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ENHANCING INFORMATION AND COMMUNICATIONS TECHNOLOGY (ICT) FOR HUMAN AND INSTITUTIONAL CAPACITY BUILDING IN UNIVERSITIES IN CROSS RIVER STATE, NIGERIA

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Abstract

Managing records electronicallywith the use of computer systems and the internet is an inevitable practice in universities in Cross River State due to its enormous benefits such as: accomplishing of tasks faster with the use of automated functions, carrying out duties with less effort and quick decision making. Therefore, the concern for human and institutional capacity building in Universities in Cross River State is imperative. The study examined the level of electronic records management practices, centralized records management practices and ICT issues on administrative effectiveness in universities in Cross River State, Nigeria. Two research questions and two hypothesis guided the study. Survey research design was adopted for the study. The population of the study was 362 comprising Records officers and Clerical staff from the three universities in Calabar. The sample for the study was 100 representing 27.6% of the population drawn through stratified and simple random sampling techniques. The instrument used for data collection was structured questionnaire. Data collected was analysed and tested using Chi Square test statistic at 0.05 level of significance. The result of the findings showed that electronic records practices significantly influenced human and institutional capacity building and strengthen ICT in the universities in Cross River State, Nigeria. Secondly, centralized records management practices was not significant in the study area. Based on the findings, it was recommended among others that the use of electronic records system in the creation, manipulation, storage, retrieval, dissemination and security of information should be improved.

Key words: Electronic records management, centralized records management, Information and Communication Technology (ICT), human and institutional capacity building.

Introduction

Electronic records management is a systematic process of inputting data, manipulating data and disseminating information using the computer systems and other digital media. The data can be stored in the hard-drive of the computer, in a compact disc and in the cloud. These data are soft copies and so can be accessed and retrieved at anytime andfrom anywhere. The introduction of computer systems assists in achieving and adding value to the conduct of business transactions (Johare, 2001). Electronic records management is very important to every institution especially the university institution because of enhancement of the process of transcripts, performance assessment, payment of school fees, processing of results, issuance of certificates and quick decision-making.

Electronic records management can also be referred to as the practice of managing information with the use of automated systems such as the computer hardware, software and the internet; disseminating same to end-user(s) either in hard or soft copy. It involves the migration of records from one source to a digital environment. In electronic records management system, information could be received or created, manipulated and shared automatically, hence, improving ICT system.

According to Lucey (2014), electronic records management which is synonymous to Management Information Systems (MIS) is any telecommunication, computer related equipment, interconnected system or sub-systems of equipment that is used in the acquisition, storage, manipulation, management, movement, control, display, switching, interchange, transmission or reception of voice or data, including software and hardware. The major objective of electronic records management is to achieve effective and efficient storage of data, data security and data retrieval whenever and wherever needed. Therefore, the innovation for organizations especially academic institutions to manage data electronically has become imperative for institutional capacity

building. The electronic method of records management has saved most academic institutions the difficulty encountered in the use of the manual records techniques.

According to Florida Electronic Records Management Practices (2010), an electronic record is any information that is recorded in machine readable form. It maintained that electronic records comprise of graphic, numeric, audio, video and textual information which is captured and communicated in analog or digital form such as electronic spreadsheets, Word processing files, databases, electronic mail, instant massages, scanned images, digital photographs and multimedia files. Similarly, an electronic record management system is a robotic information system for the orderly collection, processing, manipulation, transmission and dissemination of information in accordance with defined procedures. This means that electronic records management system and ICT are interwoven and have a symbiotic benefits.

Egwunyenga (2009) identified some problems associated with electronic records management in universities to include incompetency of staff to use the computer system, badly implemented record management system, insecurity of records, use of paper convention, lack of training, manual operation, inadequate computer systems, ineffective retrieving due to misfiling, outdated retention and disposition schedule, to mention a few. These challenges are some of the ICT issues which hamper human and institutional capacity building.

The implementation of sound electronic records management practices can result in a number of benefits for academic institutions. One of the most important benefits is to ensure a creation and management of accurate and reliable database information management system. This allows the academic institution to fulfill legal mandates regarding the protection of their records. Other benefits include; ensuring the legal acceptability of the organization's electronic records, reducing the burden of paper records management, identifying appropriate means for the movement

of records to successive generations of technology and systems, improving accessibility to public information and increasing human and institutional capacity.

While information and communication technologies (ICTs) have brought many benefits to staff and organizations through effective electronic records management, they have also introduced a number of challenges and difficulties. The challenges posed by electronic records management, particularly in the public sector, have been highlighted by Mnjama (2004). These challenges include absence of organizational plans for managing electronic records, low awareness of the role of electronic records management in support of organizational efficiency and accountability, absence of policies and procedures to guide the management of electronic records, lack of staff training on electronic records management, absence of core competencies in electronic records and archives management, absence of budgets dedicated to improve electronic records management, insecurityand confidentiality controls, absence of migration strategies for electronic records and insufficientcomputer hardware.

According to Ben (2010), the computer system which is used for electronic records management is an ICT machine which got its nomenclature from a Latin word 'Computare' meaning anything that computes. The America Heritage Dictionary – New College Education in (Ben, 2010) sees computer as an electronic machine that performs high-speed mathematical or logical calculations or that assembles, stores, correlates or otherwise processes and prints information derived from coded data in accordance with a determined programme. Information Technology (IT) has grown to a high level in education systems nowadays and many procedures concerning students affairs are handled with database system. Database is an organized collection of data and a systemize process of organizing information electronically.

Okute (2015) viewed Information and Communication Technology(ICT) as the combination of computer and communication technologies such as telephone, radio, cable television, internet and intranet that result in information processing. Gregg (2013) reported that Electronic Records

Management (ERM) has become mandatory for government agencies to apply electronic recording of information in administration to encourage e-government and increase organizational capacity. Electronic records need to be properly managed in order to maximize their value and minimize cost. By implementing good electronic records management practices, the university institutions can control, minimize and even avoid the costs associated with poor records management and improve the efficiency of the academic institution.

In this modernized world of computers, it makes sense to manage records electronically, with universities spreading out or having different locations, yet being tied together with the help of the internet. This implies that each university institution should set up a database information management system as a requirement in a contemporary society like ours. Institutions are under increasing pressure to become more efficient while at the same time maintaining or improving the quality of service. Electronic records management with its potentials, play an important role in supporting efficiency, accurate accessibility of information and human capacity building. Sing (2002) pointed out that there is a direct relationship between investment in electronic records and productivity improvements in the office and these include; better clients services, greater product/service variety, shorter response time, enhanced product/service quality and better future.

Effective electronic records management leads to a steady flow in cellular subscriptions with internet access. For example, from 2001 to 2016, the proportion of individuals using the internet in the developed world, reached 79.6% (International Telecommunication Union, 2018). This digital transformation is creating way for many positive and negative issues in the area of human and institutional capacity building. These issues cut across business, banking, healthcare and education. Positively, in the educational environment, e-teaching and e-learning is being practiced across the globe, this evolution of information and communication technology will obviously increase to an unpredicted height in the areas aforementioned.

In some Institutions, records management are organized centrally or departmentally. Some organizations choose the centralized records management system, while others prefer de-centralized/departmental system. Others also find both systems to be good. Centralized records management system is whereby all the records of theInstitution are kept and controlled in one room instead of allowing each department to maintain its own records (Etim, 2017). In many large organizations, a separate department (central filing department or Registry) is created to take care of the Organization's records. Trained personnel called records managers are in-charge of all records management and so they are done more efficiently. This makes it possible for effective supervision to be exercised over records including the movement and retrieval of records. Decentralized or departmental filing is a system by which each department or section of an organization keeps and maintains its own system of filing which best suits it (Arora, 2006).

The teachers and students in today's world expect to be able to teach and learn anywhere and anytime. This is a positive trend in ICT and it is expected that government, universities and teachers should consider and adapt to it. When this is done, the human capacity will be encouraged in terms of training, competences, efficiency, innovation and quick decision making. The government and the academic institutions will also benefit in terms of increase in productivity, meeting up with the current market demands, increasing effectiveness in ICT, increasing financial profit, sustainable development in teaching and learning and quick decision making.

In addition to institutional capacity building, distance education with the aid of the internet hitherto benefit academic institution not only because of the fact that online learning does not require physical location, but also because it offers possible ways of increasing enrolment capacity compared to classroom-based education. In other words, a virtual classroom is hundred percent larger than physical classroom. In virtual classroom environment, textbooks, articles and the World Wide Web (www) are abundant with plethora of ICT terminologies used interchangeably. Different pedagogies such as wikis, blogs and podcasts are exhibited online and are followed by

individuals based on choice. This gives teachers the opportunities of viewing multitude of possible teaching and learning methodologies and combinations of pedagogies for their use. Technological development in ICT create both opportunities and challenges, and "increasingly, our ability to leverage the benefits of ICTs depends upon our capacity to learn and acquire new knowledge" (International Telecommunication Union, 2018).

Lack of proper training for teachers to acquire ICT skills, lack of provision of computers to university teachers are some of the ICT challenges. The teachers of this new age, must develop the ability to change quickly to ICT environment, in other words, it has become imperative for teachers to engage seriously in the process of human and institutional capacity building. In blended learning, the students are required to have access to text books and computer facilities, participate in excursion and other experiments. The emphasis is on the ability of teachers and students to procure a computer system which may be challenging to participate in online teaching and learning especially during certain events in world such as COVID 19 pandemic. This is also difficult because the computer laboratories are not well equipped by the government or the school.

Inadequate ICT machines in offices, lack of internet connections, lack of skilled personnel and lack of government support are also ICT issues in capacity building. These issues are capable of negatively affecting productivity, profit and decision-making. Notwithstanding, automation of offices and robotic may take over human resource. For example, United Kingdom predicts that 35% to 47% of jobs may be displaced in the next one or two decades as a result of automation in industries and other sectors (International Telecommunication Union, 2018). Other issues include inability of the government and the school to provide technology-enabled classrooms and e-learning spaces.

Ideally, a university with a solid foundation in proper records practices should have all its records offices computerized, meet legal requirements, be cost effective in its operation, provides

Local Area Network (LAN), process students' results, transcripts and payment of all fees as fast as possible. It should be above to provideinformation in a timely and efficient manner when needed, use modern technology to manage and improve records, organise seminar and training for records managers. It has been observed with dismay that significant volume of students' records in hard-copy are kept on the floor or around the storage cabinet in some of our universities. Besides,the filing shelves are overcrowded with files and folders, making the place unkempt. Moreso, using a ladder to climb up the fixtures to trace files may be injurious as the officer may fall down from the ladder due to decay of the woods and this could be disastrous. General and personal offices are not exception from this poor manner of record management; office spaces gradually become smaller due to heaps of students' files and documents.

The attributes of good records management practices are lacking. Therefore, it becomes imperative to investigate the level of electronic records management practices in our universities. The main purpose of the study was to access the records management practices in universities in Cross River State, Nigeria. Specifically, the studysought to examine the influence of electronic and centralized records management practices on administrative effectiveness in the universities in Cross River State, Nigeria.

Methodology

The study adopted the survey research design. The study was carried out in Calabar metropolis and Akpabuyo Local Government Area, Cross River State, Nigeria. Tne research question and two hypothesis guided the study. The population of the study was 362 respondents comprising records officers and clerical staff from the three Universities in Calabar metropolis. The breakdown is as follows: (From Unical, Records Officers 96, Clerical staff 75), (From CRUTECH, Records Officers 72, Clerical staff 55), (From Arthur Javis, Records Officers 38, Clerical staff 26). The sample for the study was 100 respondents representing 27.6% of the population made up of

records and clerical staff drawn through stratified and simple random sampling techniques. The instrument used for data collection was a structured questionnaire. The questionnaire was divided into three sections. Section 'A'focused onthe demographic information of the respondents, section 'B' elicited information on electronic records management practices while section 'C' elicited information on centralized records management practices. The instrument had 12 items and was on four-point rating scale of Strongly Agreed (SA), Agreed (A), Disagreed (D) and Strongly Disagreed (SD) and were coded as follows: SA = 4, A = 3, D = 2, SD = 1 for positive items and SA=1, A=2, D=3, and SD=4 for negative items. The questionnaire was validated by three experts: one business educator and two in research and statistics, from the University of Calabar. The instrument was pilot-tested among 25 records and clerical staff from outside the sample universities. The Cronbach Alpha method of determining reliability coefficient was used and it yielded a coefficient of 0.88 making the instrument reliable for the study. Data collected was analysed and tested using Chi-Square test statistic at 0.05 level of significance.

Results:

Hypothesis 1: There is no significant influence of electronic records practices on administrative effectiveness in the universities in Cross River State, Nigeria.

Analysis of this hypothesis was done using Chi Square test analysis and the result is shown in table 1:

TABLE 1:Observed and expected frequencies for Chi-Square analysis of the influence of electronic records management practices on administrative effectiveness in the Universities in Cross River State (N=100).

	Responses		
	Agreed O(E)	Disagreed O(E)	Total
Items			
1. Records are stored electronically in your Department.	84 (82.3)	16 (17.7)	100
2. Electronic records storage is preferred to manual records management.	60 (82.3)	40 (17.7)	100
3. There is an electronic device for records back-up system in case of a disaster.	92 (82.3)	8 (17.7)	100
4. A records management training program is organized annually to ensure that quality records are kept.	92 (82.3)	8 (17.7)	100
5. Storage of records electronically in your Department has contributed to the effective service delivery of your Department and U.C.T.H. in general.	86 (82.3)	14 (17.7)	100
6. Using computer to store information and records has enabled office space to be saved.	80 (82.3)	20 (17.7)	100
Total	494	106	600

$X^2_{Cal} = 48.56; Sig. = 0.05; df = 5; X^2_{Crit} = 11.07$

The result indicated that the calculated value of X^2_{cal} was 48.56 as against the critical X^2_{crit} value of 11.07 at 0.05 level of significance and degree of freedom (r-1)(c-1) = (6-1)(2-1) = 5. Since the X^2_{cal} of 48.56 was greater than the X^2_{crit} value of 11.07, the null hypothesis was rejected and it was therefore affirmed that there was significant influence of electronic records practices on

effective administration in universities in Cross River State, Nigeria. This implied that improvement on electronic records management could enhance ICT for human and institutional capacity building.

Hypothesis 2: Centralized records management practices does not significantly influence administrative effectiveness in the universities in Cross River State.

Analysis of hypothesis 2 was done using Chi Square test analysis and the result is shown in table 2:

TABLE 2: Observed and expected frequencies for Chi-Square analysis of the influence of centralized records management practices on administrative effectiveness in the Universities in Cross River State (N=100).

	Responses		
Items	Agreed O (E)	Disagreed O (E)	Total
7.	92 (92.7)	8 (7.3)	100
8.	96 (92.7)	4 (7.3)	100
9.	96 (92.7)	4 (7.3)	100
10.	92 (92.7)	8 (7.3)	100
11.	92 (92.7)	8 (7.3)	100
12.	88 (92.7)	12 (7.3)	100
TOTAL	556	44	600

$X^2_{Cal} = 6.689;\ X^2_{Crit} = 11.07$; *Not significant at 0.05 and df = 5;*

The result indicated that the calculated value of X^2_{cal} was 6.698 while the critical X^2_{crit} value was 11.07 at 0.05 level of significance and degree of freedom (r-1)(c-1) = (6-1)(2-1) = 5. Since the X^2_{cal} of 6.698 wasless than the X^2_{crit} value of 11.07, the null hypothesis was accepted and it was therefore affirmed that there is no significant influence of centralized records management practices on administrative effectiveness in the study area. This implies that both the departmental and

centralized records management practices are useful in the study area and could enhance Information and Communications Technology (ICT) for human and Institutional capacity building.

Discussion of findings

The findings of the study revealed that electronic records practices significantly influenced administrative effectiveness in universities in Cross River State, Nigeria. These practices were: using the computer system to input data, storing information in the computer memory and other external devices, sharing information electronically and data security. This finding is in consonance with that of Kanzi (2010) who observed that electronic records management practices enable good records classification system and facilitate efficient retrieval and dissemination of information.

This study collaborated the study carried out by Johare (2001) on the comparison of electronic and manual records practices which showed that both electronic and manual records management practices come with varied benefits to businesses and organizations in respect to data storage, retrieval and sharing. The study revealed that electronic records management have proven to be more effective as compared to the manual. According to him, electronic records management gives unlimited storage space as compared to conventional method of office cataloging that involves categorizing several ink printed papers in a cabinet to allow for retrieval when needed. Data retrieval is one area where computers clearly excel. Finding a particular piece of information is infinitely easier with a modern computer system than it is with realms of paper. Solving a particular problem may, in fact, take longer time with manual method of documentation despite the fact that reading from paper is generally easier. Furthermore, improvements in navigation and control of spatial layout of individual and multiple documents is also supported in electronic documents. Digital systems can support annotation and there can be a number of advantages to electronic annotation technology if properly implemented. For example, annotations can be stored in an annotation database and make retrieval and document summaries easier, they can be linked

permitting hypertext navigation, and can be easily shared. The study recommended improvement in electronic records practices and training of records personnel.

The finding of this study also collaborated that of Okute (2015). This researcher conducted a study to determine the extent of possession and utilization of electronic records management skill by records personnel in universities in South-South Nigeria. The study revealed that records officers had little knowledge of electronic records skills. The study also revealed that the universities have some electronic record facilities, but no formal training programme organized for records officers. Also, that the universities do not have electronic record policy. The study recommended establishment of electronic records policies and training of records officers. The implication of this finding is that much still have to be done to see how to save the conventional documents electronically.

However, the finding of this study on centralized records management practices was not in consonance with Arora(2006) who viewed that centralized records management is whereby all the records of an institution are kept and controlled in one room instead of allowing each department to file its own records. According him, trained personnel called records managers are in-charge of all filing and so filing is done more efficiently. He concluded that this practice makes it possible for effective supervision to be exercised over records including the movement and retrieval of records.

Therefore, information and communication technology (ICT) would be enhanced through electronic records management practices, departmental and centralized records management practices if policies are made for effective use of electronic records, maintenance, security and archival, responsibilities are assigned to competent records managers, there are establishment of procedures and guidelines to management of electronic records, training of records personnel as well as improvement of Information and Communication Technology (ICT) systems. This will in turn improve human and institutional capacities in the study area.

Conclusion

Electronic records management is inevitable due to its enormous benefits in this era of computer technology where humans and Organisations consume more soft data than ever. Based on the results of this study, it was concluded that electronic records management practices significantly influenced the administrative effectiveness in the universities in Cross River State, Nigeria in terms of capturing of all students' payments with the use of computer system, prompt retrieval of information, quick processing of students' results and transcripts etcetera. However, centralized records management practices did not significantly influence the administrative effectiveness in the study area. This implies that both the departmental and centralized records management practices were useful in the study area. It was also discovered that the existence of electronic records management practices in the study area also enhanced ICT though with some issues such as lack of training of records personnel, lack of sustainable internet connections, lack of constant power supply and inadequate supply of computer systems.

Recommendations

It was recommended among others that:

(i) The use of electronic records systems in creation, manipulation, storage, retrieval, dissemination and security of information should be improved.

(ii) There should be adequate supply of computer hardware in universities in Cross River State.

(iii) Training should be organised for ICT staff and only trained ICT personnel should be assigned to handle ICT jobs.

(iv) There should be constant power supply and internet connections.

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