2.9		99	97.1

Sources: field survey 2023

Table 4 shows the challenges militating against the application ICT in the Nigeria Health sector. The table revealed that majority of the respondents of about 73.5% indicated erratic power supply as a very serious problem facing the use of hospital technological facilities in the study area. It was further revealed from the table that 62.7% of the respondents that network problem as not a serious challenge facing technology usage in the study area respectively. The table also shows that 39.2 % of the respondents believe that lack of adequate skills and personnel is a very serious problem militating against the use of ICT in Edo State Specialist Hospital, 46.1% says it is serious problem while the remaining 14.7 percent did not see it as anything serious. Majority of the respondents of about 97.1% revealed that inability to maintain the ICT equipment is not a serious problem militating against the application of the use of ICT in Edo State Specialist Hospital.

Table 5: Chi-square analysis of the significant relationship between respondents' Service delivery and the use of information communication technology.

Table 5

Variables	Df	x^2 tab	x^2cal	Sig	Decision
Respondents' perception	46	171.286	174.070[a]	Significant	Reject Ho

Table 5 showing Chi-square analysis of the relationship between respondents' perception and the use of technological facilities revealed that the chi-square calculated score ($\chi 2$ = 174.070a, $p<0.05$) is greater than the chi-square tabulated ($\chi 2$ = 171.286, $p<0.05$). The null hypothesis is therefore rejected. The implication of this is that there is significant relationship between the use of ICT and public service delivery in the study area, respondents' attitude shows that ICT has led to increase in performance by public servants that work in the hospital.

V. Summary of findings

The study focused on the effects of Information and Communication Technology (ICT) on public service delivery in Nigeria. Using Edo State Specialist Hospital, Benin City, Edo State, Nigeria. It was found out from this research that the hospital has various technological facilities available for use in the study area.

Result shows that use of technologies has increase performance in the hospital and the Use of technology has help to reduce mortality and fatality rates in the study area. Also, the respondents indicated that technology has improved rate of patronage, reduced cost of operations, improved customer service and increased awareness in the study area respectively. It was also obtained from the respondents that most of the challenges facing technological utilization in the study area are power supply and that network problem is not a very serious challenge militating against the use of ICT in the study area.

VI. Conclusion

It can be concluded from this research that information communication technologies were in use in the study area with a positive impact on patient experience and that of the industry but their service could be more improved when most of these technological facilities are more effective in their usage and the issue of power supply is seriously handled.

VII. Recommendations

Sequel to the above findings, the researchers recommend the following:

1. Public servants in the study area should ensure the adequacy of the use of information communication technology.
2. The Government should as a matter of urgency try to handle the issue of epileptic power supply as it is a major factor militating against the use of ICT in most public service.

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3. That public servant should improve on their Skills on communication technology.

References

1. Adesoji, K., Bankole, F., and Josephine A. (2012). The impact and challenges of information and Communication technology on health care delivery in Nigeria. MUNFOLLI Journal3 (1)
2. Agbatogun, A. O., (2011). "Computer-Assisted Programmed Instruction Revisited: A Study on Teaching Typewriting in Nigeria Higher Institution", Asian Journal of Information Technology, 10(2): 60-64. Appah
3. Akunyili, D., (2010). ICT and E-Governance in Nigeria opportunities and challenges" An address by the minister of information and communication Prof Dora Akunyih, at the world congress on information technology, Amsterdam, the Netherland 25-27.
4. Asiabaka, P. (2010). "Access and use of information and communication technology (ICT) for Administrative purpose by principals of government secondary school in Nigeria. Reasearcher2 (1)43-50. Retrieve from www.sciencepub.net/researcher
5. Asian, M., (2007). Information and communication technology penetration in Nigeria: Prospects, Challenges and metrics. Asian Journal of information technology 6(3)
6. Augustine, E., Joseph N. and Sunday O., (2015). Assessment of effectiveness use of ICT Components for service delivery in Etsako west Local Government area of Edo State, Nigeria. British Journal of Economics, Management and Trade 6 (3)
7. Babalobi, O. (2010). Internet web communication technology (VUCT) and information Communication technology (ICT) developing and use for Veterinary Medicine Education in Nigeria (2000-2009) Nigeria veterinary journal 31(3) 185-194
8. Beldona, S.,andObaniglu, C., (2007). Importance – performance analysis of guest technologies in the lodgina industry. Cornell hotel and restaurant. Administrative quarterly 48 (3)
9. Brynjolfsson, E. and Hitt L. (2000), "Beyond Computation: Information Technology, Organization Transformation and Business Performance," Journal of Economic Perspectives, 14: 23-48.
10. Burger C. Eaton R,& Hess K .(2017). A system-based Approach to managing patient Safety in Ambulatory Care and beyond Available online at https://www.psqh.com/analysis/system-based-approach-care-beyound.
11. Chiemeke, S. and Longe B., (2007). Information and communication technology penetration in Nigeria: Prospects, challenges and metrics: Asian Journal of Information Technology 6(3)
12. Cooper C, Fletcher J., Fyall, A., Gilbert, D., and wanhill, S. (2013). Tourism principles and practice (5th Ed) London: Pearson Education limited.
13. Daly, J (2003). Information and communication technology applied to the millennium development goals. http://topic.develomentgateway.orf/ict
14. Dhakai, T and Jamil 1 (2011). Prospect and challenges of E-governance for service delivery in Nepal retrieved from http://unpan/.intradoc/groups/public/documents/apcity/unpan.pdf
15. Ducut, E and fontelo.P (2008). Mobile Device in health education: Current use and practice Journal of Computing in Higher Education 20(2)
16. Edward O. and Charles O. (2014): "New Wine in Old Wine Skin: An Exploration of Major Constraints to E-Government Implementation in Nigeria''. European Scientific Journal. (May edition) Vol.10, No.14
17. Ewuim N, Igbokwe. Ibeto, C., and Nkomah B (2006). Information and communication technology and public service delivery in Amuwo-Odofin Local Government Council of Lagos State Nigeria. Singaporean Journal of Business Economic and Management Studies. 5 (1)
18. Hornby, A (2012). Oxford Advance Learners Dictionary. Oxford university press 2012
19. Idowu, A, Amusan T., and Ozoya, M., (2013). ICT and health delivery system in Nigeria being a chapter in a book titled "A Panoply of Reading in Social science lesson for and from Nigeria: Edited by D.O., Lmhonopi and U. M. Urim. Published by Department of Sociology College of Development Studies Covenant University Ota Ogun State Nigeria.
20. Mayr Ndou, D. (2004). "E-Government for developing countries: Opportunities and challenges" The Electronic Journal of Information System in Developing Countries. 18(1). 3
21. Mimbi L, and Bankole, F., (2015). ICT and public service value creation in Africa: efficiency assessment using DEA approach, 29th Australasian Conference on Information Systems (ACIS2018), UTS, Sydney, 3rd-5th December 2018
22. Naz, R., pathak, R., Rahman, M, Agarwal, K., and Smith, R., (2006). The potential for using IT to cut corruption in service delivery: A Case of service to Farmers in Fiji International Journal of Effective Management 3 (1)

ISSN No. 231-2705 | DOI: 10.51244/IJRSI | Volume X Issue VII July 2023

23. Ndukwe, E (2004). Information and communication technology science and medicine in the 21st century Nigeria. Being a paper delivered at Landmark Public Lecture event held by the college of Medicine university of Nigeria Enugu campus rotary hall October 21 2004
24. Nweke, E (2007). "Re-inventing administrative governance in Nigeria. Can information and communication technology (ICT) make a difference? African political and administrative studies. 3(1)
25. Ogbomo, M. (2009). Information and communication technology (ICT) in local government administration: The Case of Oshimili North Local Government Area of Delta State. Library Philosophy and practice (E-Journal). Retrieve from http://digitalcommons.unl.edu/cgi/viewcontent.
26. Olorode, A, and Oladunni, E., (2019). E- Health in Biomedical, its role and challenges in Bayelsa State, Nigeria. African Journal of the 1st Proceeding of International Technology Education and Environment Conference, African Society for Scientific Research (ASSR) 3(1)page 615
27. Omotosho, A., and Ayegba, P., (2019) Current state of ICT in health care delivery in developing countries International Journal of Online Engineering (IOE)
28. Oyegoke. L. (2013). Adoption and utilization of ICT in Nigeria hospital (Government owned) bachelor thesis for degree programe in business IT, HAAGA-HELIA University of Applied Science
29. Pathak, R, Naz, R., Singh, G and Smith, F (2010). ICT for improved Public Service Delivery in papua Guinea governance
30. Quy, R. (2000). Method and apparatus for interactive monitoring a physiological condition and for interactively providing health related information.
31. Ssewanyana, J., and Busler, M., (2007). Adoption and usage of ICT in developing countries: Case of Uganda of Education and development using information and communication technology 3(3) Retrieve from http://www.learntechlib.article42269.pdf
32. Tamrat, T., and Kachnowski (2012)."Special Delivery: An analysis of M Health programs and their outcomes around the world. Maternal and child health journal 16 (5) The United Nations E-Governance Survey Report in 2020
33. VUHO (2004). E-Health for health-care delivery: Strategy 2004-2007 Geneva: WHO retrieved from www.who.int/ent/en/EHT Strateg,2004-2007.