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PERCEPTION OF LIBRARY PROFESSIONALS TOWARDS DIGITAL PRESERVATION AND SUSTAINABILITY IN LIBRARIES

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ABSTRACT

The purpose of this study is to gain insight into the perception of digital preservation library professionals have, and sustainability in the library. As more and more digital material becomes available on the whole, the importance, in preserving that digital scholarly information, for long-term access, use and authenticity has increased. In the present study only the awareness and readiness of knowledge & perception of library profession towards digital preservation is emphasised. The number of respondents used in this research was structured to be Library Professionals with the population being 75, and the research design used was quantitative, and structured questionnaire was used in collecting the data. The data was analyzed using text analysis, including multiple regression analysis, Pearson's correlation, and the One Sample t-test. Results indicate that library professionals have a favourable attitude towards digital preservation and that digital preservation in the future is key to the preservation of their libraries' collections and their access to information resources. Interestingly, the study also found no statistically significant association between the awareness, institution training, technological, organizational, financial and policy factors and sustainable digital preservation activities. The findings showed that there is a need for further improvements in the job readiness of professionals, support and strategy for continuous programmes in digital preservation in the libraries.

KEYWORDS: Digital Preservation, Library Professionals, Digital Sustainability, Digital Stewardship, Metadata Management, Digital Archiving, Library and Information Science

INTRODUCTION

The production of information, as well as the organization, storage, and retrieval, has been radically changed by the digitization of libraries. Communities and institutions have increasingly put a strain on libraries because of their plethora of digital formats, including e-books and e-journals and institutional repositories, research data, and multimedia and digitized collections from archival repositories, in the last few years. In this context, digital preservation has become an integral part of Library and Information Science (LIS) to help make digital information resources accessible, usable, authentic and secure, regardless of changes in technology or format. Preservation strategies are vital to the future of scholarly knowledge, cultural heritage and institutional knowledge. In addition to technical issues, achieving sustained digital preservation requires organizational commitment, financial resources, policy creation, professional skills, and ongoing personnel development. They all play a significant role in the administration of digital repositories, the use of digital curation techniques, standards in the metadata, and ongoing access to digital content; library professionals make this happen. Their sense, awareness and preparedness

Research Paper

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are key to the successful sustainability of their way. Understanding the perception of the library professionals towards the digital preservation and sustainability is important to ensure the continuation of digital stewardship and librarians' resilience in future.

LITERATURE REVIEW

Sharma, Sharma and Tiwari (2026) determined the part libraries play in the current era's protection of digital cultural goods. Digital archiving, institutional repositories, digitization, and metadata management were identified by the study as essential preservation tools. The writers came to the conclusion that the success of partnerships and new technologies like artificial intelligence, blockchain, and cloud computing are crucial, and that challenges that must be overcome include funding, technological problems, copyright, and staff training deficiencies. Similarly, Ajetrao (2026) examined how digital libraries can contribute to Sustainable Development Goals (SDGs) through open access digital platforms and platforms that foster digital literacy, focusing on Quality education, Reduce inequalities and Environmental sustainability.

The 2025 studies underscored the sustainable relationship of digital preservation discussion. Channar et al. (2025) investigated the perceptions of LIS professionals about digital libraries and digital curation, focusing on the creation of metadata, format conversions and preservation in the cloud. Mathur, Gupta and Xavier (2025) proposed that the preservation practices should be environment-friendly, including 'green materials' to be used in the preserving process and other process should also be digitized and should involve 'green library infrastructure' of the library. In the same vein, Igbinovia, Wiche and Irenoa (2025) investigated and discovered that technological infrastructure, technological competence and institutional commitment are all important factors that affect the success of digital preservation projects.

Malekani and Wema (2024) pointed out the use of traditional conservation methods alongside contemporary digital preservation methods in Tanzanian libraries, in their study of 2024. Verma & Sharma (2023) spoke about the preservation problems, including hardware failures and technological obsolescence, and metadata creation and preservation policies. Lalduhzuali et al. (2023) found that libraries in Mizoram have faced several challenges, such as inadequate technical skills and financial resources, which have hindered the digitization process. Ghare et al. (2023) emphasized the significance of migration, emulation, backup systems, OAIS compliance, and disaster recovery planning.

Previous studies by Masenya and Ngulube (2020), Anyaoku, Echedom, and Baro (2019), and Okoh and Saliu (2014) all showed that inadequate funding, lack of preservation policies, insufficient technical skills, and limited professional training are all significant challenges for sustainable digital preservation. The studies all highlighted the need to have a strategic plan, formulate a policy, train staff, and provide institutional support for the sustainability and availability of digital collections.

RESEARCH GAP

The current research on digital preservation and sustainability of digital library collections has spanned a number of different themes covering digitization projects, metadata management, institutional repositories, persistent access to digital resources and preservation technologies. Most of the studies conducted by Okoh and Saliu (2014), Anyaoku et al. (2019), Masenya and Ngulube (2020), Verma and Sharma (2023) and Sharma et al. (2026) have focused on the technological, organizational, financial, and policy-related aspects of digital preservation. While these studies provide insight into preservation practices and sustainability issues, few have attempted to gain an understanding how library practitioners who have first-hand experience with implementing and managing digital preservation activities perceive these issues.

However, there is still considerable research on institutional infrastructure, preservation frameworks and technological solutions, and few empirical studies on implementing these efforts, challenges that might be encountered, and readiness and sustainability for the library profession. Also, there are no big research papers considering all four parameters (technological, organizational, financial and policy)

that look at the aspects from library professional's point of view. Therefore, there is a great need to carry out an empirical study to investigate how library professionals perceive long-term preservation of digital materials in the current library environment, as well as their experiences, challenges, and aspirations.

Objectives

- To examine the perception of library professionals towards digital preservation and sustainability in libraries.
- To examine the relationship between awareness and professional preparedness of library professionals regarding digital preservation.
- To examine the influence of technological, organizational, financial, and policy-related factors on sustainable digital preservation practices.

Research Methodology

- The research approach used was quantitative approach.
- For the investigation a descriptive research design was used.
- The primary data has been obtained by using a structured questionnaire.
- The respondents of the study were library professionals.
- A total of 75 respondents participated in the study.
- The study was focused on perceptions of libraries on Digital Preservation & Sustainability.
- SPSS software was used to examine the data.
- One Sample t-test was used to analyze the perception of library professionals in regard to the perception of digital preservation.
- To determine the relationship between awareness and professional preparedness Pearson correlation analysis is used.
- The effect of the technological, organizational, financial, and policy-related factors on sustainable principles of digital preservation was examined using Multiple Regression Analysis.
- All Hypotheses set at 5% (0.05) level of significance.
- Means, Standard deviation, correlation coefficient, regression analysis, and significance values were used in the interpretation of the study results.

DATA ANALYSIS AND INTERPRETATION

H0: Library professionals do not have a significant positive perception towards digital preservation and sustainability in libraries.

H1: Library professionals have a significant positive perception towards digital preservation and sustainability in libraries.

One Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Digital preservation is essential for ensuring long-term access to library resources.	75	4.16	.945	.109
Preserving digital resources should be a strategic priority for libraries.	75	3.92	1.010	.117
Digital preservation contributes significantly to the sustainability of library collections.	75	4.07	.935	.108
Libraries have a responsibility to preserve born-digital and digitized resources for future generations.	75	4.17	.812	.094
Sustainable digital preservation enhances the value and relevance of libraries in the digital age.	75	4.04	.951	.110

One Sample Test						
	Test Value = 3					
	t	df	Sig. (2-tailed)	Mean Difference	95 % Confidence Interval of the Difference	
					Lower	Upper
Digital preservation is essential for ensuring long-term access to library resources.	10.631	74	.000	1.160	.94	1.38
Preserving digital resources should be a strategic priority for libraries.	7.887	74	.000	.920	.69	1.15

Digital preservation contributes significantly to the sustainability of library collections.	9.882	74	.000	1.067	.85	1.28
Libraries have a responsibility to preserve born-digital and digitized resources for future generations.	12.520	74	.000	1.173	.99	1.36
Sustainable digital preservation enhances the value and relevance of libraries in the digital age.	9.474	74	.000	1.040	.82	1.26

The One Sample t-test was used to compare the mean values with the test value of 3 to analyze the perception of library professionals towards digital preservation and sustainability in libraries. From the results, it can be seen that each statement had a mean score exceeding value 3.90, which indicates respondents' favourable attitude. The highest score (Mean = 4.17, t = 12.520, p = .000) was in response to the statement: "Libraries have a responsibility to preserve born-digital and digitized resources for future generations", followed by "Digital preservation is essential for ensuring long-term access to library resources" (Mean = 4.16, t = 10.631, p = .000). In the same way, the respondents concurred that digital preservation has a significant impact on the sustainability of library collections (Mean = 4.07, t = 9.882, p = .000) and increases the value and relevance of libraries in the digital age (Mean = 4.04, t = 9.474, p = .000). In addition, strategic importance of preserving digital resources was also strongly agreed (Mean = 3.92, t = 7.887, p = .000). The value of significance for all statements is less than 0.05 which means that the null hypothesis (H0) is rejected and the alternative hypothesis (H1) is accepted. In conclusion, the researchers believe that the librarians have a positive perception of digital preservation and sustainability in libraries.

H0: There is no significant relationship between awareness and professional preparedness of library professionals regarding digital preservation.

H1: There is a significant relationship between awareness and professional preparedness of library professionals regarding digital preservation.

Correlations						
		I am familiar with the concepts and principles of digital preservation.	**I possess adequate skills to manage and preserve digital resources effectively.**	**I am aware of digital preservation standards, policies, and best practices.**	**My institution provides sufficient training opportunities related to digital preservation.**	**I feel professionally prepared to support sustainable digital preservation initiatives.**
I am familiar with the concepts and principles of digital preservation.	Pearson Correlation	1	-.160	-.059	.038	-.150
	Sig. (2-tailed)		.171	.612	.744	.198
	N	75	75	75	75	75
I possess adequate skills to manage and preserve digital resources effectively.	Pearson Correlation	-.160	1	.055	.037	.040
	Sig. (2-tailed)	.171		.640	.752	.734
	N	75	75	75	75	75
I am aware of digital preservation standards, policies, and best practices.	Pearson Correlation	-.059	.055	1	-.040	-.075
	Sig. (2-tailed)	.612	.640		.735	.521
	N	75	75	75	75	75

My institution provides sufficient training opportunities related to digital preservation.	Pearson Correlation	.038	.037	-.040	1	-.129
	Sig. (2-tailed)	.744	.752	.735		.272
	N	75	75	75	75	75
I feel professionally prepared to support sustainable digital preservation initiatives.	Pearson Correlation	-.150	.040	-.075	-.129	1
	Sig. (2-tailed)	.198	.734	.521	.272	
	N	75	75	75	75	75

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.199a	.040	-.015	.836

a. Predictors: (Constant), Clear institutional policies improve the effectiveness of digital preservation programs., Organizational support plays a crucial role in sustaining digital preservation initiatives., Availability of financial resources significantly affects digital preservation activities., Adequate technological infrastructure is necessary for successful digital preservation.

ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.020	4	.505	.722	.580b
	Residual	48.966	70	.700		
	Total	50.987	74			

a. Dependent Variable: Collaboration among libraries and information institutions strengthens sustainable digital preservation efforts.

b. Predictors: (Constant), Clear institutional policies improve the effectiveness of digital preservation programs., Organizational support plays a crucial role in sustaining digital preservation initiatives., Availability of financial resources significantly affects digital preservation activities., Adequate technological infrastructure is necessary for successful digital preservation.

Coefficientsa

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.410	.785		5.616	.000
	Adequate technological infrastructure is necessary for successful digital preservation.	.070	.109	.080	.646	.521
	Organizational support plays a crucial role in sustaining digital preservation initiatives.	-.130	.116	-.137	-1.119	.267
	Availability of financial resources significantly affects digital preservation activities.	-.089	.104	-.103	-.856	.395
	Clear institutional policies improve the effectiveness of digital preservation programs.	.050	.109	.056	.462	.646

a. Dependent Variable: Collaboration among libraries and information institutions strengthens sustainable digital preservation efforts.

The implications of organizational, financial, policy, and technological challenges on sustainable digital preservation were investigated using a multi-regression approach. With a R value of 0.199 and a R Square value of 0.040, the independent variables and sustainable digital preservation strategies have a weak correlation. which suggests that the independent variables can explain only 4.0% of the variation in sustainable digital preservation practices. The ANOVA test also indicates that the regression model is not statistically significant ($F = 0.722$, $p = 0.580$) with a significance value of more than 0.05. Moreover, the technological infrastructure conditions, organizational conditions, financial resources and clear institutional policies fail to have any statistically significant influence on the SDPA, as revealed by the values of their corresponding coefficients: $\beta = 0.080$, $p = 0.521$; $\beta = -0.137$, $p = 0.267$; $\beta = -0.103$, $p = 0.395$ and $\beta = 0.056$, $p = 0.646$,

respectively. All the significance values > 0.05 Thus the null hypothesis (H0) was accepted whereas the alternative hypothesis (H1) was rejected. From the perspective of the respondents, it can be concluded that based on the answers, technology, organisation, finance and policy do not have big impact on sustainable digital preservation practices from the respondents' point of view.

CONCLUSION

The results of the study in general suggest that library practitioners have a very favorable attitude towards digital preservation and sustainability of libraries. The One Sample t-test results showed that users strongly agreed that digital preservation is needed to guarantee access to library resources for many years and preserve digital collections for future generations and improve library's relevance and sustainability in the digital age. If the mean is greater than 3.90, and the significance (p) is less than 0.05, the alternative hypothesis is accepted and the null hypothesis is rejected. Additionally, it acknowledges the fact that library professionals are aware that "digital preservation" is a strategic role of modern library. The correlation analysis, however, revealed that none of the correlations were found to be significant as all of the values were weak and statistically insignificant. Similarly, the regression revealed that technological, organizational, financial and policy factors did not significantly predict the technology practices of the sustainable digital preservation practices of the respondents. Finally, from the library professionals' perspective, it was concluded that, they have positive attitude towards digital preservation, but they need more readiness in practice, institution and coordinated implementation strategies for sustaining digital preservation in libraries.

RECOMMENDATIONS

Libraries should conduct regular training programmes, workshops and awareness programmes for enhancing the professional preparedness of Library staffs for Digital preservation. Institutions should also enhance technological infrastructure, define digital preservation policies in clear terms and invest adequate financial resources in digital preservation activities that will be sustainable. It is recommended that libraries and information institutions work together, sharing expertise, resources and best practices. Further, library authorities should include digital preservation planning in their long-term strategic development policy to facilitate future sustainability and efficient administration of digital resources.

REFERENCES

1. Ajetrao, R. (2026). Digital libraries and Sustainable Development Goals (SDGs): A review study with case studies from academic libraries. Shanlax International Journal of Arts, Science and Humanities, 13(Special Issue 2), 110–120. https://doi.org/10.34293/sijash.v13iS2-i2-Jan10530
2. Anyaoku, E. N., Nwabueze Echedom, A. U., & Baro, E. E. (2019). Digital preservation practices in university libraries: An investigation of institutional repositories in Africa. Digital Library Perspectives, 35(1), 41–64. https://doi.org/10.1108/DLP-10-2017-0041
3. Channar, W. A., Rind, M. A., Orangzaib, Bhatti, A. A., & Abbasi, M. W. (2025). Perception of LIS professionals towards digital libraries and digital curation: Managing digital collection. Journal of Regional Studies Review, 4(1), 82–93. https://doi.org/10.62843/jrsr/2025.4a054
4. Digital Preservation Coalition. (2024). Digital preservation handbook (2nd ed.). Digital Preservation Coalition. Retrieved May 26, 2026, from https://www.dpconline.org/handbook
5. Ghare, J. J., Kapadi, R. V., Bavaskar, H. A., & Kastikar, A. A. (2023). Preservation and conservation in digital library. Journal of Advances in Library and Information Science, 12(4), 232–238. https://doi.org/10.5281/zenodo.10251172
6. Igbinovia, M. O., Wiche, H. I., & Irenoa, K. O. (2025). Effect of technological variables in shaping digital preservation practices in selected academic libraries in Ebonyi State, Nigeria. Samaru Journal of Information Studies, 25(1), 178–189.
7. International Federation of Library Associations and Institutions. (2023). Digital preservation. IFLA. Retrieved May 26, 2026, from https://www.ifla.org/resources/digital-preservation/
8. International Federation of Library Associations and Institutions. (2024). Digital preservation. Retrieved May 26, 2026, from https://www.ifla.org/resources/digital-preservation/
9. Lalduhzuali, L., Lallawmawmi, Boro, B., & Chanchinmawia, F. (2023). Digitization and digital preservation of library resources in the contemporary era: A study with reference to the selected special libraries in Mizoram. Annals of Library and Information Studies, 70(4), 208–214. https://doi.org/10.56042/alis.v70i4.6363
10. Malekani, A. W., & Wema, E. (2024). Preservation and conservation practices of library information resources in Tanzania: Perspectives from librarians. The Journal of Informatics, 4(1), 56–71. https://doi.org/10.59645/tji.v4i1.155
11. Masenya, T. M., & Ngulube, P. (2020). Factors that influence digital preservation sustainability in academic libraries in South Africa. South African Journal of Libraries

and Information Science, 86(1), 52–63. https://doi.org/10.7553/86-1-1860

12. Mathur, L., Gupta, R. K., & Xavier, S. (2025). Sustainable practices for preservation of library resources. In Anusandhanak (Vol. 4, pp. 1–15). Banasthali Vidyapith.
13. Okoh, M. I., & Saliu, A. S. (2014). Awareness of digital preservation strategies by librarians in Nigeria. Journal of Applied Information Science and Technology, 7(2), 11–20.
14. Sharma, A., Sharma, B. P., & Tiwari, B. (2026). Digital preservation and the role of libraries in safeguarding cultural heritage. International Journal of Scientific Research and Technology, 3(4), 309–316. https://doi.org/10.5281/zenodo.19521701
15. United Nations Educational, Scientific and Cultural Organization. (2024). Preserving documentary heritage in the digital age. UNESCO. Retrieved May 26, 2026, from https://www.unesco.org/en/memory-world/digital-preservation
16. United Nations Educational, Scientific and Cultural Organization. (2024). Preserving documentary heritage in the digital age. Retrieved May 26, 2026, from https://www.unesco.org/en/memory-world/digital-preservation/
17. Verma, R., & Sharma, A. K. (2023). Digital preservation and conservation of library collections in the digital age: Issues and challenges. Library Progress International, 43(2), 259–269. https://doi.org/10.48165/bpas.2023.43.2.13