Application of Information and Communication Technology (ICT) To the Management of Records in the Head of Services Office, Asaba, Delta State

David O. Toyo
Department of Library & Information Science,
Delta State University,
Abraka, Delta State, Nigeria
davidoghenevwogaga@gmail.com

Abstract
This study investigated the application of information and communication technology (ICT) to the management of records in the Office of the Head of Service, Asaba, Delta State, Nigeria. In order to achieve the purpose and objectives of this study, questionnaire was designed to elicit information from 45 respondents, being the sample size for the study. The data collected were critically analyzed using frequency and percentage tool. The major findings revealed the following: that records kept in government offices include general correspondences, vital statistics, working papers, staff records, finance records and legal hold records, that ICT facilities used for records management in offices include CD-ROMs, USB Flash Drives, Computerized Database, Computers, Mobile phones, Memory cards and external hard disk drives, that the extent to which ICT facilities are applied in the management of records in government offices include in the creation of records, processing of records and documents, in the storage of high volume records, retention / disposal of records and in the retrieval of records and documents, that ICT has numerous benefits and has successfully changed the practices of records management in government offices. Some of these benefits as discovered in the course of the research include: superior data storage capacity, faster data retrieval (especially when searching), quicker data analysis, sorting data by specific parameters, easier amendment of data and data redundancy and that there are many challenges facing the effective use of ICT for records management in government offices such as inadequate funding, inadequate security measures, shortage of software, computer network failure during record keeping, lack of ICT skills, lack of ICT technicians and personnel, lack of basic and adequate infrastructure/resources and inadequate standard procedures.

Keywords: *Practice, ICT, Technologies, Government, Office, Delta State, Nigeria*

INTRODUCTION

The field of records management has over the past two decades undergone great advancements and this is mainly due to the emergence of modern information and communication technology (ICT) (Kasozi, 2012). The adoption of ICT in organisations has improved on the performance of tasks (Wamukoya, 2012). Tusubira and Mulira (2012) argued that at the organizational level, it is widely accepted (though not fully appreciated) that the integration of ICT in organizational functions is necessary for increased efficiency, cost-effectiveness and competitiveness.

The use of information technology cannot be ignored in any sphere of human endeavours. Olayemi (2007) posits that Information and Communication Technology (ICT) is computer-related technology used to process, store and transit data. It is a generic term referring to a technology which is being used for collecting, storing, editing and passing on of

information in various forms. ICT has transformed the way in which organizations store and manage information (Iwhiwhu, 2005). Organizations today have adopted the use of ICT in order to cope with the ever increasing information generated within the organization (Lyman, 2014).

In today's environment, records are now understood more in terms of function, content, context, and structure (The National Electronic Commerce Coordinating Council, 2014). This shift in understanding has resulted in large part from the rise of electronic records, in which records may be stored as bits and bytes, dispersed non-sequentially across a storage device or media and assembled into a complete record only when viewed (The National Electronic Commerce Coordinating Council, 2014).

Records as defined by the American Heritage Dictionary (1980), and cited by Onifade (2012) are information or data on a particular subject collected and preserved. This definition implies that any processed and unprocessed data that is collected and kept for future use constitutes 'record'. Chifwepa (2013) observed that a record is a documented transaction and that information is what a record contains, stores and transmits.

Hulme (2012) defined a record as something that represents proof of existence and that can be used to recreate or prove state of existence, regardless of medium or characteristics. A record is either created or received by an organization in pursuance of, or in compliance with legal obligations, or in the transaction of business. The records of governmental agencies capture information used to protect the rights and interests of governments, businesses and citizens and to preserve history and culture by documenting information about noteworthy people, issues, places, and events.

The National Archives of Scotland (2013) defined records management as the systematic control of an organization's records, throughout their life cycle, in order to meet operational business needs, statutory and fiscal requirements, and community expectations. Effective management of corporate information allows fast, accurate and reliable access to records, ensuring the timely destruction of redundant information and the identification and protection of vital and historically important records.

Information is every organization's most basic and essential asset, and in common with any other business asset, recorded information requires effective management. Records management ensures that information can be accessed easily, can be destroyed routinely when no longer needed, and enables organisations not only to function on a day to day basis, but also to fulfill legal and financial requirements (NAS, 2013). The preservation of the records of government for example, ensures that government officials can be held accountable for its actions, that society can trace the evolution of policy in historical terms, and allow access to an important resource for future decision making.

However, Popoola (2010) opined that what actually keeps the civil service going in any modern system of government is recorded information called "records," which are used for planning, decision making and controlling. The need for a records management programme in all organizations cannot be overstressed in the digital age. The purpose and essence of any record system is the right information in the right place in the right order, at the right time for the right person at the lowest cost (Popoola, 2010). For this feat to be achieved, an integrated records management programme is needed (Baje, 1998 cited in Akporhonor & Iwhiwhu, 2007).

Akporhonor & Iwhiwhu (2007) citing Enwere (1992) argued that the un-integrated records management programme in Nigerian public service has led to inefficiency in administration and to the loss or unavailability of vital information needed for decision-making. As records management developed, it has also incorporated principles integral to information science as the means of processing information for optimum accessibility and usability, concerned with the origination, collection, organization, storage, retrieval,

interpretation, transmissions, transformation and use of information (Vakkari & Cronin, 2012). Such principles are adopted by records managers in seeking to enhance the access and use of records especially in offices.

Stressing the use of technology in records management, McDonald (2014) opined that in developing record keeping solutions, it is necessary to understand the evolution that is taking place in the use of technology. The application of Information and Communication Technology (ICT) to the management of records in offices therefore, will go a long way in making such records accessible and usable.

OBJECTIVES OF THE STUDY

The main purpose of this study is to examine the practice of ICT in managing government records. The specific objectives are to:

(i) find out the types of records created in the Head of Service office;
(ii) know the ICT facilities used in the creation and use of records in the Head of Service office;
(iii) examine the extent to which ICT facilities are applied in the management of records in the Head of Service office;
(iv) determine the benefits of using ICT for records management in the Head of Service office; and
(v) Investigate the challenges facing the effective use of ICT on records management in the Head of Service office.

RESEARCH QUESTIONS

The following research questions were raised to guide this study:

(i) What are the types of records created in the Head of Service office?
(ii) What are the ICT facilities used in the creation and use of records in the Head of Service office?
(iii) To what extent are ICT facilities applied in the management of records in the Head of Service office?
(iv) What are the benefits of using ICT for records management in the Head of Service office?
(v) What are the challenges facing the effective use of ICT on records management in the Head of Service office?

METHODOLOGY

The research design adopted for the study is the expo-facto design or the descriptive survey method. The total population for this study is forty-five (45). This consists of all the professional staff who handles records in the Office of the Head of Service, Asaba, Delta State. The research instrument that was used for this study is the questionnaire. It was titled "Use of ICT in Managing Government Records in the Office of the Head of Service, Asaba, Delta State (UICTMGR). Copies of the questionnaire were personally administered to the respondents randomly. Their responses were immediately collected.

RESULTS AND FINDINGS

Bio-Data of the Respondents

Table 4.1: Gender distribution of the respondents

Gender	Responses	Percentage (%)
Male	18	40
Female	27	60

Total	**45**	**100**

Source: Field survey, 2016

Research question one: *What are the types of records created in your office?*

Table 4.2: *Types of records created in the Head of Service office*

Types of records	Agree	Percentage (%)	Disagree	Percentage (%)
General correspondence	45	100	0	0
Transactional records	42	93.3	3	6.7
Vital statistics	45	100	0	0
Working papers, including drafts, versions, and copies	45	100	0	0
Websites (including Web pages, images, documents, and audio/video files)	41	91.1	4	8.9
Electronic messages (including e-mail, instant messaging, and voice mail)	43	95.6	2	4.4
Metadata associated with records	11	24.4	34	75.6
Staff records	45	100	0	0
Finance records	45	100	0	0
Legal hold records	45	100	0	0

Source: Field survey, 2016

From table 4.2, the records that have the highest frequency are general correspondence, vital statistics, working papers, staff records, finance records and legal hold records with 45 (100%) respectively showing that the respondents agreed to this claim. Electronic messages are another record with high response rate as shown by 43 (95.6%) of the respondents. Transactional records and Websites recorded 42 (93.3%) and 41 (91.1%) respondents respectively. It is obvious that metadata associated with records is hardly done as recorded in the response by 11 (24.4%) of the respondents.

Research question Two: *What are the ICT facilities used in the creation and use of records in the Head of Service office?*

Table 4.3: *ICT Facilities used in Records creation and use*

ICT Facilities used in Records creation and use	Agree	Percentage (%)	Disagree	Percentage (%)
Compact Disc Read Only Memory (CD-ROM)	45	100	0	0
USB Flash Drives	45	100	0	0
Floppy Disc	8	17.8	37	82.2
Microforms	0	0	45	100
Computerized database	45	100	0	0
Optical Storage Disc	43	95.6	2	4.4
Computers	45	100	0	0
Mobile phones (GSM)	45	100	0	0
Memory cards	45	100	0	0
External hard disk drives	44	97.8	1	2.2

Source: Field survey, 2016

In table 4.3, the ICT facilities that have the highest record are CD-ROMs, USB Flash Drives, Computerized Database, Computers, Mobile phones and Memory cards with 45 (100%) respondents agreeing to this claim. However, external hard disk drives and optical

storage discs are also used in records management in Head of Service office as agreed by 44 (97.8%) and 43 (95.6%) respondents respectively. It is also clear from this analysis that the use of floppy discs was low as affirmed by 8 (17.8%) of the respondents while microform recorded no response on its use for records management in the Head of Service office. The analysis clearly shows that majority of the ICT facilities are used for the management of records in the Head of Service office under study which is in line with Osakwe (2012) who asserted that the opportunities afforded by modern technology to support records management in offices are growing rapidly and that offices now have at their disposal a remarkable range of technologies for creating, using and managing records which include computerized databases, ICT tools (CD-ROMS, Flash drives, etc) amongst others.

Research question Three: *To what extent are ICT Facilities applied in the management of records in the Head of Service office?*

Table 4.4: *Application of ICT Facilities in Records Management*

Application of ICT in Records Management	**Agree**	**Percentage (%)**	**Disagree**	**Percentage (%)**
Creation of new records	45	100	0	0
Processing of records and documents	45	100	0	0
Retention and disposal of records	44	97.8	1	2.2
Retrieval of records and documents	40	88.9	5	11.1
Storage of high volume records	45	100	0	0

Source: Field survey, 2016

Table 4.4 displays the extent to which ICT facilities are applied in the management of records in the Head of Service office. All the respondents says ICT facilities are applied in the creation of records, processing of records and documents and in the storage of high volume records. 44 (97.8%) affirmed that ICT facilities are also applied in the retention and disposal of records while 40 (88.9%) agreed on its use in the retrieval of records and documents, although 5 (11.1%) disagreed. It is however evident that ICT facilities are applied optimally in the management of records in the office under study which is in line with the study of Shelly, Cashman and Vermaat (2003) who highlighted the various functionalities of modern ICT tools and their applications in government offices.

Research Question Four: *What are the benefits of using ICT for records management in the Head of Service office?*

Table 4.5: *Benefits of using ICT for Records Management*

Benefits of using ICT for Records Management	**Agree**	**Percentage (%)**	**Disagree**	**Percentage (%)**
Superior data storage capacity	45	100	0	0
Faster data retrieval, especially when searching	45	100	0	0
Data analysis is much quicker	45	100	0	0
Reports can be automatically generated	25	55.6	20	44.4
Sorting data by specific parameters	45	100	0	0
Amending data is much easier	45	100	0	0
If properly configured, there is less chance of data loss	35	77.8	10	22.2
Easier-to-manage security	44	97.8	1	2.2
Data redundancy	45	100	0	0

Source: Field survey, 2016

However, in table 4.5, the benefits of using ICT for records management in government offices were revealed. All the respondents agreed that the benefits of using ICT for records management include superior data storage capacity, faster data retrieval (especially when searching), quicker data analysis, sorting data by specific parameters, easier amendment of data and data redundancy. 44 (97.8%) agreed to easier-to-manage security as a benefit. However, 21 (44.4%) disagreed that reports cannot be automatically generated, 10 (22.2%) do not believe that if properly configured, there is less chance of data loss. The analysis therefore implies that ICT application in records has numerous benefits as cited in the words of Sheahan (2015) who opined that information and communication technology benefits the office environment by allowing organizations to work more efficiently and to maximize productivity. Also, the analysis is also in line with Chiltern (2015) who highlighted various advantages of ICT in records management in offices.

Research Question Five: *What are the challenges facing the effective use of ICT on records management in the Head of Service office?*

Table 4.6: *Challenges facing the effective use of ICT on records management*

Challenges facing use of ICT for records	**Agree**	**Percentage (%)**	**Disagree**	**Percentage (%)**
Lack of basic and adequate infrastructure/resources	39	86.7	6	13.3
Lack of ICT technicians and personnel	41	91.1	4	8.9
Inadequate funding	45	100	0	0
Lack of ICT skills	42	93.3	3	6.7
Interruption of ICT facilities by electricity	15	33.3	30	66.7
Computer network failure during record keeping	44	97.8	1	2.2
Inadequate security measures	45	100	0	0
Shortage of software	45	100	0	0
Inadequate standard procedures	38	84.4	7	15.6

Source: Field survey, 2016

Furthermore, table 4.6 shows some of the challenges facing the effective use of ICT for records management. All the respondents said inadequate funding, inadequate security measures and shortage of software is a problem. 44 (97.8%) says computer network failure during record keeping is a challenge, 42 (93.3%) says lack of ICT skills is a problem, 41 (91.1%) says lack of ICT technicians and personnel is a factor, 39 (86.7%) says lack of basic and adequate infrastructure/resources is a problem while 38 (84.4%) says inadequate standard procedures is a challenge. These findings are in accordance with Emetaron (2001), Ibadin (2001), Osundine (2007) and Ogunlade (2008) who highlighted various factors that hinders effective use of ICT for record management in offices.

DISCUSSION OF FINDINGS

From the analysis, the following results can be seen.

From table 4.2, the records that have the highest frequency are general correspondence, vital statistics, working papers, staff records, finance records and legal hold records with 45 (100%) respectively showing that the respondents agreed to this claim. Electronic messages are another record with high response rate as shown by 43 (95.6%) of the respondents. Transactional records and Websites recorded 42 (93.3%) and 41 (91.1%)

respondents respectively. It is obvious that metadata associated with records is hardly done as recorded in the response by 11 (24.4%) of the respondents.

In table 4.3, the ICT facilities that have the highest record are CD-ROMs, USB Flash Drives, Computerized Database, Computers, Mobile phones and Memory cards with 45 (100%) respondents agreeing to this claim. However, external hard disk drives and optical storage discs are also used in records management in Head of Service office as agreed by 44 (97.8%) and 43 (95.6%) respondents respectively. It is also clear from this analysis that the use of floppy discs was low as affirmed by 8 (17.8%) of the respondents while microform recorded no response on its use for records management in the Head of Service office. The analysis clearly shows that majority of the ICT facilities are used for the management of records in the Head of Service office under study which is in line with Osakwe (2012) who asserted that the opportunities afforded by modern technology to support records management in offices are growing rapidly and that offices now have at their disposal a remarkable range of technologies for creating, using and managing records which include computerized databases, ICT tools (CD-ROMS, Flash drives, etc) amongst others.

Table 4.4 displays the extent to which ICT facilities are applied in the management of records in the Head of Service office. All the respondents says ICT facilities are applied in the creation of records, processing of records and documents and in the storage of high volume records. 44 (97.8%) affirmed that ICT facilities are also applied in the retention and disposal of records while 40 (88.9%) agreed on its use in the retrieval of records and documents, although 5 (11.1%) disagreed. It is however evident that ICT facilities are applied optimally in the management of records in the office under study which is in line with the study of Shelly, Cashman and Vermaat (2003) who highlighted the various functionalities of modern ICT tools and their applications in government offices.

However, in table 4.5, the benefits of using ICT for records management in government offices were revealed. All the respondents agreed that the benefits of using ICT for records management include superior data storage capacity, faster data retrieval (especially when searching), quicker data analysis, sorting data by specific parameters, easier amendment of data and data redundancy. 44 (97.8%) agreed to easier-to-manage security as a benefit. However, 21 (44.4%) disagreed that reports cannot be automatically generated, 10 (22.2%) do not believe that if properly configured, there is less chance of data loss. The analysis therefore implies that ICT application in records has numerous benefits as cited in the words of Sheahan (2015) who opined that information and communication technology benefits the office environment by allowing organizations to work more efficiently and to maximize productivity. Also, the analysis is also in line with Chiltern (2015) who highlighted various advantages of ICT in records management in offices.

Furthermore, table 4.9 shows some of the challenges facing the effective use of ICT for records management. All the respondents said inadequate funding, inadequate security measures and shortage of software is a problem. 44 (97.8%) says computer network failure during record keeping is a challenge, 42 (93.3%) says lack of ICT skills is a problem, 41 (91.1%) says lack of ICT technicians and personnel is a factor, 39 (86.7%) says lack of basic and adequate infrastructure/resources is a problem while 38 (84.4%) says inadequate standard procedures is a challenge. These findings are in accordance with Emetaron (2001), Ibadin (2001), Osundine (2007) and Ogunlade (2008) who highlighted various factors that hinders effective use of ICT for record management in offices.

CONCLUSION

At the end of the study, findings that were made were laid out as follows:

(i) Records kept in the Head of Service office include general correspondences, vital statistics, working papers, staff records, finance records and legal hold records.

(ii) ICT facilities used for records management in the Head of Service office include CD-ROMs, USB Flash Drives, Computerized Database, Computers, Mobile phones, Memory cards and external hard disk drives.

(iii) Extent to which ICT facilities are applied in the management of records in the Head of Service office include in the creation of records, processing of records and documents, in the storage of high volume records, retention / disposal of records and in the retrieval of records and documents.

(iv) ICT has numerous benefits and has successfully changed the practices of records management in the Head of Service office. Some of these benefits as discovered in the course of the research include: superior data storage capacity, faster data retrieval (especially when searching), quicker data analysis, sorting data by specific parameters, easier amendment of data and data redundancy

(v) There are many challenges facing the effective use of ICT for records management in the Head of Service office such as inadequate funding, inadequate security measures, shortage of software, computer network failure during record keeping, lack of ICT skills, lack of ICT technicians and personnel, lack of basic and adequate infrastructure/resources and inadequate standard procedures.

Having had an insight on the use of ICT in records management in the Head of Service office, it was shown that the benefit of ICT in any establishment or sector cannot be overemphasized. The researcher therefore concludes that every office, whether private or government should implement every strategy possible to combat the factors militating against the effective application of ICT in the management of their records.

RECOMMENDATIONS

From the findings and results of this research, the researcher further recommends that:

(i) Government should continually be involved in the development of ICT especially in ministries and parastatals.

(ii) Adequate infrastructures / resources should continually be made readily available to record managers / personnel.

(iii) Record managers / personnel should always be kept abreast of current advancements in ICT.

(iv) Record managers and personnel should be trained on the use of latest information technologies / gadgets so as to be effective and efficient in their performances.

REFERENCES

Akporhonor, B. A. & Iwhiwhu, E. B. (2007). The Management of Staff Records at Delta State University Library, Abraka, Nigeria. *Library Philosophy and Practice*. Retrieved 11th May 2015 from http://unllib.unl.edu/LPP/akporhonor-iwhiwhu.htm.

Baje, E. N. (1998). *Records Management Programme in Oyo State Civil Service, a study of Governor's office*. Unpublished MAS thesis, Ibadan, 36.

Chifwepa, G. (2013). Information and Communication Technology for administration and management for secondary schools in Cyprus. *Journal of Online Learning and Teaching 4* (3): 1 – 19.

Enwere, J. C. (1992). Records Management in Nigeria: To be or not to be? *Nigeria Library and Information Science Review, 10* (1/2): 61 - 67.

Hulme, T. (2012). Information Governance: Sharing the IBM approach. *Business Information Review 29* (2): 99 – 104.

Iwhiwhu. (2005). Management of records in Nigerian Universities: Problems and Prospects. *The Journal of Electronic Library*. Retrieved May 1, 2015 from www.primejournal.com.

Kasozi, A. (2012). *The Contribution of ICT in the management of students academic records (a case of Makerere University Academic Records Information System).* Unpublished Dissertation. Makerere University, 19

Lyman, K. (2014). How much information? Retrieved May 3rd, 2015 from www.simsberkely.edu

Mcdonald, I. (2014). Managing records in the modern office: taming the wild frontier. *Archivaria 39* (Spring): 70 - 79.

Olayemi, B. (2007). The relevance of ICT in adult education. *Ikere journal of education 9* (1): 1 – 9

Onifade, T. (2012). *Importance of Record keeping in Universities.* Being Paper Presented to the Department of PHE, University of Ilorin, pp. 1-10.

Popoola, N. (2010). Managing records for effective school administration in Nigeria. Contemporary Issues in education management. University of Ibadan. Retrieved April 30, 2015 from www.primejournal.org.

The National Archives of Scotland (2013). What is records management? Retrieved 11th May 2015 from http://www.nas.gov.uk/recordkeeping/recordsmanagement.asp.

The National Electronic Commerce Coordinating Council (2014). Challenges in Managing Records in the 21st Century. Retrieved May 11th 2015 from https://library.osu.edu/assets/Uploads/RecordsManagement/Challenges-in-21st-e-recs-neccc.pdf

Tusubira, G. & Mulira, E. (2012). Supporting University ICT developments: The Makerere University Experience. Retrieved March 13, 2015 from http://www.codesria.org

Vakkari, P. & Cronin, B. (Eds). (2012). *Conceptions of Library and Information Science: Historical, Empirical and theoretical perspectives.* Proceedings of the international conference held for the celebration of the 20th Anniversary of the Department of Information studies. University of Tampere, Finland, 26-28 August, 2011. London: Taylor Abraham.

Wamukoya, T. (2012). Capacity building requirements for e-records management. *Records Management Journal, 15*. Retrieved May 1st, 2015 from http://www.naa.gov.au.