

ELECTRONIC ADMINISTRATION ON SERVICE DELIVERY

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ABSTRACT

The study is an investigation the electronic administration on service delivery. Three objectives were formulated. The research was anchored on the platform of the Technology Diffusion Theory which advocated for a swifter and more result oriented management method. The study revealed that most have adopted and integrated e-administration into various areas of their management which have also improved service delivery to some reasonable extent. However, full benefits of this new management technique are not realized due to some undermining factors essentially bordering on low level of technological development in the country. The challenges include internet hiccups, power outage, poor maintenance culture, illiteracy, and integrity issues. The research therefore calls for the intervention of government (via funding and logistic supports) at all levels to assist tertiary institutions to fully adopt and integrate e-administration in all needed areas of their management.

Keywords: Administration, Tertiary institutions, examinations, Service delivery

INTRODUCTION

In the modern World where technology is becoming the order of the day, organizations in both public and private sector are focusing on strategic management as a way of steering their effectiveness and performance. Technology is also getting into strategy and one of the major aspects of strategies in the 21st century world is the electronic based administration or simply put – Electronic administration. It is the use of ICT to improve administrative processes and the internal working of departments within an organization.

Electronic administration has also been widely known as E-Management, is the use of ICT to improve administrative processes and the internal working of departments within an organization states that while E-Services focus on so called "front-office" relations, E-Administration refers to the so called "back-office" organizational systems. E Government strategies within this domain deal with improving management from streamlining internal processes, cross-departmental flow of information and include initiatives such as E-Mail, Integrated human resources and payroll systems, Integrated financial management systems, web-based collaborative data resources platforms, electronic filing systems, electronic document management (EDMS), E Recruitment as well as enterprise resource planning.

E-Administration is the use of ICT to improve administrative processes and the internal working of an organization's departments. It is based on various types of management work, internal routines, computerizing administrative jobs and realizing strategic connections among departments. Globally E-Administration is changing the service delivery by reducing knowledge, increasing information access and control makes administration more informed, in a better position to understand and exercise its rights and E-Administration.

According to , given its back-office capability E – Administration is usually recognized as a precondition for developing E-Services and E-Democracy and to have well working E-Services, E-Administration is vital for the effective use and transfer of information, data and electronic records between various public institutions as it refers to the incorporation of ICT in public administrations from two perspectives: intra-office and inter-office. States that E-Administration stands on the

administrative modernization issue, on efficiency and efficacy of services and whether electronic services do or do not improve services to citizens.

Government performance is measured through service delivery and is therefore an essential function in the relationship between government and citizens. In the 21st century, the growing demand for accountability and efficient governance and provision of services have put under pressure on governments and public sector to deliver not only quality, but efficient and effective services. Africa in particular, governments are trying to tackle the demand for efficient governance by re-engineering the processes of how government services are delivered to people. In this regard, E-Government has played, and is still playing a major role in developing and delivering services to citizens using online platforms that are faster and efficient. According to a 2014 Kenyan Public Service Commission evaluation report on the Public Service Compliance with Values and Principles in Articles 10 and 232 of the Constitution evaluation findings show that the public service, is making much effort at increasing the uptake of E-Administration in service delivery.

Objectives of the Study

- i. To determine the extent to which information and communication technology is used to effect routine administration.
- ii. To examine the extent to which the automation of admission processes has enhanced registration exercises.
- iii. To examine the relationship between computer-based test and examination management.

Concept of E-Administration

Hornby (2012) perceived administration as activities done in order to plan, organize and successfully run a business, an institution or an organization; that is, a process or act of organizing the way something is done. The administration of tertiary institutions refers to the means by which higher educational institutions are operated, organized and managed. Bleiklie (2007) asserted that the administration of higher educational institutions deals with how higher educational institutions steer themselves as well as the processes used to manage them in such away as to lead to effective performance in achieving desired outcomes, goals and satisfaction of stakeholders. For conceptual clarification, e-administration is an aspect of e-governance, though in most cases, they are used interchangeably. When scholars therefore talk of e-governance in education sector, they are still referring to e-administration. For major reforms and developments in tertiary education to be significant, an improvement in Information and Communication Technology with its positive influence on teaching, administration and research technologies is inevitable. Also, a major tertiary education reform recommended by the World Bank (2002) was that there should be electronic networking involving e-mail communication capacities for teaching, learning, research, management, performance and monitoring of systems. It is imperative that at this junction, we should clearly state the meaning of ICT. Information and Communication Technology refers to technologies that provide access to information through telecommunication devices like computers, wireless networks, cellular phones, internet and/or other forms of electronic gadgets (Tech-Terms, 2010; TechTarget, 2017).

According to Mormah (2014) e-administration is one of the knowledge explosions and it is all about a system of administration whereby the traditional art of initiating, planning, organizing, analyzing, directing, budgeting and coordinating of all factors of production to achieve organizational goals are electronically processed with little or no paper and stress of movement of files and documents from one office or table to the other. E-administration is an effective mechanism for achieving organizational objectives through the adoption of electronic devices in carrying out administrative functions of day-to-day activities. In line with the trend of globalization through Information Communication Technology, tertiary institutions in Nigeria have adopted e-administration in the management of their affairs, ranging from web enabled admission processes and digitalization of

entrance examination, learning and assessment process, library services, record management and payment systems. There are various components of the electronic administrative system, which has not been incorporated very well into the emerging e-administration of tertiary education management system in Nigeria. These components can immensely improve the e-administration practices in the institution management system. Memos/emails, for instance, are now expected to be distributed on-line instead of manual dispatch. Transcripts, verification, confirmation are expected to be done electronically. Others are payment of school fees payment through remita or e-transact, course registration and publication of in course examination results, e-documentation of students' academic records, Computer-Based Test, electronic library services and e-learning. In a nutshell, adoption of Information and Communication Technology into administration to enhance service delivery and transformational development equals e-administration.

DIMENSION OF E-ADMINISTRATION

Information and Communication Technology

ICT means Information and Communication Technology. There are various views of different authors towards the definition of ICT. ICT broadly refer to all forms of technology used to create, store, process and use information in its various forms (data, voice, multi-media presentations and other forms including those not yet conceived) and which enable, facilitate and support communication (Ejehoms, 2002). More specifically, ICT refers to the conveyance of micro-electronics, computers and telecommunications which make it possible for data including text, video and video signals, to be transmitted anywhere in the world where digital signals can be received (Crook & Booth 2012). It includes networks such as fixed, wireless and satellite telecommunications, broadcasting networks and applications such as the internet, database management systems and multi-media tools. ICT clearly encompasses a wide range of technologies. For the purpose of this paper, ICT refer specifically to the use of computers, email, internet and other office automation equipment, as these are the technologies that are used predominantly to promote school and administrative performance. These facilities include word processors, data processing equipment, micro-computers, records management with its emphasis on paperless files and reprographics. Computer in the opinion of Obi (2002), is an electronic machine which accepts data through an input device, does the arithmetic or logical operations in accordance with a pre-defined programme and finally sends the processed data to an output device either for further processing or in its final processed form. The fact that this machine is able to process data following an instruction makes it an electronic brain which work millions of times faster and more accurately than human brains.

Information Communications Technology (ICT) is the technology that supports activities involving the creation, storage manipulation and communication of information, together with the related methods, management and application (Chuta, 2012). In other words, ICT enables office professionals and other users to record, store, process, retrieve and transmit information. It encompasses modern technologies such as computer, telecommunication, facsimile and micro-electronics. Older technologies such as document filling systems, mechanical accenting machines, printing and care drawings are also included in the term information technology (Obi, 2012). Information Communication Technology in today's world refers to those technologies that determine the efficiency and effectiveness with which we communicate and the devices that allow us to handle information. Information Communication Technology (ICT) has become a key tool in acquiring, processing and disengaging knowledge. It has become an imperative tool for investing developing of a nation in the 21st century. The revolutionary impact of ICT on all sphere of the society has not spared the educational sector.

Automation of Admission Process

The automation of admission process is reduces the time that are taken is old process and also reduce the human efforts. The college or universities conduct the online admission process in that

to fill the admission form using typing but in this project the input of system is in file format it may be excel file, folder, image or pdf in that the student can write the information or student information available that is used in admission form like self-information, document, etc. That file is input of system and filled that information automatically using read and write method into admission forms so no human interaction to read information and write in admission form. And also reduce the crowd of student that are stand in queues and at a time take one student application in the form of paper and read the information available in that paper and then type in admission form it's a very time-consuming task so to avoid this because it not necessary student present at the time of form filling process only send a file to college and using this to fill the admission form automatically or student can register in portal and send file through portal. Then the system can send the auto-generated mail to the student so the student aware the admission process is completed. And all process is automated so it is very secure and fast.

Computer-Based Test (CBT)

Testing in education sector has become one of the most important parameters by which a society adjudges the product of educational system. A reality that cannot be ignored is that no matter how lofty, how enviable, how laudable, how gigantic the education goals are, and how relevant the school curriculum is organized, if no provision is made for accurate evaluation and reportage of learning progress, all these efforts will amount to a wasteful venture (Duze, 2011). In the past, various methods were employed in examining the ability of an individual starting from oral to written, practical to theoretical, and paper and pencil to electronic. The predominant mode of students' assessment in Nigeria is the traditional method. In this method, students are assessed using pen on paper on their cognitive abilities. It's no longer news that the traditional methods of assessment in Nigeria is characterized by different forms of examination malpractices such as bringing in unauthorized materials, writing on currency notes and identity cards, spying on other candidates in examination hall, substitution of answer sheets and change of examination scores or grades. Others include, impersonation, body writing or tattoo in which students especially females write on hidden parts of their bodies (Mubashrah, Tariq & Shami, 2012). Computer Based Assessment or e-assessment/testing is a method of administering tests in which the responses are electronically recorded, assessed, or both. According to Bennett (2015), computer-based test represents a modern way of answering an examination questions, replacing the written pen on paper format. CBT is a combination of networks, hardware and software as well as means of communication, collaboration and engagement that enables the processing, management and exchange of data, information and knowledge. It can be understood to be a complex of artificial techniques and knowledge for solving problems associated with marking pen on paper examination (Bennett, 2015). Computer-based testing or computer-based assessment is seen as a catalyst for change, bringing about a transformation in learning, pedagogy and curricula in educational institutions. Computer Based Test (CBT) is a series of questions, problems, or practical tasks issued on a computer in order to gauge somebody's knowledge, ability, or experience. It is the use of computer to issue questions to an examination candidate, allowing the candidate to give in answers through the computer and providing bases for evaluating the candidate (Alabi, Issa & Oyekunle, 2012). Computer Based Tests are written to test specific levels of abilities; they have the potential to deliver more accurate and reliable results than traditional examination. Traditional methods of assessment are being changed by automated assessment and administrators of tertiary institutions across the globe are now migrating toward the use of CBT to test students' knowledge (Conole & Warburton, 2005).

Benefits of Computer Based Testing Method

Traditional Examination refers to a formal examination administered through question papers to which students respond in the form of written answers to a limited choice of previously unseen examination questions, set in advance and answered in examination centers where invigilators

(examination supervisors) prevent communication between students and prohibit the use of notes or other revision aids (Harris, 2005). The paper and pen (manual) method of writing examination, which has been in existence for decades, may not be appealing for use because of the problems usually experienced including examination venue capacity constraints, lack of comfort for examination candidates, delay in the release of results, examination malpractices, cost implications of printing examination materials, taking advantage of candidates by the examiners, missing scripts/scores and human errors (Obasi, 2009 & Nwaorgu, 2012). It has also been noted that in some occasions, many students often refuse to submit their answer scripts when it is obviously observed that they have not written well enough of what is required of them to pass the course. This often happens when the teachings and examinations are conducted with large number of students involved especially in general studies courses. Abubakar and Adebayo (2014) also observed that POP assesses students only on cognitive abilities while e-examination can be used to assess both cognitive and practical abilities. Cognitive abilities are assessed using e-testing software while practical abilities are assessed using e-portfolios or simulation software. Similarly, Obioma, Junaidu and Ajagun, (2013) opined that automated assessment if carefully designed can comprehensively and reliably assess students in the three domains (cognitive, psychomotor and affective) of learning.

Specifically, the benefits of computer based test spread across the shortcomings of paper based testing method. Olatoye (2014) itemized the benefits of CBT, which are:

- i. **Improved Measurement Precision and Efficiency:** The way to doing as such is, once more, the capacity of the computer to associate with and tailor itself to the understudy being tested. A CBT with these capacities is named versatile. As a versatile test continues, answers to prior inquiries figure out which inquiries are asked later. The test hence logically changes as the understudy's execution level is slowly uncovered.
- ii. **Increased Convenience:** A major benefit of computerized testing is operational convenience for students, test administrators, and those who use test scores. These conveniences include:
 - **Self-administering:** Regular paper-and-pencil tests for the most part oblige somebody to disseminate test→ booklets and answer sheets, monitor time points of confinement, and gather materials after the test closes. Overseeing a CBT can be as straightforward as stopping an understudy before a computer.
 - **Immediate Scoring:** The estimation of any data debases after some time. A score report based on a test taken a→ month and a half prior is a portrayal of what that understudy was instead of what she or he at present is. CBTs can address this qualification by giving understudies score reports endless supply of their test. The test can along these lines have moment effect. At the understudy level, this may include rapidly changing the instructional approach brought with a specific idea. At the school or local level, prompt data may permit comparative however more worldwide strategic movements.
 - **Integrated Information Administration Frameworks:** Testing on computer can enable scores to be entered→ naturally into classroom-, school-, region, or state level databases. Once there, different individual and total reports can without much of a stretch be created to condense and track the execution of individual understudies and characterized gatherings.
 - **Diagnostic Appraisal and Combination with Instructional Programming:** Self-delegating, prompt scoring,→ and simple information administration makes CBTs-versatile CBTs specifically-perfect for demonstrative or developmental appraisal. Consider the issue of evaluating an understudy's example of qualities and shortcomings over a genuinely wide substance space.

Concept of Service Delivery

Service delivery simply means the extent to which an individual, unit or department of an organization discharge their assigned or statutory responsibilities. It is also a means by which an organization evaluates an individual employee or unit input and output level especially in the area of attaining set goals or task assigned. In the view of Byars and Rue service delivery is the degree to which an employee accomplished the tasks that made his or her job.

El-Rufai summarizes service delivery as the degree of an organization and/or employee performance, output and 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 spate of service delivery is determined by the performance of employees in achieving organizational goals and satisfying the public.

However, for purpose of this study, the researcher views service delivery as the achievement of targets (performance/output/ productivity) of the tasks assigned to organizations or employees' within particular period of time. It involves the execution of duties and responsibilities assigned by constituted authorities which one have promised to do, so as to achieve set goals of an organization.

Therefore, the degree to which an organization or employees performs its duties and functions towards achieving set goals determines the spate of service delivery-whether it is efficient or inefficient, effective or ineffective, economical or not economical, productive or not productive. To ensure that the Nigerian Universities perform their cardinal functions of teaching, research and community service efficiently and cost-effectively, the e-government platform must not only be accepted but also implemented in their activities, and this could only be done through building the capacities of staff and students in the use of ICT and other e-government tools

MEASURES OF SERVICE DELIVERY

Examination Management

Examination management entails the whole process of administering examinations as well as preservation of results. It comprises of question paper delivery, response storage, marketing of responses, reporting of results from tests or exercises, collation, compilation and computation of results, etc. Assessments according to the NPE (2013) are designed for the following goals as provided in section 151(iv): i. To accurately measure the abilities of students; ii. Enhance the global competitiveness of the products of the Nigerian educational system; iii. Improve the credibility of examinations conducted in Nigeria; iv. Eliminate the intractable problems associated with the traditional paper pencil test (PPT); and v. Improve learning. The foregoing enumerated goals demonstrate explicit realization by the chapters of the sixth edition of the National Policy on Education that the PPT is fraught with challenges that have insurmountable solutions (Onu, 2017). Consequently, the NPE (2013) recognized the benefits of using ICTs in examination management as a possible sustainable solution. It thus encouraged providers of all levels of education in Nigeria to migrate to the current and more sufficient way of testing by adopting electronic testing models. On section 151(C), the NPE was specific when it observed that in pursuance of the goals enumerated in section 151(i-v) as stated above, that all levels of education in Nigeria shall be encouraged to migrate to computer based testing mode of assessment (Baker-Eleleth, Emeleth, O'Neill, & Stone, 2006; Fagbola, Adignn, & Oke, 2013; Fluck, Pullen, & Harper, 2009). Obviously, with the above provisions, management of tertiary institutions are fastly keying into the use of CBT in examination conduct assessment. The move is supposed to ensure academic integrity and quality assurance in the system.

E-administration and Service Delivery

The major mandate of the tertiary institutions in Nigeria as defined by the National Policy on Education (2004) includes the provision of high level manpower for national development and this role is achieved through its programme of teaching, learning and research. In this 21st century

digital age, nothing serious can be achieved without the help or input of Information and Communication Technology in tertiary institutions. All over the world, educational institutions are benefiting from shift from manual to ICT based service delivery. According to Chukwuemeka, Ubochi & Okechukwu (2017), this shift is essential because the use of ICT in work-related activities reduces waste of time, delays and mistakes on the part of workers in the discharge of their duties. There is no limit to the use of computers for educational administration. E-Administration enables tertiary institutions to improve efficiency, reduce costs and improve on both formal and current service delivery systems (Danda, 2004). It also keeps storage requirements to a minimum. It allows data to be accessed by more than one person at a time. There is better security system. Data can be coded and require less workforce with fewer staff to enforce the system. In managing personnel electronically, database can be used to keep the students and staff information system. These records are then used to calculate the workers output and performance, the ready available data makes decision making easy and more efficient. A more informed administration is in a better position to understand and exercise its rights and e-administration will lead to reduction in knowledge gap on issues bordering on administration and quality assurance with regards to products. Digital administration will ensure that staff are no longer passive in the discharge of their duties, instead would decide on the kind of services they want and structure which could best provide the same (Sharma, 2010). Tertiary institutions have introduced in different areas the use of electronic medium in the administration of their institutions. ICT have gained prominence globally in the area of information dissemination, teaching, learning, research and public service delivery. Its application according to Jude and Dankoro (2012) is pivotal to the technological advancement of any nation especially in the 21st century. As rightly captured by Edidiong, Nse, Iniobong and Eno (2015), the verdict is that ICTs revolution has brought in its wake education revolution that has changed the way services are rendered. In this direction, software programmes and specifically equipped computers are already providing learning opportunities that emphasize exploration, problem solving creativity and innovation techniques in libraries. Online applications allow users in remote and distant areas to access a wide variety of information resources and make use of advanced materials from digital libraries, power network enable users to interconnect videos, podcast and webs conferencing. Collapsing e-administration and service delivery as regards to tertiary education in Nigeria is accessing how the higher institutions use information communication technology in learning and administration for effective service delivery. The need for educational administrators in Nigeria tertiary institutions to acquire electronic literacy skills cannot be ignored, every modern administrator ought to acquire knowledge and skill in information technology, and to use internet to browse to obtain or circulate information that will enhance organizational productivity and efficiency in their jurisdictions (Osakede, Ijimakinwa, Arijeniwa, Adesanya & Ojo, 2017).

THEORITICAL REVIEW

Technology Diffusion Theory

The theory positions that it is easier to implement innovations that show an improved advantage over that which is to be replaced, making it easier to adopt. The theory provides a vital view on one of the most challenging topics within the innovation field, namely, technology assessment, improvement, adoption, and implementation thus has become a common reference theory for empirical studies of technological strategies as its strength lies in its utility and theory anchored on Technology Diffusion Theory.

Dynamic Capability Theory

Dynamic capability theory, whose proponents define as the organization's ability to purposely establish, reconfigure, create, and assimilate internal and external capabilities as well as resources with the goal of improving performance, service delivery and address the fast-changing business environment

EMPIRICAL REVIEW

Harris (2013) summarizes the role of e- administration as not just about government web site and e-mail. It is not just only about service delivery over the Internet. It is not just about digital access to government information or electronic payments. It will change how citizens relate to governments as much as it changes how citizens relate to each other. It will bring forth new concepts of citizenship, both in terms of needs and responsibilities. E-government will allow citizens to communicate with government, participate in the governments' policy-making and citizens to communicate each other and to participate in the democratic political process. This is in tandem with the work of who opined that e-government is the use of Web 2.0 technologies, both internally (intranet) and externally (internet), to increase collaboration and transparency, and efficiency in service delivery. Therefore, in broadest sense, e-government has great implications on public service delivery.

Atkinson [2017] research on e- administration and services delivery concludes that e-government refers to the use by government agencies of information technologies, such as web-based Networks, the Internet, and mobile computing, that have the ability to transform relations with citizens, businesses, and other arms of government. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased transparency and productivity, greater convenience, revenue growth, and/or cost reductions

Buttressing this point, Fang [2018] stated that e- administration is the processes and structures that define the relationship between governments and citizens; the processes and structures that define the relationship between government service delivery and citizens' needs. The import of this submission is that the essence of e-government is to meet the needs of the citizens by improving service delivery. Therefore, given the scale, scope, multi-portfolio nature, and transformational potential of e- administration in delivering efficient, cost-effective and timely service, Roy advocates that it should be treated as a holistic system adjunct to the area of e-commerce in the E-society.

Yu and Norris [2017] in their separate research on the relationship between e-administration and service delivery carried out in Delhi and Uk argue that the quality or level of e-government determines the efficiency of service delivery, and this depends on the level of ICT tools and Internet access (digital divide) among citizens and employees of an organization. The implication of their finding on Federal University Ndufu-Alike Ikwo and other public organizations in Nigeria is that it should ensure consistent, functional and affordable internet access for its staff and students, by providing the needed ICT infrastructure on campus, in other to enhance the performance of its workforce and thereby improve service delivery for its publics.

CONCLUSION

1. Most tertiary institutions have keyed into the e-administrative system of management of the core areas of their activities. Some of the areas where ICT have been used include selection and admission of new entrants, post UTME and in-course examinations, use of e-mails services for general administration, fee payment and electronic library.
2. Automation of admission processes has enhanced registration exercise in tertiary institutions. Tertiary institutions have to a reasonable extent adopted the automated admission processes for prospective students. In this regard, entrance forms are purchased online, same with acceptance of admission, payment of fees and course registration. The e-process has made enrolment exercise less cumbersome.

3. Application of Information and Communication Technology (ICT) is not fully utilized in routine activities. Most mails are not electronically treated for quick dispatch of directives. There are major challenges militating against the use of ICT. The institutions' websites for online transaction within and outside are not fully functional. Records electronically generated are not easily retrieved due to technical and infrastructural challenges, especially poor network services.
4. The study concluded that E-Administration played a significant role in promoting delivery of public services by the state agencies in Kenya. Through adoption of Integrated Data Interchange and Integrated Human Resource and Payroll Systems, the management of the employees as well as access of customer data was enhanced thus streamlining service delivery to the citizens. The adoption of Integrated Financial Management Systems (IFMIS) enhanced accountability and effective use of public resources thus reducing wastage and achieving value for money among the agencies.

RECOMMENDATIONS

1. E-Administration is an important step towards enabling running of the state agencies. The agencies through their management should therefore ensure that E-Administration is adopted through embrace of different aspects such as the Integrated Human Resource and Payroll Systems and Integrated Financial Management Systems. Through these systems, the agencies are able to achieve accountability and integrity in dealing with public funds as well as effectively managing the workforce to ensure productivity and commitment to service delivery. The management of state agencies could enhance the use of strategy execution practices so as to enable success of E-Administration strategies which are significant to enhanced public service delivery.
2. The need to address the problem of epileptic power supply in Nigeria cannot be over-emphasized. This will put a stop to cases of power failure interrupting examinations. Also, institutions should improve on their current ICT infrastructure and strategy particularly as regards accessibility of websites and internet. 2. Frequent training and retraining of both workers and students in ICT technology is also paramount. This will not only enhance implementation of e-administration but will generally improve teaching, learning and research in the institutions.
3. To meet the demands of the global best practices in higher education, the implementation of CBT will require a more secure testing environment that will prevent students from seeking answers by scanning their computer hardware during examinations, instant messaging, e-mailing friends or browsing the internet. CBT can also be improved by using other forms of question types like theory-based and diagrammatic questions to make the test questions more diverse. Furthermore, post-test feedback can also be introduced

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