Electronic records preservation and librarians' job performance in university libraries in South-South, Nigeria

Oluchi Bridget Ibeh[1] and Ifeka E. Okeke, *Prof.*[2]
[1]Department of Library and Information Science , Chukwuemeka Odumegwu Ojukwu University Nigeria
[2]Department of Library and Information Science, Nnamdi Azikiwe University. Awka, Nigeria
E-mail: [1]ob.ibeh@coou.edu.ng

Abstract
The paper examined the relationship between electronic records preservation and librarians' job performance in university libraries in South-South, Nigeria. A correlational study design was adopted. A sample size of 148 librarians was used. A structured questionnaire was used for data collection and Pearson's correlation coefficient was used to answer the research question. The null hypothesis, p-value was used to determine the significance of the correlation at 0.05 level of significance. Findings of the study revealed that there is a moderate positive and significant relationship between electronic records creation and librarians' job performance in federal and state university libraries of South-South, Nigeria. The study therefore recommends that librarians should prioritize the preservation of electronic records in order to enhance their overall job performance.

Keywords: Electronic records, electronic records preservation, librarians' job performance

Introduction
In recent years, the digital era has revolutionized the way information is preserved and managed, particularly in academic libraries. With the increasing reliance on electronic records for information retrieval and preservation, the role of librarians in ensuring the effective management of electronic records has become more crucial than ever. In Nigerian university libraries, librarians play a vital role in the preservation of electronic records to support research, teaching, and learning activities by ensuring that digital resources are readily available and easily accessible (Ifijeh, 2014; Anunobi and Nwokedi, 2018). Thus, electronic records preservation may impacts the job performance of librarians in Nigerian university libraries by enabling them to provide enhanced access to information resources for students, researchers, and faculty members.

Librarians are responsible for ensuring the authenticity, reliability, and accessibility of electronic records in university libraries to meet the needs of students, researchers, and faculty members (Oliver and Wong, 2011). The performance of librarians in electronic records preservation is essential for maintaining the credibility and relevance of university libraries as sources of reliable and up-to-date information. By effectively managing electronic records, librarians contribute to the advancement of knowledge and research within their institutions and support the academic community in accessing and utilizing electronic resources for their scholarly activities. Librarians also have the responsibility of staying up-to-date with best practices and technologies related to electronic records preservation. Consequently, the job performance of librarians in Nigerian university libraries may be compromised if proper strategies for electronic records preservation are not implemented.

Electronic records preservation involves policies, strategies and actions to be taken to ensure the precise and authentic

maintenance of the contents of these records at all times, irrespective of the challenges of media failure and technological change that may occur (ALA in Ilo, Fagbohun, Idiegbeyan-Ose, Esse, Nwokeoma, Adebayo, Olawoyin & Osinulu, 2018). Electronic preservation according to Matlala, (2019) entails techniques or methods aimed at managing the risks of information loss as well as ensuring long-term and meaningful access to digital information. These techniques include creating digital archives, backups, implementing metadata standards and management, migration to newer file formats to prevent data loss and ensure the authenticity and integrity of the records, and ensuring the long-term accessibility of digital resources (Ifijeh, 2014 & Matlala, 2019).

The objective of electronic record preservation is the perfect interpretation of valid contents over time. The form and content of electronic resources and records are liable to change from time to time. Preservation of electronic records has become an issue in University libraries. However, the rapid growth of electronic records has posed challenges for librarians in terms of their organization, longevity and accessibility. Electronic records preservation can also pose challenges for librarians, such as the need for specialized skills, resources, and technologies, as well as the risk of data loss or corruption. Ibegwam and Nwogu, (2015) asserts that inadequate training, lack of resources, and changing technologies can further complicate the task of managing electronic records effectively. Therefore, there is need to ensure the sustainability of electronic records through proper preservation, even though it has been realized that the preservation of electronic records is not as simple as the printed materials due to non-availability of appropriate criteria relating to the format

and media type. By enhancing the capabilities of librarians in electronic records preservation, librarians are more likely to improve their job performance and better fulfill their role in supporting research and academic activities in Nigerian university libraries. This study seeks to shed light on the importance of electronic records preservation in enhancing librarians' job performance in university libraries in South-South, Nigeria.

Statement of the problem
Despite the increasing reliance on electronic records in university libraries in Nigeria, there is a lack of adequate systems and processes in place to ensure the long-term preservation and accessibility of these records. These pose a challenge for librarians who are tasked with managing and organizing these records effectively. Furthermore, the lack of proper electronic records preservation can hinder librarians' ability to provide timely and accurate information to users, impacting their job performance and the overall effectiveness of the library.

Therefore, it is pertinent to address these issues and implement effective strategies for preserving electronic records in Nigerian university libraries to enhance librarians' job performance and ensure the continued success of these libraries.

Purpose of the study
The purpose of the study was to examine the relationship between electronic records preservation and librarians' job performance in university libraries in South-South, Nigeria.

Research question
The following question is answered in the study:
What is the relationship between electronic records preservation and librarians' job

performance in university libraries in South-South, Nigeria?

Hypothesis
The study hypothesized that there is no significant relationship between electronic records preservation and librarians' job performance in university libraries in South-South, Nigeria.

Literature review
The development of information communication technology has led to a rapid growth of the number of produced electronic records in the library. This is as evident in the creation of large electronic information formats which include emails, social networking websites, e-journals, e-books and databases. E-records require specific hardware and software to ensure that they are accessible, retrievable, and understandable to users. As such, they are technology dependent and require proactive actions to preserve as long as they are required to serve as continuous business and operational needs, protect the legal, regulatory, financial and requirements, as well as interests of the organization, their employees and the public; ensure the legal admissibility of e-records to meet evidence purposes, avoid causing damage to the damage and reputation of the organisations due to inaccessibility, un-usability or loss of e-records to demonstrate an open and accountable organisation and avoid high recovery costs to reconstruct e-records that have become unreadable, just to mention a few (Handbook of preservation of electronic records 2013). Hence, e-records preservations is one of the several activities that are carried out as part of the e-records management functions necessary to maintain the form, authenticity, integrity, reliability, usability and security as evidence of an activity.

E- record preservation according to Kalusopa and Zulu (2009:99) is defined as a "series of adapting management activities necessary to ensure continued access to electronic materials." This applies to materials "born" electronic and those that have been digitized from analogue materials. Therefore, electronic preservation entails techniques or methods aimed at managing the risks of information loss as well as ensuring long-term and meaningful access to electronic information. Preservation of electronic records is the maintenance of digital information resources irrespective of their location, for continual access to such generations of technology users for as long as possible (International Records Management Trust, ND). Preservation of electronic record is to secure records for a medium to long period of time in a secure environment for which they can be retrieved when needed following well-structured and traceable process.

In order to effectively preserve electronic records, librarians must adhere to frameworks that guide their actions and decision-making processes. Such as Open Archival Information System (OAIS), this provides guidelines for the long-term preservation of digital materials. According to the OAIS Reference Model, digital materials should be ingested, stored, managed, and accessed in a standardized manner to ensure their continued accessibility over time (CCSDS, 2012). Another framework that informs electronic records preservation is the Digital Preservation Coalition's (DPC) Five Steps to Sustainable Digital Preservation. This model emphasizes the importance of risk assessment, selection, storage, access, and administration in preserving electronic records (DPC, 2019).

E–record preservation process must be carried out with proper planning in relation to well-run records systems (in this

case policies and frameworks, standards, and regulations), technological implementations, and requisite resources. The process also requires concerted efforts of different stakeholders including records managers, ICT personnel, top management, consultants, and departmental heads. Otherwise, if this process is not taken with serious consideration the e-records and the connections between them cannot be preserved systematically and much of the meaning will be lost, even with a short period of time (ICA 2016; Handbook of preservation of electronic records 2013; Beagrie & Jones 2008; Brown 2008; UK digital preservation. 2008). Organizations should come up with e-records preservation policy or approaches and strategies that will ensure that its e-records are maintained and sustained in an accessible format as long as a need for those records exists, thus, ensuring those of current and continuing value are created and maintained in a way that will both preserve their value and include appropriate access arrangements to them.

In terms of job performance, librarians play a crucial role in implementing these frameworks and ensuring the preservation of electronic records. Their responsibilities may include developing preservation policies and procedures, conducting risk assessments, managing digital collections, ensure the authenticity and reliability of digital records, and providing access to digital materials for users in a secure and efficient manner.

Electronic records preservation techniques according to Ngoepe and Walt (2009) and Ifijeh (2014) are: migration, emulation, cloud computing, institutional repository conversion.

1. Migration is the process of transferring electronic data/information from one technology to another, without losing its properties. This means that a library moves its database entirely to another system without losing any data as a result of the library changing to a new information management system. The record's authenticity, reliability and usability is however maintained. It is a good method through which libraries can ensure the preservation of electronic resources.

2. Emulation is the process of mimicking the hardware of older versions of a technology that are compatible with a new technology to access electronic data. It is the process of preserving the old environment of electronic records by using latest technologies, mimicking the original environment that was used to create the records. This will technically ensure that no data is lost in the new technology environment; this way, a new technology is used without losing the old data.

3. Cloud computing is also a new technology through which libraries preserve electronic resources and records for posterity. Cloud computing is one of the most effective strategies for preserving electronic records in the library. Electronic records are preserved through sharing or using applications and infrastructure in a network environment to achieve set goals without having concerns of its ownership, network management or resources.

4. Institutional Repository is also a valuable method for the preservation of electronic resources. It is an archive for the collection and preservation, as well as dissemination of intellectual, emanating from Staff and Students

of an institution. Institutional repository offers opportunity for the members of a university community to manage and disseminate electronic materials created by the community members of the institution.

5. Conversion is defined as the process of changing records from one medium to another or from one format to another when a record's format becomes obsolete as a result of the application becoming unsupported because the software developer discontinues a product or goes out of business.

Ngoepe and Walt (2009).Investigated strategies for the preservation of electronic records in South Africa: implications on access to information. Qualitative survey was conducted on existing national and provincial archival institutions in South Africa. The researchers used questionnaires directed to the head of records management units of national archives and all nine provincial archives repositories in South Africa as a source of data collection. The key findings of the study revealed a lack of infrastructure to ingest electronic records into archival custody in both national and provincial archives. The paper concludes by arguing that insufficient attention to the preservation of electronic records could lead to a future situation where access to an enormous quantity of important government records could be denied.

Oduwole and Olawole (2015) found that librarians in Nigerian university libraries face several challenges in preserving electronic records, including inadequate funding, lack of training and skills, and limited access to appropriate technologies. The authors concluded that these can affect librarians' ability to provide timely and accurate information to users.

Ilo, Fagbohun, Idiegbeyan-Ose, Esse, Nwokeoma, Adebayo,Olawoyin, and Osinulu (2018) investigated strategies for the preservation of electronic records in university libraries in Nigeria. The main objective of this study is to ascertain the strategies used by the University libraries in Nigeria to preserve electronic records. The study employed descriptive research design. The population comprises one hundred and sixty-nine (169) librarians from university libraries in Nigeria. Simple random sampling technique was used and the instrument for data collection is semi-structured closed and open-ended questionnaire. Data was analysed using descriptive statistics, charts with simple percentages. Statistical Package for Social Science version 22 was used for data analysis. The findings of the study revealed that (x=1.63±SD = 0.660) majority of university libraries in Nigeria do not have in place preservation strategies for electronic information records. 94.1% of librarians do not possess requites skills for preserving electronic information records. Lack of manpower and other infrastructure are identified as the major inhibiting factors (x=3.90±SD = 0.418). The study also found out that there is a significant relationship inhibiting factors of preservation and preservation strategies adopted by university library staff in Nigeria (r=-0.305, N=169 and P <0.01).

Matlala (2019) researched on long-term preservation of digital records at the University of KwaZulu-Natal archives. The study examined the strategies used for the digital preservation of records at the University of KwaZulu-Natal Archives. It describes how care is taken in order to ensure that the various plans of action that are adopted are appropriate for the university archives. A qualitative research design with an interpretive world view was used in this exploratory study. In this study,

interviews, observations and document analysis were employed as data-gathering techniques. The research sample was purposively selected from members of the archivist staff at the university archives. Findings revealed that staff members had started a data preservation project; however, it became clear, that there was no decisive policy framework for the preservation of digital records for the UKZN Archives.

While electronic records preservation can enhance librarians' ability to provide access to digital resources and improve information management, it also poses challenges that need to be addressed. Also, the relationship between electronic records preservation and librarians' job performance in Nigerian university libraries is complex and multifaceted. Hence, this study would bridge the said knowledge gap of electronic records preservation and librarians' job performance in public university libraries in South-South, Nigeria.

Methods
This study adopted correlational survey research design. The correlational research design, according to Cheprasov (2019) is a design that seeks to understand what kind of relationship naturally occurring variables have with one another. The choice for this design is relevant and appropriate because it to establish the relationship between electronic records creation and librarians' job performance in federal and state university libraries in South-South, Nigeria.

The study was carried out in all the federal and state university libraries in south – south Nigeria. South - south is one of the six geo political zones in Nigeria. In South-South, Nigeria, there are six (6) federal universities and ten state universities (NUC,2022). In all, there are sixteen (16) public universities in South-South, Nigeria. The population of the study is 148 librarians based on preliminary investigations as at the time of the study. A total of 68 librarians in federal university and 80 librarians in state university in south – south Nigeria. The researcher chose heads of department in the library and the university librarians because they are the ones managing records in the library. Due to the number of the population, the researcher used census sampling because the size of the population of the study was small and was managed by the researcher. Therefore, the entire population of 148 became the sample size.

Data were collected using structured questionnaire. The study used a four-point Likert scale of strongly agree- 4; agree-3; disagree – 2 and strongly disagree-1. The reliability of the instrument was established using Cronbach's alpha method. This involved single administration of instrument. To achieve this, copies of the three instruments were administered on 20 librarians randomly selected in Federal University of Technology, Owerri Library and Imo State University Library both in Imo state; these were not part of the study. The reliability coefficient of 0.890 was obtained. The researcher administered one hundred and forty eight copies of the validated instruments to the respondents in sixteen (16) university libraries in South-South, Nigeria. Out of the one hundred and forty eight (148) copies of the instrument administered, one hundred and thirty six (136) were properly completed and found usable for data analysis. This produced response rate of 92%.

Data generated from the study were analyzed using inferential statistics. Pearson's correlation coefficient was used to answer the research questions. For the null hypothesis, p-value was used to determine the significance of the correlation. Where the calculated p-value is less than the stipulated level of significance (0.05), the null hypothesis was rejected. Whereas the null hypothesis was not rejected where the

calculated p-value is greater than the stipulated level of significance (0.05). All analysis were done using Statistical Package for Social Sciences (SPSS) version 2021.

Results

The results are presented according to the research question and hypothesis

Research question: What is the relationship between electronic records preservation and librarians' job performance in federal and state university libraries of South-South, Nigeria?

Table 1: Pearson's r on the relationship between electronic records preservation and librarians' job performance in federal and state university libraries of South-South, Nigeria

Source of Variation	N	R	Remark
Electronic Record Preservation Job Performance	136	0.51	Moderate Positive Relationship

Table 1 shows that there is a moderate positive relationship existing between electronic records preservation and librarians' job performance in Federal and State university libraries of South-South, Nigeria. This is indicated by the size of Pearson's Correlation Coefficient r, which is 0.51.

Hypothesis: There is no significant relationship between electronic records preservation and librarians' job performance in federal and state university libraries of South-South, Nigeria.

Table 2: Test of significance of Pearson's Correlation between electronic records preservation and librarians' job performance in federal and state university libraries of South-South, Nigeria

Source of Variation	N	R	p-value	Remark
Electronic Record Preservation Job Performance	136	0.51	0.00	Sig

Analysis in Table 2 shows that there is a significant correlation between electronic records preservation and librarians' job performance in Federal and State university libraries of South-South, Nigeria. The calculated r (0.51) had *P*.value <0.05. The null hypothesis was therefore rejected.

Discussion

The findings relating to the research question shows that there is a moderate positive relationship existing between electronic records preservation and librarians' job performance in Federal and State university libraries of South-South, Nigeria. This is indicated by the size of Pearson's Correlation Coefficient r, which is 0.51.

Likewise, hypothesis shows that there is a significant correlation between electronic records preservation and librarians' job performance in Federal and State university libraries of South-South, Nigeria. The calculated r (0.51) had *P*.value <0.05. The null hypothesis was therefore rejected. The moderate positive relationship between electronic records preservation and librarians' job performance highlights the importance of effective electronic

preservation practices in ensuring the success and effectiveness of librarians in their roles. The findings is in contrast with the findings of Ilo, et al (2018) which revealed that (x=1.63±SD = 0.660) majority of university libraries in Nigeria do not have in place preservation strategies for electronic information records. 94.1% of librarians do not possess requites skills for preserving electronic information records. However, librarians who excel in electronic records preservation may be seen as more valuable assets as they can help improve the efficiency of information retrieval and organization processes, enhance user experience and contribute to the productivity of library services.

Conclusion
The present study therefore concludes that there is positive significant relationship between electronic records preservation and librarians' job performance in federal and state university libraries of South-South, Nigeria. This implies that the preservation of electronic records can contribute to the improvement of librarians' performance in their roles and responsibilities.

Based on the findings, the study therefore recommends that:
1. Librarians should prioritize the preservation of electronic records in order to enhance their overall job performance. By ensuring that electronic records are properly managed and preserved, librarians can access information more efficiently, provide better services to patrons, and contribute to overall productivity in the library.
2. Additionally, investing in professional development and training related to electronic records preservation can further improve librarians'' job performance.

References
Anunobi, C. & Nwokedi, S. E. (2018). Challenges of e- record management in Nigerian university libraries. *Library Philosophy and Practice,* 1-9.

Cheprasov, A. (2019). *What is a correlational study*? https://study.com/academy/lesson/what-is-a-corr e lational-study-definition-examples.h tml.

Consultative Committee for Space Data Systems (CCSDS). (2012). Reference model for an open archival information system (OAIS). https://public.ccsds.org/pubs/650x0m 2.pdf.

Digital Preservation Coalition (DPC). (2019). Five steps to sustainable digital preservation. https://www.dpconline.org/handbook/preservation -management/sustainab ledp-by-step.

Ibegwam, H., & Nwogu, J. (2015). Digital preservation: Challenges and prospects for Nigerian university libraries. *Information and Knowledge Management,* 5(16), 71-76.

Ifijeh, G. (2014). Adoption of digital preservation methods for theses in Nigerian academic libraries: Applications and implications. *Journal of Academic Librarianship.* http://doi.org/10.1016/j.acalib.2014.0 6.008.

Ilo, P., Fagbohun, M. Idiegbeyan-Ose, J., Esse, U., Nwokeoma, N., Adebayo, O., Olawoyin, O. & Osinulu, I. (2018). Strategies for the preservation of electronic records in university library staff in Nigeria. Proceedings of iceri2018 conference12th-14th november 2018, seville, spain0589 – 0595 https://www.researchgate.net/publica tion/329225524

International Council of Archives, (ICA).(2016). *Digital preservation in lower resource environments: A core curriculum.* [online] Available at https://books.google.co.ke/books/abo ut/Digital_preservation_in_lower_res ource_e.html?id=vZj0nQAACAAJ& redir_esc=y..

International Records Management Trust (N.D.). Preserving Electronic Records Module 4 Training in Electronic Records Management. Accessed DEC 13, 2023. Retrieved from http://www.irmt.org/docum ents/educ_training/term%20modules/ IRMT%20TERM%20Module%204. pdf.

Kalusopa, T & Zulu, S. (2009). Digital heritage material preservation in Botswana: problems and prospects. *Collection Building* 28(3), 98-107.

Matlala, E (2019). Long-term preservation of digital records at the University of KwaZulu-Natal archives University of KwaZulu-Natal. *Journal of the South African society of Archivists, 52,* http://www.ajol.infor/index.php/ jsasa/article/view/189859/179074.

Ngoepe, M and Walt, V. T (2009). Strategies for the preservation of electronic records in South Africa: Implications on access to information. 10.4314/innovation.v3 8i1.46971.

Oduwole, A. A. & Olawole, O. O. (2015). Challenges of preserving electronic records in Nigerian university libraries: Towards a sustainable framework. *Library Philosophy and Practice*, 1290.

Oliver, G. & Wong, T. (2011). *Digital curation: A life cycle approach to managing and preserving digital materials.* Chandos Publishing.