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Azeez Adekunle Akintonde

University of Ibadan, amzadol52@gmail.com

Olalekan Abiola Awujoola

University of Ibadan, abileks132917@gmail.com

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**INFORMATION AND COMMUNICATION TECHNOLOGY SKILLS AND
DIGITAL PRESERVATION PRACTICES BY LIBRARY PERSONNEL IN SOME
SELECTED UNIVERSITY LIBRARIES IN SOUTH-WEST, NIGERIA**

BY

Azeez Adekunle Akintonde

Department of Library, Archival and Information Studies,

University of Ibadan, Nigeria.

Amzadol52@gmail.com

and

Olalekan Abiola Awujoola

Department of Library, Archival and Information Studies,

University of Ibadan, Nigeria.

Abileks132917@gmail.com

ABSTRACT

As part of the resources in university libraries are digital information resources, these libraries therefore need to undertake digital preservation practices to protect the lifespan of their digital resources. Personnel in these libraries need to possess ICT skill to effectively involve in the digital preservation practices. The study investigates ICT skill and digital preservation practices among library personnel in nine university libraries in South-west, Nigeria. The study adopted the descriptive survey design, the study population comprised 262 library personnel from nine university libraries in South-west, Nigeria. All personnel in the nine university libraries were sampled, while the questionnaire was the data collection instrument. Data was analysed using descriptive statistics, using standard deviation and correlation analysis. Majority of the respondents were male (46.9). ICT skills possessed by library personnel were: computing skills (3.56), word processing skills. Others were printing skills (3.52) and database creation and updating skill (3.30). The finding revealed a weak significant positive relationship between computing skills and digital preservation practices ($n = 237$; $r = 0.288$, $p < 0.05$). The findings revealed a weak significant positive relationship between computing managing skills and digital preservation practices ($n = 237$; $r = 0.364$, $p < 0.05$). There was a weak significant positive relationship between Internet Navigation skills and digital preservation practices ($n = 237$, $r = 0.255$, $p < 0.05$). Majority of the respondents (3.29) revealed that the library engages in general cleaning and dusting at regular intervals. Furthermore, majority of the respondents (2.95), indicated that the library has an integrated pest management system. Digital preservation practices is an essential activity to ensure the

prolonged use of information resources in university libraries in South-west, Nigeria, as such adequate ICT skills must be possessed by library personnel. It was therefore recommended that management of libraries should review policies to accommodate and support effective digital preservation practices of information resources.

Keywords: Digital preservation, information and communication technology skills, information resources, library personnel, university library.

Word count: 457.

Introduction

A library is a place where people can create, access, use and share information, knowledge which in turn enables individuals, community and people to achieve their ultimate potential as well as achieving sustainable development and growth. The university library houses information resources that range from print to electronic, these resources are needed by students, lecturers and other staff of the university to achieve the aim of the university and the academic pursuit of the individual users. The university libraries, because of the formats of resources in them, need to move from the traditional preservation practices to digital preservation practices that are fuelled by ICT skills possessed by university library personnel. Engaging in digital preservation is imperative for any university that will function adequately in the information/digital age.

Digital preservation, as defined by Tiwari (2015), refers to the maintenance of digital content. Digital preservation is a collection of processes, activities and digital information management practices that are implemented over time to ensure long-term accessibility of digital information. Digital preservation is not a new issue in the libraries. Along with the growth of digital collections in the library, there is an urgent need for the library to take some important measures in order to preserve their digital collections as well as printed collections. Digital preservation has been a theme of study in Information Science. It is a complex challenge, inevitable and current in national and international publications of the area, requiring analysis and inter/multidisciplinary solutions. As a definition of digital preservation, Grácio, Fadel and Valentim (2013) interpret that digital preservation refers to an organisational management process that encompasses various activities necessary to ensure that a digital object can be accessed, retrieved and used in the future, from the ICT existing at the time and with guarantees of authenticity. Judging the concept of the authenticity of a digital resource/object, it can be linked to safeguarding the original informational content of

its production. Digital preservation is also explained as a combination of policies, strategies and actions to ensure that digital objects remain authentic and accessible to users and systems over a long period, regardless of the challenges of component and management failures (American Library Association (ALA) 2018).

Digital preservation involves the preservation of two categories of information resources which are the born-digital types which are originally made in an electronic form and digital surrogate which were originally produced in print format and later given an electronic version (Noonan, 2014). Digital preservation has also been defined as ways of managing the risks of loss of information as well as guaranteeing that electronic information stands the test of time and have meaningful access (Matlala, 2019). Digital preservation practices explain ways by which libraries protect their digital resources from deterioration. Preservation and conservation practices have to do with some measures adopted by libraries to protect or prevent the entire library materials or collections from being harmed, damaged or deteriorated. The following are some of the techniques used for preservation of information resources in libraries: migration, emulation, encapsulation, coping, refreshing, cloud computing, establishing institutional repositories, cleaning and dusting of information resources, photocopying, re-binding, microfilming, lamination, fumigation and shelving to allow free air flow, air conditioning and digitisation. Libraries now adopt technologies in the preservation of library information resources and this has brought about the concept of digital preservation.

A major factor that can influence the adequate deployment of digital preservation practices by library personnel is their possession of information and communication skills. ICT skills are abilities to use digital technology, communication tools and/or networks to define access, manage, integrate, evaluate, create and communicate information ethically and legally in order to function in a knowledge society. ICT skills are the abilities to use their knowledge about ICT to find, develop and present information; whether it is text, image or number, or all of this integrated task” (Quadri, 2017). ICT skills can be referred to as the overall competencies (knowledge, know-how, skills and attitudes) necessary to create, store, analyse, organise, retrieve and disseminate digital information (text, images, sounds) in digital libraries or any type of information.

Achugbue, Uwaifo and Igun (2015) observe that libraries have undergone significant changes in the past two decades due to the application of information technologies. Some of the changes are seen in automated cataloguing, circulation systems, online information retrieval, electronic document delivery and CD-Rom databases. In this ICT-oriented

environment, library professionals must possess ICT skills in order to survive. ICT skills to be possessed by librarians includes word processing, spreadsheets/excel, power-point presentations, knowledge of databases, files folders, email/internet, hardware/software, web design and management, mobile technology and social media skills. A recent study by Cherinet (2018) states that since skills are essential for the success of individuals and libraries, the universities should include emerging skills in curricula to meet the needs of the 21st Century librarians and expectation of potential employer. LIS professionals must update and upgrade their ICT skills to perform better in the digital environment. Heavy reliance on technology suggests that LIS professionals must be able to adapt and learn new technologies, advanced skills and tools such as Web 2.0, for academic success.

Literature review

Preservation is an action taken to anticipate, prevent, stop or retard deterioration. Conservation is the maintenance of each item in the collection in a usable condition. Preservation is the task of minimising or reducing the physical and chemical deterioration of documents. Conservation is the maintenance of documents in a usable condition through treatment and repairs of individual items to slow the process of decay or to restore them to a usable state. Conservation includes study, diagnosis, preventive care, examination, treatment, documentation using any methods that may prove effective in keeping that property in as close to its original condition as possible and for as long as possible. The conservation actions are carried out for a variety of reasons including aesthetic choices, stabilisation, need for structural integrity or for cultural requirements for intangible continuity (Khin San, 2019).

Adekannbi and Wahab (2015) investigated comparative analysis of the preservation and conservation techniques of selected special and academic libraries in Nigeria. The study found out the causes of deterioration in both special and academic libraries were dust, wear and tear, excessive photocopying, pests and excessive light, frequent use of material, magnetism and biological agents. The results further showed among others that both special academic libraries adopted cleaning and dusting, shelving to allow free flow of air, security systems, de acidification, technology preservation, refreshing and migration to preserve their information resources. It was discovered further that inadequate funding, lack of necessary facilities, inadequate manpower, inadequate staff training and users and security, autonomy and administrative lags, power were challenges to preservation and conservation techniques.

A study conducted by Mensah (2015) on digital preservation in the context of institutional repositories in public universities' libraries in Ghana, concluded that, support in

terms of training, funding and engaging staff dealing with digital preservation of institutional repositories has not met sufficient consideration. The study of Gbaje and Mohammed (2017) conducted on long-term accessibility and reuse of institutional repository contents of some selected academic institutions in Nigeria, found out that digital preservation activities such as: migration, emulation that have proven to ensure long-term preservation and access to digital resources were not used in academic institutions in Nigeria. In order to carry out effective digital preservation practices in the library, library personnel need to possess some ICT skills.

Digital preservation and conservation techniques have to do with some measures adopted by libraries to protect or prevent the entire digital library resources or collections from being harmed, damaged or deteriorated. The following are some of the techniques used for digital preservation of information resources in libraries: cleaning and dusting of information resources, photocopying, re-binding, microfilming, lamination, fumigation, and shelving to allow free air flow, air conditioning and digitisation. Others are: migration, encapsulation, emulation, coping, reformatting, refreshing, cloud computing, institutional repositories among others. Masenya and Ngulube (2019) conducted research on preservation of print information resources and proposed the appropriate strategies that could be adopted in academic libraries for preserving their print information resources.

Masenya and Ngulube (2019) suggested that the best strategies for preserving digital information resources in libraries is through monitoring and controlling of environmental conditions where these information resources are housed. However, the study conducted by Matusiak and Johnston (2014); Shigwan (2015) and Ifijeh, Iwu-James and Osinulu (2015) recommended mass deacidification, binding, lamination and restoration as the appropriate strategies that need to be adopted in order to preserve the print resources. The suggested strategies for preserving digital information resources implies that researchers in the field of library and information science are working hard to ensure that suitable strategies are discovered that could help to protect digital information resources from harm, damage and deterioration in libraries. Preservation of information resources is done to keep information resources safely from blurring and staining of papers and media materials which would lead to prompt loss of information that is contained in them. Shigwan (2015) added digitisation as another strategy that could assist in preserving library information resources in academic libraries in order to address the information needs of their clients. This suggested solution for preserving information resources is likely to increase accessibility and visibility of newspapers to stakeholders.

A recent study by Cherinet (2018) states that since skills are essential for the success of individuals and libraries, the universities should include emerging skills in curricula to meet the needs of the 21st Century librarians and expectation of potential employer. LIS professionals must update and upgrade their ICT skills to perform better in the digital environment. Heavy reliance on technology suggests that LIS professionals must be able to adapt and learn new technologies, advanced skills and tools such as Web 2.0, for academic success.

Researchers have identified ICT skills expected to be possessed by ICTs-skilled person, librarian. These skills are very essential for managing and operating libraries in this 21st Century. These skills according to Masumda (2007) cited in Anyoku (2012) can be compartmentalised into two broad classes: first are skills required to use computer and information technological tools. These include skills for using software application programmes e.g., word processing tools, graphic design tools, presentation software, web development, scanning techniques, database creation and maintenance, software installation skills and knowledge of hardware basics and troubleshooting. The second category includes the skills for using the internet and computer communication networks such as skills to search and retrieve data effectively on the web environment, networking skills and web 2.0 skills (Masunda, 2007; Anyoku, 2012).

The use of electronically stored information resources has led to reshaping information retrieval methods and access to information. In the past, information was being transferred from librarians to users. Currently, the majority of the communication and transfer of information is between users and computers and this is due to the most of information being accessed is stored electronically (Gbaje, 2011 cited in Kavishe and Dulle, 2016). Therefore, the need to perform digital preservation would require that library have skilled personnel who can manage digital information resources stored in libraries. According to Gbaje (2011) and Kavishe (2016), the increase in use of the internet and computers in many information resource centres as well as production of electronic information materials combined with the significant challenges related with ensuring long term preservation of electronic information resources means that, it is vital that there should be thorough action to overcome these challenges. ICT skills possession gives impetus to technological revolution and help in keeping up with its ever changing trends. Technological advances require that librarians grasp the basic modern skills and knowledge for using technologies more efficiently in libraries. Nkamneben, et al. (2015) examined the extent of ICT skills possessed

by librarians in the universities in Anambra State, Nigeria. The findings reveal that librarians in the universities in Anambra State are weakly skilled in ICTs.

Another study by Okafor (2015) examined the relevance and adequacy of ICT skills set in some Nigerian university in a digital environment. The result revealed that many of the respondents do have knowledge and skills of email use and word process task but lack knowledge of search engines and directories other than Google and Yahoo, respectively. Vijay kumar and Sweetey (2015) in their study report that professionals have above average skills for ICT based information retrieval (accessing, searching and use of e-journals). The respondents also have an average level of skill in electronic document delivery and Inter library loan through a network, online Indexing and abstracting services digital reference services, development of institutional repository, SDI services and electronic new additional alert.

Objectives of the study

The specific objectives are to:

- I, identify information and communication technology skills possessed by library personnel
in nine university libraries in Southwestern, Nigeria;
- ii. determine the level of information and communication technology skills of library personnel in nine university libraries in Southwestern, Nigeria;
- iii. ascertain the prevailing digital preservation practices in nine university libraries in Southwestern, Nigeria;
- iv. find out the relationship between ICT skills and digital preservation practices in nine university libraries in Southwestern, Nigeria; and
- v. examine the challenges to digital preservation practice in nine university libraries in Southwestern, Nigeria.

Methodology

The descriptive survey research design was adopted for the study. The population comprises 262 library personnel in nine university libraries in Southwest, Nigeria. These included three federal, state and private universities selected across Ogun, Osun and Oyo states in Southwest, Nigeria. They are: University of Ibadan, Ibadan, Oyo State, Ajayi Crowther University, Oyo, Oyo State, Ladoke Akintola University of Technology, Ogbomosho, Oyo State, Obafemi Awolowo University, Ile-Ife, Osun State, Redeemers

University, Ede, Osun State, University of Osun State, Osogbo, Osun State, Federal University of Agriculture Abeokuta, Abeokuta, Ogun State, Covenant University, Ota, Ogun State and Olabisi Onabanjo University, Ago-Iwoye, Ogun State. Total enumeration method was used to sample the entire population of 262 library personnel in three university libraries. The questionnaire was the chief data collection instrument. Data gathered will be analyzed using the Statistical Package for Social Sciences (SPSS). Demography of respondents and research questions will equally be analyzed with descriptive statistics, using the simple percentages, frequency count, and standard deviation as well as correlating analysis. The analyses will be presented in tables.

Result and Discussion

Objective 1: Information and Communication Technology skills possessed by library personnel

Table 1: Information and Communication Technology skills of the respondents

S/N	Types of ICT skills possessed	SA	A	D	SD	\bar{x}	STD
A	Computing skills						
1	I possess word processing skill	144 60.8%	82 34.6%	10 4.2%	1 0.4%	3.56	0.598
2	I have printing skill	132 56.2%	94 40.0%	9 3.8%	0 0.0%	3.52	0.572
3	I possess ability to scan, upload, download and save document	130 54.9%	96 40.5%	11 4.6%	0 0.0%	3.50	0.587
4	I possess formatting and document processing skills	124 53.9%	87 37.8%	19 8.3%	0 0.0%	3.46	0.644

5	I have database creation and updating skill	103 43.5%	105 44.3%	27 11.4%	2 0.8%	3.30	0.701
Weighted Mean = 3.47							
B	Computing managing skills						
1	I can solve simple technical issues on my computer	93 39.2%	130 54.4%	14 5.9%	0 0.0%	3.33	0.585
2	I can resolve issues with Office software (Microsoft Office, Open Office etc.) for preservation programme without assistance	83 34.9%	115 48.3%	34 14.3%	6 2.5%	3.16	0.755
3	When I buy a new computer hardware or device relating to preservation, I can install it into my computer	74 31.2%	121 51.1%	40 16.9%	2 0.8%	3.13	0.708
4	I can identify problems with damaged books and be able to determine the kind of tools and equipment to use for their repairs	70 29.5%	127 53.6%	36 15.2%	4 1.7%	3.11	0.711
5	I can design and implement a preservation and conservation programme	51 21.7%	128 54.5%	50 21.3%	6 2.6%	2.95	0.729
Weighted Mean = 3.14							
C	Internet navigation skills						
1	I can browse and navigate the internet	135 57.0%	99 41.8%	3 1.3%	0 0.0%	3.56	0.523
2	I have the ability to uses different online search engines	117 49.0%	111 46.4%	11 4.6%	0 0.0%	3.44	0.583
3	I can effectively use internet for cloud storage of digital objects	81 34.0%	126 52.9%	29 12.2%	2 0.8%	3.20	0.676
4	I can create and maintain digital repository	56 23.7%	113 47.9%	60 25.4%	7 3.0%	2.92	0.779
5	I have web page creation skills	56 23.6%	105 44.3%	71 30.0%	5 2.1%	2.89	0.782
Weighted Mean = 3.20							
D	Computing application skills						
1	I possess required skills to duplicate certain documents for security reasons, in case the originals are damaged, stolen, or destroyed (Microfilming skills)	97 40.6%	112 46.9%	26 10.9%	4 1.7%	3.26	0.717

2	I know the process by which materials can be converted from the hard copies to electronic copies (Digitisation skill)	91 38.7%	118 50.2%	22 9.4%	4 1.7%	3.26	0.695
3	I can transfer digital materials from one generation of computer technology to a subsequent generation one e.g. transfer information from floppy disk to CD-ROM or conversion of Microsoft Word to PDF (Migration skills)	81 34.2%	117 49.4%	37 15.6%	2 0.8%	3.17	0.711
4	I understand how to preserve the original application program (Emulation skills)	67 28.6%	109 46.6%	53 22.6%	5 2.1%	3.02	0.775
5	I can personally create the original application that was used to create or access the digital object on future computer platforms (Encapsulation skills)	58 24.5%	105 44.3%	64 27.0%	10 4.2%	2.89	0.821
Weighted Mean = 3.12							

The findings on the computing skills possessed by library personnel revealed that the majority of the respondents possessed word processing skill (= 3.56), printing skills (= 3.52) and database creation and updating skills (= 3.30). On computing managing skills, the findings revealed that library personnel (= 3.33) can solve simple technical issues on their system. Majority of the library personnel (= 3.16) can resolve issues with Office software (Microsoft Office, Open Office etc.) for preservation programmes without assistance. On internet navigation skills, the findings revealed that the majority of the respondents (= 3.56) can browse and navigate the internet, to use different online search engines (= 3.44) also revealed that they have the ability. Furthermore, the majority of the respondents (= 2.89) and have web page creation skills. In relation to the computing application skills, the findings revealed that majority of the respondents (= 3.26) possess required skills to duplicate certain documents for security reasons, in case the originals are damaged, stolen, or destroyed (Microfilming skills). Majority of the respondents (= 3.26) know the process by which materials can be converted from the hard copies to electronic copies (Digitisation skill). Furthermore, the respondents (= 2.89) can personally create the original application that was used to create or access the digital object on future computer platforms (Encapsulation skills).

Objective 2: Level of information and communication technology skills possesses by library personnel in nine university libraries in South-west, Nigeria.

Table 2: Shapiro-Wilk normality test for the level of information and communication technology skills of the respondents

Variables	Mean	StD	Statistics	Df	Sig.
Computing Skills	17.0840	2.74078	0.888	238	0.000
Computing Managing Skills	15.6008	2.75059	0.944	238	0.000
Internet Navigation Skills	15.9202	2.64135	0.949	238	0.000
Computing Application Skills	15.4412	3.06241	0.939	238	0.000

The result of the Shapiro-Wilk normality test to determine the level of information and communication technology skills of library personnel in nine university libraries in South-west, Nigeria is presented in Table 2. The findings revealed that the results from the computing skills are normally distributed across the sampled population ($df = 238$; $p < 0.05$). It was also revealed that result from the Computing managing skills were normally distributed across the respondents ($df = 238$; $p < 0.05$). Furthermore, the distribution of responses relating to the internet navigation skills was normally distributed across the respondents ($df = 238$; $p < 0.05$). Additionally, results from the computing application skill were normally distributed across the sample population ($df = 238$; $p < 0.05$). This means the responses from the sampling population regarding the information and communication technology skills were approximately normal. Hence, it can be inferred that the level of ICT skills possessed by library personnel in the nine university libraries in South-west Nigeria is high.

Objective 3: The prevailing digital preservation practices in the nine university libraries in South-western, Nigeria?

Table 3: Prevailing digital preservation practices

S/N	Preservation and Conservation practices in libraries	SA	A	D	SD	\bar{x}	STD
1.	The library has a security against theft, mutilation and poor handling of information resources	108 45.6%	111 46.8%	15 6.3%	3 1.3%	3.37	0.661
2.	Lamination and photocopying of highly demanded collections is done in the library	109 46.0%	108 45.6%	17 7.2%	3 1.3%	3.36	0.673
3.	The library has a binding unit where damaged collections are repaired	109 46.2%	93 39.4%	31 13.1%	3 1.3%	3.31	0.744
4.	The library engages in general cleaning and dusting at regular intervals	86 36.3%	135 57.0%	14 5.9%	2 0.8%	3.29	0.612
5.	The library engages in environmental control/monitoring	76 32.2%	135 57.2%	23 9.7%	2 0.8%	3.21	0.642

6.	The library creates user copy for some collections	82 34.7%	121 51.3%	31 13.1%	2 0.8	3.20	0.689
7.	There is a clearly mapped out punishment for offenders on any preservation and conservation law breached	70 29.5%	139 58.6%	24 10.1%	4 1.7%	3.16	0.664
8.	The library place restrictions and conditions on the use of some collections	70 29.7%	138 58.5%	20 8.5%	8 3.4%	3.14	0.706
9.	The library has a housing and storage system plan	67 28.5%	135 57.4%	31 13.2%	2 0.9%	3.14	0.659
10.	The library has conservation treatment for its resources e.g. Basic book and paper repair	74 31.4%	125 53.0%	33 14.0%	4 1.7%	3.14	0.710
11.	The library has policy set in place for moving collections	69 29.1%	138 58.2%	24 10.1%	6 2.5%	3.14	0.690
12.	Periodic fumigation is done in the library	72 30.5%	131 55.5%	24 10.2%	9 3.8%	3.13	0.739
13.	The library has a manual/guide/plan book in case of emergency	72 30.4%	129 54.4%	30 12.7%	6 2.5%	3.13	0.720
14.	The library engages in general user education on proper library collection management with users and library staffs	64 27.2%	140 59.6%	27 11.5%	4 1.7%	3.12	0.665
15.	The library carry out regular weeding of information resources based on criteria set from time to time	70 29.7%	131 55.5%	27 11.4%	8 3.4%	3.11	0.732
16.	The library carries out digitization of print information resources	78 33.2%	114 48.5%	32 13.6%	11 4.7%	3.10	0.805
17.	The library insist on resources produced with de-acidity papers even if they are expensive	70 30.2%	110 47.4%	45 19.4%	7 3.0%	3.05	0.785
18.	The library has a disaster preparedness, response and recovery policy	54 22.8%	147 62.0%	24 10.1%	12 5.1%	3.03	0.730
19.	There is periodic immigration, emulation, copying and reformatting of digital documents in the library	68 28.9%	115 48.9%	39 16.6%	13 5.5%	3.01	0.824
20.	The library has an integrated pest management system	65 27.7%	104 44.3%	55 23.4%	11 4.7%	2.95	0.836

The prevailing preservation practice among the libraries were; Security against theft, mutilation and poor handling of information resources; Lamination and photocopying of highly demanded collections is done in the library and availability of binding unit where damaged books are repaired with ($\bar{x} = 3.37$), ($\bar{x} = 3.36$) and ($\bar{x} = 3.31$) respectively. The libraries also carry out general cleaning and dusting ($\bar{x} = 3.29$) as well as undertake integrated pest management system ($\bar{x} = 2.95$).

Objective 4: Relationship between ICT skills and digital preservation practices in nine university libraries in South-western, Nigeria?

Table 4: Relationship between ICT skills and digital preservation practices in nine university libraries in South-western, Nigeria

Variable	Mean	Standard Deviation	Digital Preservation and Conservation Practices			
			n	r	p Value	Remark
Computing Skills	17.0840	2.74078	237	0.288	0.000	Sig.
Computing Managing Skills	15.6008	2.75059	236	0.364	0.000	Sig.
Internet Navigation Skills	15.9202	2.64135	237	0.255	0.000	Sig.
Computing Application Skills	15.4412	3.06241	237	0.424	0.000	Sig.
Digital Preservation and Conservation Practices	62.7890	8.91572	237			

The finding revealed a weak significant positive relationship between Computing skills and digital preservation practices ($n = 237$; $r = 0.288$, $p < 0.05$). The findings revealed a weak significant positive relationship between computing managing skills and digital preservation practices ($n = 237$; $r = 0.364$, $p < 0.05$). The finding also showed that there is a weak significant positive relationship between Internet Navigation skills and digital preservation practices ($n = 237$, $r = 0.255$, $p < 0.05$). Furthermore, the finding revealed a weak significant positive relationship between computing application skills and digital preservation practices ($n = 237$; $r = 0.424$, $p < 0.05$). This implies that the ICT skills of the library personnel influence digital preservation practices in the library. Therefore, there is a significant relationship between ICT skills and digital preservation practices in nine university libraries in South-western, Nigeria.

Objective 5: What are the challenges to digital preservation practices in nine university libraries in South-western, Nigeria?

Table 5: Challenges to digital preservation practices

S/N	Challenges to preservation in my university library	SA	A	D	SD	\bar{x}	STD
1.	Inadequate finance is a challenge to preservation and conservation	90 39.3%	97 42.4%	36 15.7%	6 2.6%	3.18	0.790
2.	Erratic power supply is a serious challenge to preservation and conservation in my library	61 26.6%	85 37.1%	68 29.7%	15 6.6%	2.84	0.896
3.	Constant problem of network connectivity hinders cloud storage in my library	56 24.6%	91 39.9%	63 27.6%	18 7.9%	2.81	0.898
4.	There is lack of sponsored conferences, organised seminars, workshops on preservation and conservation for staff	49 21.5%	95 41.7%	69 30.3%	15 6.6%	2.78	0.858

5.	Space provided for storage of facilities/equipment is not adequate	63 27.5%	67 29.3%	82 35.8%	17 7.4%	2.77	0.938
6.	There are issues of outdated hardware and software in my library	38 16.9%	106 47.1%	68 30.2%	13 5.8%	2.75	0.802
7.	Issue of rapidly changing storage devices e.g. CD, DVD, Flash drive DVD etc in my library	45 19.7%	95 41.5%	76 33.2%	13 5.7%	2.75	0.835
8.	There is constant deterioration of digital media such as CD-ROM, DVD etc in my library	40 17.4%	95 41.3%	84 36.5%	11 4.8%	2.71	0.807
9.	ICT facilities/equipment in my library are not adequate	42 18.5%	84 37.0%	87 38.3%	14 6.2%	2.68	0.845
10.	Limited opportunities exist for training in the library	32 14.0%	103 45.2%	80 35.1%	13 5.7%	2.68	0.785
11.	Negative attitude of library management during selection of staff for training is a challenge	38 16.5%	99 42.9%	75 32.5%	19 8.2%	2.68	0.846
12.	ICT skill by staff for preservation and conservation is not adequate	34 15.0%	86 37.9%	95 41.9%	12 5.3%	2.63	0.801
13.	There are no trained conservators in my library	31 13.6%	85 37.6%	91 39.9%	21 9.2%	2.55	0.841
14.	There is lack of preservation and conservation policy	34 14.9%	76 33.3%	100 43.9%	18 7.9%	2.55	0.841
15.	Harsh environmental condition is a major challenge to preservation and conservation practices in my library	35 15.3%	74 32.3%	97 42.4%	23 10.0%	2.53	0.871
16.	The working condition is not conducive	40 17.5%	52 22.7%	111 48.5%	26 11.4%	2.46	0.910
17.	There is general poor condition is not conducive	35 15.5%	54 23.9%	111 49.1%	26 11.5%	2.43	0.888
18.	Staff in charge of preservation and conservation in my library have phobia for computers (Technophobia)	28 12.2%	65 28.3%	110 47.8%	27 11.7%	2.41	0.850
19.	The library building is not appropriate	45 19.7%	31 13.6%	118 51.8%	34 14.9%	2.38	0.966
20.	ICT facilities/equipment are not available in my library	32 14.0%	44 19.2%	129 56.3%	24 10.5%	2.37	0.851

A major challenge to digital preservation among libraries is inadequate finance (\bar{x} = 3.18), Erratic power supply (\bar{x} = 2.84). Others are constant internet connections for storing documents in the cloud (\bar{x} = 2.81), inadequate ICT facilities/equipment (\bar{x} = 2.37) and inappropriate library structure/store houses (\bar{x} = 2.38).

CONCLUSION

ICT skill possession among library personnel is instrumental in library's involvement in digital preservation practices. The study has shown a significant relationship between ICT skills

and digital preservation practices. However, because of the continuous advancement in digital contents housed in the library, the preservation practices required also changes, these then calls for libraries to continuously invest in the ICT training of personnel. The library must also diverse ways to combat challenges encounter during digital preservation activities in the library to prevent the deterioration of digital information resources.

RECOMMENDATIONS

In view of the conclusion of the study, the following recommendations are made. These recommendations include;

1. Library management should continually organise training (in –house and on the job) that would boost the ICT competence of the staff and also make them understand recent means of digitally preserving resources in the library so as to stand the test of time.
2. The management of the institution should increase the budgetary allocation for the library so that the tools and equipment’s needed for digital preservation practices can be acquired.
3. A policy review should be done by the university libraries to accommodate activities that would support effective digital preservation of information resources in the library and pay more attention to the latest trends in the world of preservation.
4. The library needs to allocate more space for storage of library resources so as to prevent them from mutilations caused by lack of proper storage.

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