
**e-Records And Information Retrieval Strategies:
a Panacea For Business Educators Record Management In
Nigeria**

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Abstract

The study examines electronic record and information retrieval strategy, a solution to business educators in record management. It discussed the meaning of record, what constitute non-records, electronic record and electronic record management system, types of electronic records, information management system, how electronic record management work. Records and information management in institutions addresses records from the period they are originally created, actively used, possibly re-purposed and re-used, and eventually disposed of or transferred to an archive because of their long-term value. The various tools, programs, databases and systems used to create and actively manage records and other information resources are discussed in this paper. Data and data lifecycle was discussed to mean a process that helps organisations to manage the flow of data/information from its initial creation to destruction. Also discussed is the components of electronic record management storage and retrieval system, objectives of information management strategy and retrieval, kinds of information retrieval system, basic components needed in information retrieval system, and indexing techniques. In conclusion, it was stated that institutions must ensure that records are not only properly stored for easy access and management in a secured manner but adopt the use of e-record, and e-record management in compliance with legal requirements and regulations regarding the storage, assessment and use of information. Its suggestion is for institutions to adopt to the use of cloud recording to enhance academic delivery.

Key Words: Records, Electronic Record, Information Retrieval

Introduction

Document that serves as evidence of activity or transaction performed by an organisation that require retention for a period is a record. A record can be referred to mean evidence that a particular event took place such as a football goal score, date of birth or population figure, death rate, a picture, purchase receipt, financial report, an X-ray, a contract approval, an email, legal judgement or verdict. The International Organisation of Standardization (2015) cited in Ezeonwueie (2020) stated that records are information created, received and maintained as evidence by a person or an organisation, in pursuance of legal obligations or in the transaction of business. Records are very important in every aspect of human life because they provide information about the past and present activities of an individual or organisation.

Record management is primarily concerned with the evidence of an organization's activities and is usually applied according to the value of the records rather than their physical format. The International Organisation of Standardization (2001) in Ezeonwueie (2020) defined Records Management (RM) as the field of management responsible for efficient and systematic control of creation, receipt, maintenance, use, and disposition of records, including the processes for capturing and maintaining evidence of information about business activities and transactions in the form of records. Essentially, record management include assigning unique identifiers to various records, providing safeguards against unauthorized changes being made to those records, and creating an unbreakable audit trail for reasons of accountability, discovery and eDiscovery.

Conceptual Clarifications

Records

Records according to the Illinois State Records Act (2013) are: "books, papers, digitized electronic material, maps, photographs, databases, or other official documentary materials, regardless of physical form or characteristics, made, produced, executed or received by any agency in the State in pursuance of state law or in connection with the transaction of public business and preserved or appropriate for preservation by that agency or its successor as evidence of the organization functions, policies, decisions, procedures, operations, or other activities of the State or of the State Government, or because of the informational data contained therein". It could be deduced to mean that records are pieces of useful information recorded either for personal or organisational use, or reference purposes.

School records are usually from information relating to pupil personnel, staff personnel, curriculum, facilities and plant, finances, supplies and external relationship. School records could be defined as systematic documentation of information relating to school personnel, school facilities and sundry issues fundamental to effective administration of school. However, Abraham 2003 in Ugochukwu (2011) stated that school records are all the works, files correspondence, document (be it in paper form or electronic) that bear information about who is who in the school and the facilities and equipment the school owns. Ugochukwu, et al. (2011) stated types of school records in two categories to include statutory records, and non-statutory records. Whereas the statutory records are register of admission, progress (Results) and withdrawal, class attendance registrar, syllabuses, scheme of work, diary, notes of lessons, timetable, continuous assessment record, logbook, visitor's note, cash records,

corporal punishment records, inventory book. The non-statutory records are staff time book, staff movement book, supervision book, duty book, correspondence file, memo book, minutes book, farm records, and health diary.

Non-Records

Non-records are duplicates of the University records, drafts, materials used merely for reference purposes, or materials that communicate information of short-term value. Non-records should be disposed of as soon as possible after their primary usefulness has expired. Unlike the University records, non-records do not require State or organisational approval prior to their disposal.

Non-records may still be valuable to units if they may still be expected to be kept locally within a department for future business processes. For example, the legal units may want to have access to reference copies of contracts when drafting new contracts for similar goods and services. For this reason, they may intentionally retain these copies for specific periods of time, in which the materials are disposed as soon as their primary usefulness has expired. Margaret (2019) stated some examples of Non-records document of the University and other agencies are: junk mail/spam, personal correspondence, Non-University publications and catalogues, working papers and drafts or reports that have been published over a period, Duplicate materials including recipient copies of most internal communications, Blank forms and stocks of printed or reproduced documents kept for supply purposes, Materials created and preserved only for reference or convenience purposes, Private materials neither made nor received by the University in the transaction of public business, Material used to facilitate operations but not to support, enable, or document administrative actions, Transitory messages created primarily to communicate information of short-term value. Transitory messages are created in many formats such as email, instant messaging (IM), text messaging (SMS), or paper correspondence. Examples of transitory messages include, but are not limited to reminders to employees about scheduled meetings or appointments, announcements of office events, etc.

e-Record Management in Educational Institution

The applications of software to manage records are referred to as e-Records Management (RM). The ARMA International (2023) opined that any recorded information, regardless of medium or characteristics, made or received and retained by an organization in pursuance of legal obligations or in the transaction of business is a record. Ezeonwueie (2020) stated that Record management is the ability to locate, retrieve, and dispose electronic records that are stored in a repository through integration with relevant core Electronic Data Management System (EDMS). It includes the administration and supervision of digital records regardless of format. The activities are mostly creation, receipt, maintenance, use and disposal of records. A good record management application will have at least one core EDMS component, with that, Record Managers would be able to manage the electronic records. The primary functions of Institutions in record management should include categorizing records, locating records, and identifying records that are due for disposition.

Dambo (2016) opined that e-Record management is an important part of organisations overall information governance strategy. Ensuring the authenticity and availability of e-record over time can help organisations achieve its mission (e.g Banks, including

Institutions of learning). It also helps ensure compliance with industry regulations and government laws.

The goal of educational institutions in e-records management is to keep the necessary documentations accessible for both business operations and compliance audits. Filing, indexing and spreadsheets are often used to keep track of stored records for easy retrieval.

Alternatively, software applications are available used both as taxonomy (group) and as records retention schedule. Such software is marketed as enterprise information management (EIM) applications that could help institutions address information governance, which is the formal management of both records and other content. E-record management is a key component of an information governance plan.

Types of E-Records

Records are said to mean piece of useful information recorded either for personal/organisational use, or reference purposes. Records are made either electronically or manually. Electronic records are records stored on storage media in-house, off site, and the cloud. They are made and saved with the aid of electronic device such that it could be retrieved when needed. Examples of electronic records are emails, websites, Word/Excel documents, digital purchase receipts, databases, text messages, social media postings, and information stored on SharePoint sites and content management systems (Catalyst, Slack, Drop Box, etc.). These e-records have lots of benefits to individuals and organisations depending on their needs and usage. Some benefits of electronic records management systems include reduced storage space, easy organisation, protection from disaster, remote sharing, expedited information lookup, informed decision-making, enhanced security, system backups, cost saving. etc.

Benefits of e-records Management to Business Educators

Reduced storage space: Records reduces storage spaces in every organisation where the old filing system (cabinets) were used. Some filing cabinets takes up around 17 square feet on average in the organisation, this can become a resource drain as your company grows, by shifting your records storage into the cloud or digital on-premises archives, you free up all that square footage for more desks, conference rooms, offices, and other productive uses of space.

Easier organization: Files and records can easily be misplace if proper filing system was not applied. Maintaining a physical organisation schema requires time and effort. It's easy to misplace a record; once it is been organized incorrectly, it becomes significantly harder to find. In some cases, it may as well be lost. E-recording and filing of documents are far less tedious to store, organize, and retrieve than paper ones, cutting down on time spent maintaining proper organisation and scouring cabinets for crucial bits of information.

Protection from disaster: Documents in physical papers form are at constant risk of being destroyed by factors outside the control of the average business. Natural disasters such as flood and fire can destroy crucial paper trails and documents stored in the cabinets. A simple exposure to light or high levels of humidity over a time can cause these records to degrade. Any loss to readability or access can disrupt day-to-day productivity, and records loss or destruction can endanger compliance. With the

use of e-records management, however, records can be stored in the cloud. Once there, these documents are all but completely insulated from disastrous destruction.

Enhanced security: Paper records are more in risk using locked rooms and file cabinets. E-records management systems can be set to automatically implement individual user passwords, encryption, and regular backups to prevent unwanted access by users outside the organisation and minimize damage in the event of such access.

Remote sharing: Files and documents can easily and efficiently transferred from one office, location to another when using e-recording. Although it may seem quick and easy to walk a physical document over to another employee's desk, that time expands as the physical business does. Walking up a flight of stairs and across the office adds mounting inefficiencies to records sharing. Making a swap to digital records optimizes inter-office document sharing such that employees always have the information they need to do their work as quickly as possible.

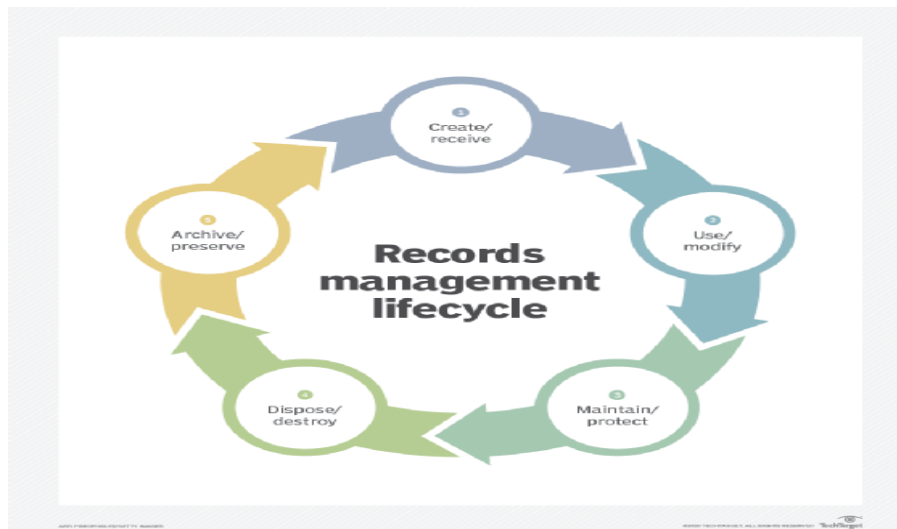
Electronic sharing is even more important for distributed teams. Sending a electronic document to a remote worker can take just a few clicks, making it much faster than mailing or faxing. With electronic records management systems, workers anywhere in the world can retrieve the records they need at any time. They can even do so simultaneously alongside their colleagues, allowing for fast and easy collaboration.

System backups: Files and records moves on daily bases within the organisation, each time a paper record is removed from its place in the filing system, it runs the risk of being lost. Electronic files are immune to this problem thanks to search functionality, and the ease of creating backups. This ensures that even in the event of data loss, no important data vanishes.

Cost savings: Owing to the increase in cost of various commodities like paper, beyond the raw material itself, purchased in huge volumes, businesses that work with it must further invest in storage solutions, printers, toner, folders, transportation, and more. Implementing the electronic records management in your organisations eases many of these costs. It also brings a less obvious, and perhaps even more valuable, cost savings. Through its many workflow efficiencies, electronic records management trims lost productivity. Workers spend less time searching for files, sharing them, scouring them for information, re-filing them, and losing them. That translates to a healthier bottom line.

Data Lifecycle Management

Data are mostly creation, maintained, use and disposed. The various processes of data creation up to it's destruction is referred to data lifecycle. Obindah (2022) in Strategic Information Management stated that data lifecycle management is a process that helps organisations to manage the flow of data/information throughout its lifecycle from initial creation to destruction. There are many interpretations to the various phases of a typical data lifecycle, which can be summarised as data creation, data usage, data maintenance, data destruction, and data archival.



The lifecycle of a record.

The first phase of the cycle being data creation or capture could come in form of image, PDF, word document, which can be created by means of any of the following: data acquisition, data entry and data capture. Data usage comes after data creation, it states the uses of such data. The data storage or maintenance is the need of data to be protected with appropriate level of security applied by the organisation. The data become in use to support the activities of the organisation which can be viewed, processed, modified and saved for further use. Data destruction removes those data that are no longer needed, and then data archiving comes when data are no longer in use but hope to be used at a time.

e-Records Management Standards/Principles

The Association of Records Managers and Administration International(2013) as the largest global organisation on record matters addresses that records and document management provides numerous services to members including training, conferences and standards with best practices and professional certifications. The body - ARMA and IT professionals developed the generally accepted recordkeeping principles, a framework of eight principles for records management development in 2009 and updated in 2017.

These principles include:

1. **Accountability:** to ensure senior management delegates authority for managing records to trained employees.
2. **Transparency,** to provide a program that documents are available for review by all employees.
3. **Integrity:** to protect the accuracy, reliability and authenticity of records in the program.
4. **Protection:** to ensure records are secured and kept private and confidential.
5. **Compliance:** to make sure that applicable laws, regulations and other requirements are met.
6. **Availability:** to ensure that records can be made available when needed, including when disruptive events happen.
7. **Retention:** to guarantee that records are maintained for time frames required by law and industry standards and practice.

8. Disposition: to provide appropriate ways to get rid of records that are no longer needed.

Information management in Educational Institutions

Information Management (IM) according to the Association of Records Managers and Administrators (ARMA) International (2013) is “the practice of ensuring a consistent flow of organisational information through a defined lifecycle that starts with its conception or captures through to its archival or disposition”.

Records management and information management are used almost interchangeably. In different cases, including this paper, they are referred to as a combination of the two disciplines under the title “Records and Information Management (RIM)”. Both are concerned with making sure information flows into and out of an organisation when needed and gets to where it is needed and be accessible by the right people when and how they need it.

The Association of Records Managers and Administrators (ARMA) International (2013), also looked at records and information management as “the field of management responsible for establishing and implementing policies, systems, and procedures to capture, create, access, distribute, use, store, secure, retrieve, and ensure disposition of an organization’s records and information.” Records and information management in Institutions addresses records based on its lifecycle. However, there are various tools, programs, databases and systems used to create and actively manage records and other information resources. It investigates creating a unified, consistent, efficient and effective approach to their management.

Records enable and support organisations work to fulfill its mission. The Government of the United States of America (USA) - White House explained the importance of Records and Information Management in the U.S. Presidential Memorandum – in Managing Government Records. It is important to note that when records are well managed, the organisation can use them to assess the impact of programs, to reduce redundant efforts, to save money, and share knowledge within and across their organizations. In these ways, proper records management is the backbone to open government, agencies, organisations.

Ministries, Departments, and Agencies (MDAs) are very important bodies in understanding how the government works. The MDAs in Nigeria are public organisations used by the government to bring their programs and initiatives to fruition. The MDAs consist of thousands of public and civil employees whose sole task is to implement policies adopted by the people in charge of the administration of the country (Ladipo, 2018). However, there are group of trained personnels that perform bulk of the work in offices - the Office Managers (Secretaries) who oversee documentations and retrieval of office information. Implementation of policies can only be effective when the secretary implements a good records management practice.

In the University system, record management is evidently lodged as a planned locus in the effective and efficient management of the system which constitute it's corporate memory. A proper record management makes a good foundation central in the administration of departments. They serve equally to document policies, transactions and activities of members of the department, university community and to provide a trusted source of information to support decision-making, accountability, planning,

allowing proper monitoring of work. Igwoku, 2008 in Dambo and Ben-George, (2016) opined that the process of record keeping, and retrieval provides a framework of keeping, maintaining and providing for the disposition of records and what is contained in them. They are therefore intended to benefit all members of the University community by facilitating continuity and evaluation of services and preserving privacy. The Universities system is designed for records and information retrieval, whereas, data are taken, electronically recorded as information and retrieved when needed.

Information Storage and Retrieval

Data are observed facts and when meaning is assigned to, or being processed, it therefore becomes an information. Information reduces uncertainty and it is communicable. Information leads to confirmation and when information is processed and internalized, it becomes knowledge.

Today, lots of information are available in print and non-print format that lead to information overload. Internet is one of the vital sources of information storage in this era. Information storage system is a systematic arrangement of records in a way that they can be easily retrieved when needed. Information storage system implement stringent standards that ensure security and protection of data, documents and electronic documents.

Educational institutions must adopt various methods in storing e-records including Subject storage method, Alphabetical storage methods, Numerical storage method, Geographical storage method, Alpha-Numerical storage method, Chronological storage method, and Consecutive storage method.

Objectives of Information Storage and Retrieval System

1. To provide information to the user in least time with least efforts
2. To provide non-ambiguous search results through proper indexing
3. To act as facilitator between information and user.
4. User friendliness

Kinds of Information Retrieval System

Vambara (2019) stated two kinds of information retrieval system – Offline and Online Search:

1. Offline Search: Refers to search where user get the required information without the help of computer or internet, for example, the use of Library.
2. Online Search: This is search with use of remotely located database through interactive communications with the help of computer and communication channel. This can be accessed through vendor or directly, example is Databases, Internet etc

Indexing in Educational Institution

Indexing from the library science point of view can be referred to as cataloguing, or metadata extraction, it is the manual or automated process in creating indexes for record collections. Indexing allows to quickly find records, and without, one might have to look through hundreds or thousands of records to locate a particular record.

Records can be indexed using a subject indexing method – this method identify and describe the subject of a document. It is an act of classifying a document by index terms or other symbols to indicate what the document is all about, to summarize its content or to increase its find ability. Indexes are constructed separately on three distinct levels: terms in a document (such as a book); objects in a collection (such as a library); and documents such as books and articles) within a field of knowledge.

Indexing as Basic components in Information Retrieval process

The Information Retrieval system perform retrieval operations by indexing documents, leading to representation of documents and queries. The system matches the indexed documents with that of user query and displays the matched documents found and the user selects the relevant items. These operations are tightly intertwined and are directly dependent on each other. The search process often goes through several interactions: several cases feature similarity measurement is used to distinguish the relevant documents from irrelevant ones.

Conclusion

In this study, e-records and information retrieval are seen to be useful tools/instrument for all educational institutions be it private or public institution including individuals. No organisation operates completely without record keeping and records kept are sometime retrieved for feature use or reference purposes. Educational institutions must ensure that records are not just properly stored for easy access or management use but must adopt the use of e-record management in compliance with legal requirements and regulations regarding the storage, assessment and use of information.

Suggestions

This framework suggests possible guidelines in e-record and information retrieval in educational institutions: -

1. To educate institution's decision regarding electronic record keeping.
2. Institutions to encourage office managers (the secretaries) who oversee documentations and retrieval of office information with the use of electronic records instead of the manual record keeping as implementation of policies can only be effective when the office manager implement a good e-records management practice.
3. Educational institutions to adopt to the use of cloud recording to enhance academic delivery.

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