Servicing of Paperless Meetings and Matching the Global Pace of ICT Deployment in University Administration: The Roles of Public Administrators

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INTRODUCTION

Information and Communication Technology (ICT) can contribute to not only local but universal access to education, equity in education, the delivery of quality learning and teaching, teachers' professional development and more efficient education management, governance and administration (UNESCO, 2015). ICT has tremendously broadened the opportunities for people to acquire information, interact, network, address issues of common concern, generate income and participate in society. The scope of Science and Technology in Higher Education in Nigeria is experiencing an exponential increase in awareness with operators incorporating several Information and Communications Technology (ICT) techniques in management, administration, admission processes and dissemination of information; including e-learning modules. (Oladipo and Akinwumi, 2015). At every stage of education management process, the university management information system (UMIS) should inform the different stakeholders and partners on the state of education, its efficiency, its pedagogical and institutional operation, its performance, shortcomings and needs. These should also be presented in a format that enables decision making to become natural. This will help policy and decision-makers as well as other planning managers find clear and easy to interpret documents that are accompanied by relevant analyses on which to base their policies. Information and Communication Technology (ICT) have always influenced the evolution of the society and has a consequence on the nature of administration. Historically, they have enhanced existing social, economic and political interactions and even introduced new forms of

interactivity (Sharma, 2010). This interactivity is in both a social and technical sense, is the channel that allows information dissemination amongst administrator and sharing between management and administrators. Access to information is both a consequence and a driver of the digital revolution. Efficient and effective administration, rest on the pillars of knowledge and recognition of this set of knowledge by the decision makers. Digitization of this entire set of knowledge within a network which links every individual including the decision makers gives freedom to everyone to access and make use of this knowledge paving the way for digital governance. ICT-enabled administrators, therefore includes ICT induced changes in the running and management of the university and more importantly changed induced in the way staff interact and participate in the administration of the university (Ikenna, 2015).

Definition of Terminologies
Information Communication Technologies (ICT): For the purpose of this paper refers to the computer and internet connections used to handle and communicate information for learning purpose (Mikre, 2011). The words science and technology are often used together to denote the intricate relationship between the two. However, for the sake of this paper science and technology which is often used interchangeably is used interchangeably with Information and Communication Technology (ICT) for the sake of narrowing down the scope.

Raw Data: Original records and documentation, retained in the format in which they were originally generated (i.e. paper or electronic), or as a 'true copy'. Raw data must be contemporaneously and accurately recorded by permanent means. In the case of basic electronic equipment which does not store electronic data, or provides only a printed data output (e.g. balance or pH meter), the printout constitutes the raw data.

Data: Information derived/ or obtained from raw data (e.g. a reported analytical result)

Data Source: Includes all information in original records and certified copies of original records used for reconstructing and evaluating the investigation.

Meta Data: Metadata is data, that describes the attributes of other data, and provide context and meaning. Typically, these are data that describe the structure, data elements, interrelationships and other characteristics of data. It also permits data to be attributable to an individual.

Electronic Record: an electronic record as any combination of text, graphics, data, audio, pictorial, or other information represented in digital form that is created, modified, maintained, archived, retrieved, or distributed by a computer system.

Hybrid System: A 'Hybrid System' is defined as an environment consisting of both Electronic and Paper-based Records (Frequently Characterized by Handwritten Signatures Executed on Paper).

As a Biochemist, I thought of data as quantitative or qualitative and that was about it. I focused on what came after the data: journal articles and reports describing the research and what conclusions could be drawn from it. I had heard about "Big Data" from my data specialists in ICT, but it wasn't until I started working initially as Director of ICT and later as Chairman of the University's Computer Based Examination (CBE) that I began to really make the connections. The CBE in Ambrose Alli University processes vast amounts of data about the students' academic, financial etc records every day.

GENERAL OVERVIEW OF E-ADMINISTRATION

The high cost of administering tertiary institutions reinforces the need for an alternative management framework that reduces cost at the long run but optimizes the University's objective function. This scenario fits the e-concept. The National Universities Commission of Nigeria has over the years argued that for Universities to achieve their mandate they need efficient management of its internally generated resources and an open access to data and information needs of the community. It is foreseen that the introduction of e-Administration will act as a pathway in generating significant or even massive benefits for staff and Economic development in tertiary institutions. e-Governance, the adoption of web-based technologies to deliver and conduct government services, has become a global trend in public administration (Gasco, 2003). e-Governance often comes with a promise to improve public administration in terms of efficiency, one of the primary values in public administration (Lee and Perry, 2002). The potential for electronic government to transform public administration has been heralded at various points throughout the past half-century. Even by the 1960s and the 1970s, as computers started to appear in government organisations, some public officials and commentators predicted that information technology would bring a revolution to public administration. As increasingly sophisticated information and communication technologies (ICTs) spread across all organisations in Nigeria today.

Meaning of E-Governance

The term 'e-Government' was born out of internet boom. However, it is not limited to internet use or publicly accessible systems for direct use by customers or citizens. e-Governance started as a practitioner field, basically convening practitioners struggling to meet the new challenges of the internet medium by implementing new systems creatively (Gore, 1993; Salem, 2003). e-Governance is a broader concept that encompasses all interactions and exchanges between the government and the governed and includes e-voting, e-democracy and e-representation. e-Government relates to the use of ICTs to transform and support services provided to the generality of people concerned. In other

words, e-Government can be seen as the transformation of internal and external public sector relationships, through ICT in order to optimize service delivery and people's participation. E-Government according to European Union is the use of Information and Communication Technologies in public administrations combined with organisational change and new skills in order to improve public services and democratic processes (EU, 2004). e-Governance is a process of reform in the way management's work, share information, engage people and deliver services to external and internal clients for the benefit of both the managers and the clients that they serve. e-Services such as e-Tax systems, e-Registration, e-Payment system, etc. are e-Government services and their adoption and their process of execution is referred to as e-Governance. Although e-Government is often defined as "online government" or "Internet-based government", many non-Internet "electronic government" technologies such as the telephone, fax, short message service (SMS), multimedia messaging service (MMS), wireless networks, bluetooth, television and radio-based delivery of government services can be used in the context of e-Government (Anttiroiko & Malkia, 2006; Heeks, 2004).

The Applications and Scope of E-Governance in Nigerian Universities
E-governance is gradually getting its roots in the activities of Nigerian Universities. Hence, the Nigerian universities are moving towards embracing ICT which is an approach of e-governance in the educational sector. Many challenges faced by the country such as student admissions and tracking, financial management, data distribution, teaching, learning and research, staff appraisals, general administration, security, etc. can be addressed through appropriate deployment of ICT

Record management is the keeping, storing retrieved and use of all the information in the school. Etesike (2008) opined that record is recorded information produced or recorded in the initiation, conduct or completion of any institutional or individual activity and that comprises content, context and structure sufficient to provide evidence of the activity. In other words, record is the documented evidence of the activities in the institution. Nworgu (2006) gave the concept of record management as the practice of maintaining the record of an organization like the school from time they are created up to their eventual disposal. Summarily, record management is the ability to arrange and maintain all the school records which are kept for retrieval of information when need be. To manage the records of all areas of school administration should have been difficult but with fast growing world in the science and technology, everything is being done with the help of internet. Effective management of records cannot be achieved without sound knowledge of Information and Communication technology (ICT). Information and communication technology according to Murdic and Ross (1971) as cited in Nwangwu (2005) is the process in which information
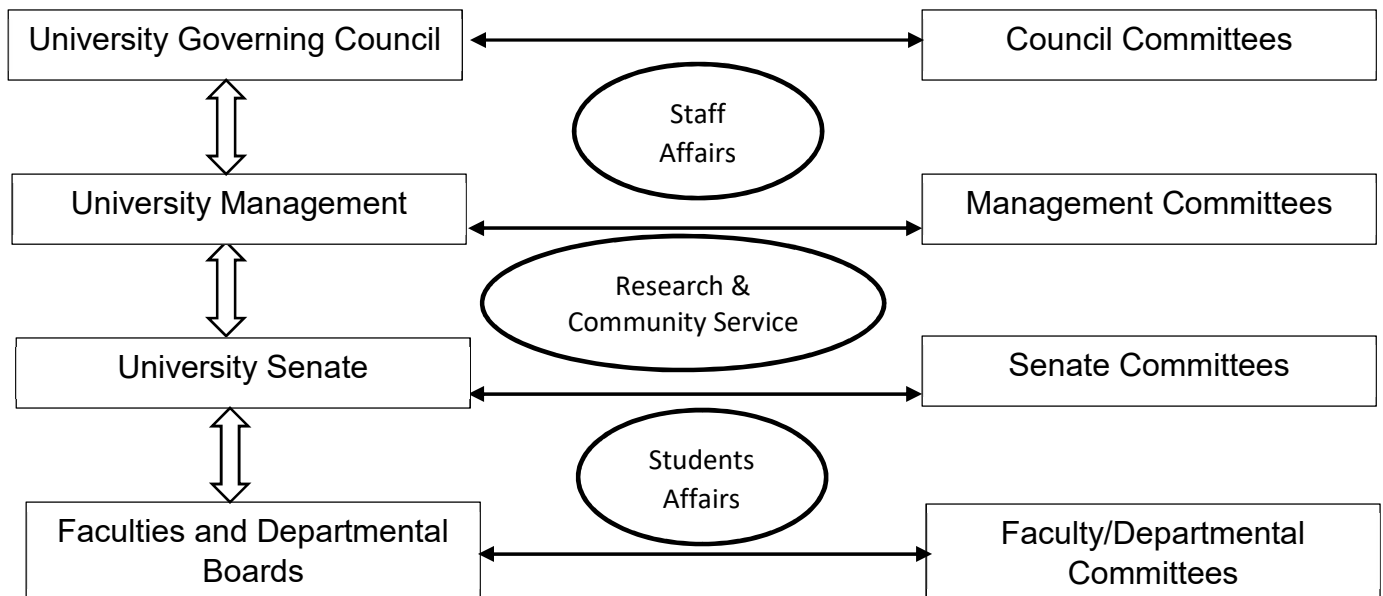
(in-put) is recorded, stored and retrieved (processed for decision (output) on planning, coordination and controlling. Alkadi (2004) stated that information communication technology focused an understanding the processes, systems and mechanisms pertaining to information storage, absorption, transfer, presentation and processes through understanding the scientific principles in school management in tertiary institutions.

Classes of Record
Nworgu (2006) (adapted from Chidobi, 2015) classified university records under the following subheadings (1) Management records (2) Administrative record (3) Students Record.

The management of record in the university setting in Nigeria is similar to the organigram. The question is how to use ICT in recording all the events in the university. Using ICT to display the organizational chart. Generating management information and receiving them. ICT resources should be used to record meetings proceeding and decisions made. The second type of record is Administrative records they including staff personnel records and physical resource record. Here ICT facilities will be used in recording all documents pertaining to personnel leave records, personnel duty roster and inventory of all the physical resources record like furniture stored in the various offices classrooms laboratories and workshop. Finally using ICT facilities to record, the students' personnel data like admission data, type of programme which includes sandwich, part – time programmes, evening distance learning programmes

Steps to set up a Paperless Meeting

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Step 1: Setup OneNote

OneNote is the centre of all meeting universe. It is the holder and organizer of my critical meeting information. I create a OneNote notebook for the organization, then create tab called *Board Meetings,* and then create a new page with the meeting name and date.

Step 2: Get my Agenda Organized

Typically, each meeting agenda is distributed electronically. I find that most of them arrive as a Word or PDF document. This works well for me as I then insert a copy of the agenda onto my OneNote page as a printout. I then select the printout and click SET PICTURE AS BACKGROUND so that I can write all over it without it moving around the page.

Step 3: Prepare my Notes

Once my agenda is pasted into my meeting note, I pull out my Microsoft Surface and start making notes in preparation for the meeting. I love using the DRAW feature to make notes all over the agenda, just like I would if I had a paper agenda. I also create a section on the same page for inserting notes for specific agenda items. I simply create a little text box and then type out some bullet points for the agenda items.

Step 4: Create a To-Do Area for Post-Meeting Tasks

Almost every meeting seems to generate a few follow up tasks. I set aside some space on my OneNote page to capture those things that others or I need to follow up on after the meeting. For those things that I need to do, I tag them as an OUTLOOK TASK that will automatically appear as a to-do item in my Outlook.

Step 5: Create A Folder for Supporting Documents

My larger meetings tend to have a great deal of supporting material. I have one Board meeting coming up this month that has over 200 pages of supporting material scattered over 18 documents. I want those on my computer, in case I cannot secure a network connection to my cloud storage. I set up a folder for the meeting and synchronize the supporting material onto my computer.

Step 6: Markup Documents

With paper meeting materials, I tended to review the material using a pen and a highlighter. In the paperless world, I use the same sort of tools in digital form. I review all documents using my Microsoft Surface and a digital pen. I use a tool called DrawBoard that allows me to markup documents using highlighters and pen marks. Other tools, such as Acrobat, can provide the same sort of markup functionality. I love Drawboard for its simplicity and large inventory of markup options.

Step 7: Prepare the Meeting Room

I always work with my meeting hosts to prepare the room for the paperless meeting. Two things are critical: network connectivity and power. I attended a meeting a few weeks ago which featured about 80% of the attendees using paperless tools at the meeting. The problem was, there was a very limited number of power outlets in the meeting room. This left us scrambling for power bars and extension cords to keep all of our laptops humming. Just to add to the problems, their guest wireless network only allowed a few users to connect at a time, again leaving some people scrambling to download their documents. So, now I make sure I have access to a network and power BEFORE the meeting starts – so I don't have to scramble for that stuff at the last minute.

Step 8: Run an Awesome Meeting

Unfortunately, at the end of all of that preparation, I still have to run the actual meeting. I am organized and I have access to all of the critical information I need to run the meeting. In all honesty this makes me confident, and a confident meeting leader who is organized is a really good start to running an awesome meeting. I also feel like a expert when running meetings this way as those paper heroes end up fumbling with their paper while I can streamline through organized documents with one click.

Benefits of Going Paperless

Paperless office tips are all good and fine, but is going paperless worth it? Each business needs to determine whether the benefits outweigh any disadvantages. Saving the world's trees is a noble goal, and smart business owners balance it with understanding how a paperless system affects their costs and efficiency. With that said, here are some of the many benefits of going paperless:

- **Increased accessibility:** File sharing with clients and employees is easy. Electronic searches allow you to locate documents quickly from anywhere you have an internet connection.
- **Increased security:** Digital documents are stored on secure off-site servers and are only accessible by authorized users.
- **Better service:** A quick electronic document search brings up all relevant staff/students/agenda data, including applications and request, allowing you to provide more effective service in a timely manner.
- **Improved productivity:** Employees spend less time handling and printing documents, allowing them to focus on important tasks.
- **Employee flexibility:** As employees access needed documents through the cloud, telecommuting and virtual work become a possibility. Fewer people in the office means lower energy costs, and virtual employees usually work from their own computers, reducing equipment needs.

- **Space savings:** Medical offices and other businesses that must comply with strict regulations have to keep records for many years, which presents storage challenges. One of the great benefits of going paperless is the ability to store documents virtually, freeing up room in the office.
- **Protected from disasters:** Going paperless positively affects your business disaster plan. As virtual documents are stored off-site in secure locations, they are safe from fire, theft and any other disasters that might strike your office.
- **Potential cost savings:** The financial importance of a paperless office cannot be overstated. Once you understand how to go paperless, you can save on printing costs, fax and printer equipment, pens, and—of course—paper. By sending documents electronically, you save on mailing and shipping costs.
- **Positive employee/student opinion:** Users who value eco-friendly approaches to business will have a better opinion of your office and your sustainable workplace practices, while technologically savvy users will appreciate the efficiency of paperless service.

Challenges and Disadvantages of Going Paperless

Going paperless is not without its challenges. As with any business decision, you must consider the potential disadvantages to a paperless office. Increased up-front costs: The benefits of going paperless include reduced operating costs, but these may not be worth the expense of new electronic equipment, installation fees and the costs of paperless document storage.

- **Possibility of cyberattacks:** Cloud-based documents are at risk of cyberattacks and information breaches that could put sensitive data at risk. To reduce that risk, store copies of your documentation on an external hard drive as well as in the cloud, and grant users online access to the individual documents they need, not the entire collection.
- **Upgrading office equipment:** Despite the many ways to go paperless, most offices still need a printer or copier. Older models may need replacing with newer models as part of your energy conservation efforts, which can be expensive. Not replacing older and energy-hungry equipment may offset any savings from your paperless efforts.
- **Issues with compatibility:** Just because you've gone paperless doesn't mean your business contacts have. This can lead to communication problems and a need to use paper in business-to-business dealings.

Possible user reluctance: While many people are quick to embrace paperless technology, over half of all users still prefer to receive paper statements. Before committing to a paperless system, be sure your users are willing to accept online documents in lieu of hard copies.

CHALLENGES FACING ICT EDUCATION IN NIGERIAN SCHOOLS
(Adapted from Damkor et al, 2015)
ICT help to advance western and Asian countries, while African countries still experience a lag in its implementation, and this continue to widen the digital and knowledge divides. The following are challenges facing implementation of computer education in Nigeria:

1. Lack of Qualified Teachers to Teach ICT in Schools
The demand for ICT learning has been tremendous and the number of teachers who are trained to teach ICT cannot meet the demand. There are more students willing to be taught computing skills than there are teaches to transfer the skills.

2. Lack of Computers
Computers are still very expensive and despite spirited efforts by the government agencies, NGO, corporate organizations and individuals to donate computers to as many schools as possible, there still remain a big percentage of the schools unable to purchase computers for use by their pupils.

3. Lack of Electricity
Many schools are still not yet connected to electricity; Nigeria being a developing country, the government has not been able to connect all parts of the country to the national electricity grid. Consequently, those schools that fall under such areas are left handicapped and may not be able to offer computer studies.

4. Computers are still expensive in Nigeria
In a country with high rate of inflation, majority of the individuals and schools cannot afford to buy a computer and consider it as a luxury item, more expensive than a TV. While 2nd hand computers cost as N45,000 naira and branded new computers being sold at between N98,000 and above.

5. Broken Down Computers
while a good number of schools have benefited from donated used computers, they have not been adequately equipped with the same on maintenance and repair, hence its very common to see a schools computer lab full of broken down computers, some repairable and some not. This has actually been a major problem, and the government has now put strict measures on any person, NGO or corporate bodies willing to donate 2nd hand computers. (It is seen as a dumping ground); e-waste management.

6. Burglary
The fact that computers are still very expensive in Nigeria; this makes them a target for thieves who usually have ready markets to another party at a much less figure. This has made many schools to incur extra expenses trying to burglar proof the computer rooms.

This extra expense makes some schools shy away from purchasing computers for their students.

7. Lack of Internet or Slow Connectivity

Most schools are not able to connect to the World Wide Web, due to the high costs involved in the connectivity. On average, it may cost approximately $150 per month to connect to about 15 computers on a bandwidth of 128/64kbps. This is considered as very expensive for a very slow speed.

8. Increased Moral Degradation

Internet pornography, cyber bullying and other anti-social behaviors is a worrying emerging problem. The dilemma which arises in providing educational technology stems from a lack of financial resources and a limited distributive capacity. In addition, many African countries have not been able to employ teachers, and provide resources to keep up with this demand. This brings about compromised quality of education. Further, many African governments face the predicament of educational expansion that corresponds with economic development. Despite the setbacks, access to education is a strong focus of most governments.

CONCLUSION

The advent of Information and Communication Technologies (ICT) has provided a platform for effective and efficient service delivery electronically. E-administration is being embraced as a means of better service delivery to both the university community and the general public. The Nigerian Universities are yet to be equip with ICT as a platform in equitable service delivery, it is apparent that e-administration practice in the Nigerian Universities therefore is imperative. From the forgoing, the present reflection of e-administration in the Nigerian University reveals an uncoordinated public project implementation, hence as a research institution more work on ICT should be done to improve teaching, learning and research. To this end this paper has provoked consciousness on prospective actions to be ensured in the bid to make the Nigerian University meet up with international global standard.

REFERENCES