PERCEPTION OF FUTURE JOBS AMONG LIBRARY PERSONNEL IN A TECHNOLOGICALLY DRIVEN ENIVORMENT: A STUDY OF FEDERAL UNIVERSITY LOKOJA, KOGI STATE

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Abstract

The study investigates the perception of future jobs among library personnel in a technologically driven environment, using federal university Lokoja library, Kogi State as a case study. The researchers observed that inflow of library customers into the library in the area of study has reduced drastically due to the availability of internet access and other ICT facilities which are accessible anytime, anywhere thereby, reducing the workload of librarians and their relevance. Librarians who are not technologically driven may not be certain of their future job especially with the rapid advancement in technology. Three research questions were formulated to guide the study. Data were collected and analyzed using questionnaire designed and administered via Kobo tool box. Out of a total number of 33 staff of the library, 31 responses were received and analysed using mean scores, representing 93.95 response rates. The analysis of the findings revealed that the library staff are aware of moderations brought about by the influx of technologies, also lays emphasis on the need to acquire analytical skills as key in ICT environment. The study recommends that it is imperative for all library personnel to acquire the necessary skills such as analytical skills, web design and management, skills in Artificial intelligence and Robotics. There is also need for the Management of the university to provide the necessary support to enhance the implementation of technology driven environments that will encourage their personnel to effectively embrace ICT in delivering of their responsibilities.

***Keywords**: Perception, library personnel, future job, technologically driven environment, university library*

Introduction

Technologies are ever changing and the librarians need to have a working knowledge of them to succeed in library profession as this highly technologically driven library environment of 21st-century has significantly redefined the roles of librarians. The complexity, competitiveness and dependence on technological changes and information explosion are felt most in the library profession. Librarians' use of these innovative technologies such as blogging, instant messaging, pod casting, web 2.0 applications, email etc. have the potential of making them more effective thereby improving and redefining access for users. Librarians have played an essential role in containing, preserving and sharing of information over countless civilizations and ages before the advent of technological advancement that now queries the relevance of this same profession in a time like this. It is evidence that acquisition of these new skills secure librarians' future job and engenders improved service delivery, library administration, efficiency and job performance. According to Sani and Musa (2018), this new service environment necessitated the need for librarians to shift their focus from traditional activities of collecting, processing, storing and accessing information to offer customer-centered automated information services, generated by using online/offline databases, e-resources, e-journals, networks and consortia.

Librarians of this age must be able to function in the virtual space connecting patrons to the needed information without facial contact. They now have the opportunity to use modern tools to provide quicker, more complete, and more sophisticated service to the users. This paradigm shift cannot be overlooked because library patrons are relying less on librarians as the sole information providers thus librarians are challenged to learn the new skills that enables them to implement the new technologies for learning, research and information for their patrons. Library customers now expect to be able to learn and work anywhere and anytime with continuous access to learning materials and one another for collaborative learning. Libraries should be the first places where most advanced technologies are implemented because it leads the way to digital citizenship. The future librarians need to embrace technology and avoid digital exclusion thus, for the library to be considered important in the future it needs to improve the technological literacy of its local communities. A library fitted with smart library technology is able to be open to library users without being staffed. The technology enables remote control of library buildings such as self-service, automatic doors, and computers and this will enable the librarians to extend library hours and people can use it at any time.

The interconnection of world through the use of Internet and Web has changed the fundamental roles, paradigms and culture of the librarians and created more opportunities for them. The technological environment has added to the range of services libraries provide and in turn this has also increased the variety of roles available to librarians (Cragg & Birkwood, 2011) The major changes we expect in the future to happen in our libraries are the use of new innovating technology for overall

information management. The future library possibly renamed Resource Centers with online facility to provide resource sharing services to its registered users since a smart library technology is able to be open to library users without being staffed. In the words of Federick and Run (2019), the future of librarians as information providers is not in a dazzling building, but in the world of cyberspace that resides in the hand-held devices of most library customers, and as an indispensable partner in the local and world communities therefore librarians must understand and adapt to the existing services to be able to create new ones to meet their community needs.

Federal university Lokoja is one the nine universities established by president Goodluck Ebele Jonathan's regime situated in the North Central Nigeria. The library was established to cater for the information needs of the academic community in support of the achievement of the vision of the university which is to be the best among its peers that were established at the same time. Since its establishment, efforts have been made by successive leadership in transforming the library to become a digital information hub for ground breaking research and a center for academic excellence through the implementation of ICTs to render effective library and information services. Therefore, this study becomes imperative so as to investigate the perception of the library staff on the outlook of their jobs in future especially as the library environment is gradually transforming into a digital environment.

Statement of the Problem

Librarians are originally persons located in the library building, carrying out tasks like acquiring, organizing and preserving the printed documents besides helping the readers in locating the information needed by them. But with the avalanche of Information and Communication Technologies and digital resources on the internet and multiple access points, the library users are now self-reliance thus there is a propensity to say that libraries and librarians are redundant. The researchers observed that inflow of library users into the federal university library, Lokoja for information search and consultation with the librarians has reduced drastically due to the availability of internet access and other ICT facilities which are accessible anytime, anywhere thereby, reducing the workload of librarians and their relevancy. Librarians who are not technologically driven may not be certain of their future job especially with the rapid advancement in technology. Therefore the need to appraise the perceptions of library staff on future jobs in a technological driven library environment. It is also anticipated that we could see in future libraries with completely paperless reading areas, touchscreen information portals and robotic assistants as guides thus endangering the future job of the librarians. The gap this paper intends to fill is to examine and provide information on future jobs of librarians in the face of highly technologically library environment.

Research Questions

1. What are the moderations brought about by technological driven library environment?
2. What is the new service skills required in a technological driven library environment?
3. What are the opportunities available for the future librarians?

Literature Review

Modern librarians and information professionals are challenged to implement new information systems for the collection, organization, preservation, and dissemination of information and new knowledge regardless of format, so the traditional method of managing the unwieldiness and growth rate of information using manually based system is gradually fading away. With knowledge being given in a variety of formats, the possibilities for the future are only limited by people's imaginations (Aregbesola, Omale, & Yahaya, 2023). The current and gradual shift from the age – long conservative means of providing library services to technology driven approaches compelled by the improvements and integration of computer technology, telecommunication systems have given rise to a new digital paradigm known as technologically driven library environment (Babayi, Ijabula, Peter & Aminu, 2023).

According to Nzioki (2018), a technologically driven library environment is one where people frequently utilize computers, computer networks, the internet, and digital communications for work, research, and enjoyment. Additionally, Umeozor and Emasealu (2022) defined the term "digital environment" as a work environment that is wired with different types of technology to improve efficient information management. Momoh (2018), quoting Mosoro (2000), pointed out that improvements in ICT have given libraries and information centers more effective means to gather, organize, store, and disseminate information throughout time. Hence, current technologies are becoming an integral component of libraries and have the prospective of changing the status-quo of libraries and librarianship as a profession. ICTs have come to play prominent roles in information management therefore; it is unthinkable that any library can function effectively without the appropriate use of these technologies (Adindu & Chinyere, 2015).

Ayo-Olafare (2020) observed that the trending technological advancement has brought a lot of changes to library and information services. Some of the moderations in library and information services brought about by the implementation of ICT are in stages which includes: library automation, digitization of print resources and providing remote access to digital resources, creation of paperless libraries [digital libraries],

subscription to online/offline databases and robotics and Artificial Intelligence which are the current trends in the profession.

The spectrum of abilities needed to handle a digital information environment is large, unending, and includes anything from a general understanding of computers to more sophisticated abilities linked to library services. Randniecki (2013) emphasized the need for expertise in the design of the technical architecture of the digital library, planning for automation and digitization skills, web design and management skills, digital reference services, digital document delivery skills, institutional repositories skills, robotics and AI skills, among others Anand (2018) asserts that the ICT environment has changed the obligations and functions of library professionals. Communication, technical competence, leadership, time management, user orientation, collection development, managerial skills, interpersonal proficiency, ICT literacy, and motivation are just a few of the essential skills that library personnel need to succeed in this digital age. Professionals working in libraries may adapt to shifting demands and offer top-notch services in the digital era by consistently developing and improving their abilities. Additionally, LISEDUNETWORK (2023) stated that library professionals must continuously improve their competences to meet the changing demands of library users in order to meet the changing needs of library users in the ICT environment. Competencies include the information, comprehension, abilities, and attitudes required to meet predetermined goals.Librarians are information managers. Their main responsibility is to acquire, process, store, preserve and disseminate information to satisfy the information needs of their varying users. Hence, they carry out these responsibilities even in a technological transformed library environment (Akor, 2014).

However, Somvir (2012) observed that patrons complain at the decline in prompt services delivered by some academic librarians who appear tactless and hardly cope with their job-related problems. Nwokike & Unegbu (2019) opined that decline in prompt services and the misuse of resources as well as low turnout of research output are evidences of the librarians' low level of job performances. Job performance is seen to express the extent to which an individual fulfills the responsibilities specified in the job description. This includes the fulfillment of the duties and delivery of the activities required by a job role. The librarian's performance is hinged on their level of competencies necessary in a digitally transformed library environment (Anyaegbu, Obiozor & Aghauche, 2015).

Nwokike & Unegbu (2019) carried out a study on assessing the job performance of Librarians in Universities in South-East, Nigeria, using a cross-sectional survey design to collect data from 210 respondents in 21 universities based on total enumeration. Anchored on the eight factor model of job performance, the study found that the level of job performance of librarians in universities in South-East, Nigeria was high because they understood their job roles and are technologically skilled. Their study recommended that with the consistent advancement in the technologies, librarians should be exposed to regular training and

retraining programmes to acquire new skills in their job so that they would be able to meet the demands of the challenging library work environment.

Gitau (2015), Abowha (2019) and Shivani (2022) emphasized that the status of librarianship has remained a concern throughout 20th and 21st century. With the continuous influx and advancement in ICT application in libraries, the future job opportunities for librarians in the digital age will keep expanding to include the following: information broker for both print and electronic media which has to do with identifying, retrieving, organizing, repackaging and providing electronic access to digital information sources; change agent i.e. technology application leader who collaborates with IT Services to design and evaluate systems that would facilitate e-access; facilitator who makes access easier, e.g. provides network access, purchases software's & e-journal licenses; educator who trains clients on Internet use; Innovator/Web Site Designer/Builder/Manager who designs the library's web page and searches and evaluates information resources to be linked to the site; digital asset librarian; digital archiving; Database manager; research and development and facilitators and creators of high value content. Doctorow (2013) also supported that librarianship have proven to be an adaptable profession that is especially concerned with its image and its future.

Methodology

The study adopted a quantitative research method, particularly the survey research design to investigate the perception of library personnel at the Federal University Lokoja on the future jobs in a technologically driven environment. Four research questions were formulated to guide the study. The population for the study comprised thirty three (33) library personnel in the university library. Hence, no sampling technique was adopted since the entire population is manageable. Data were collected and analyzed using questionnaire designed and administered via Kobo tool box. A total of 31 responses were received and analysed using mean and standard deviation with benchmark mean ≥2.50 as agree and < as 2.50 disagree.

Results

Research Question 1: What are the moderations brought about by technological driven library environment?

Table 2: Perceptions on the moderations brought about by technological driven library environment

Moderations brought about by Technological Driven Library Environment	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean(±SD)	Remark
Library automation	16 (51.6)	15 (48.4)	0 (0.0)	0 (0.0)	3.5(±0.1)	A
Digitization of library resources and provision of digital information	16 (51.6)	15 (48.4)	0 (0.0)	0 (0.0)	3.5(±0.1)	A
Remote access to information resources	15 (48.4)	15 (48.4)	1 (3.2)	0 (0.0)	3.5(±0.1)	A
Artificial intelligence and Robotic assistants as guides	4 (12.9)	21 (67.7)	6 (19.4)	0 (0.0)	2.9(±0.1)	A
Paperless library environment	10 (32.3)	19 (61.3)	2 (6.5)	0 (0.0)	3.3(±0.1)	A
Libraries as touchscreen information portals	25 (80.6)	4 (12.9)	2 (6.5)	0 (0.0)	3.7(±0.1)	A
Subscription to online/offline databases for easy access to current information in diverse fields	12 (38.7)	19 (61.3)	0 (0.0)	0 (0.0)	3.4(±0.1)	A

SA= strongly agreed, A= Agree, D= disagree, SD= strongly disagree, STD= standard deviation, Mean value of 2.5 and above indicates agreement, while less than 2.5 indicates disagreement.

The outcomes presented in table 1 offer insights into the transformations within the library landscape brought about by technological advancements. The analysis below highlights the extent of agreement among participants and provides mean values as a collective measure of significance. The analysis showed that the respondents agreed that libraries as touchscreen information portals with the mean score of (3.7) is most important transformation and the least from the analysis is artificial intelligence and robotic assistants (2.9).

The analysis of the findings above is in line with study conducted by Ayo-Olafare (2020) who observed that the current technological advancement has brought some moderations to library and information services such as automation of library services, robotics and Artificial Intelligence which constitute the current trends in the profession. Considering library as a touchscreen information portal implies that any librarian that is conversant only with the conventional method of library services cannot fit into

future jobs. It is also obvious that the activities of artificial intelligence system and robotics assistant have not been fully considered.

Research Question 2: What is the new service skills required in a technological driven library environment?

Table 3: Perceptions on the new service skills required in a technological driven library environment

Job Description	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean(±SD)	Remark
Computer literacy and skills	11 (35.5)	20 (64.5)	0 (0.0)	0 (0.0)	3.4(±0.1)	A
Library automation skills	11 (35.5)	19 (61.3)	1 (3.2)	0 (0.0)	3.3(±0.1)	A
Digitization Skills	11 (35.5)	20 (64.5)	0 (0.0)	0 (0.0)	3.4(±0.1)	A
Information Retrieval (accessing Searching, Use of E journals)	8 (25.8)	22 (71.0)	1 (3.2)	0 (0.0)	3.2(±0.1)	A
Web design and management skills	4 (12.9)	25 (80.6)	2 (6.5)	0 (0.0)	3.1(±0.1)	A
Electronic Document delivery & ILL through network	21 (67.7)	9 (29.0)	1 (3.2)	0 (0.0)	3.6(±0.1)	A
Online Indexing and abstracting Services skills	6 (19.4)	24 (77.4)	1 (3.2)	0 (0.0)	3.2(±0.1)	A
Skills needed for the development of institutional repository	18 (58.1)	13 (41.9)	0 (0.0)	0 (0.0)	3.6(±0.1)	A
Artificial intelligence and Robotics Skills	4 (12.9)	26 (83.9)	1 (3.2)	0 (0.0)	3.1(±0.1)	A
Online Current Awareness/ SDI Services skills	8 (25.8)	22 (71.0)	1 (3.2)	0 (0.0)	3.2(±0.1)	A
Digital reference services skills	22 (71.0)	9 (29.0)	0 (0.0)	0 (0.0)	3.7(±0.1)	A
Analytical skills	24 (77.4)	7 (22.6)	0 (0.0)	0 (0.0)	3.8(±0.1)	A
Software installation skills	22 (71.0)	9 (29.0)	0 (0.0)	0 (0.0)	3.7(±0.1)	A

Mean value of 2.5 and above indicates agreement, while less than 2.5 indicates disagreement.

Analytical skills is perceived by the respondents to be the most important new service skills required in a technological driven library environment with a mean score of 3.8. From the data collected the least new service skills required in a technological driven library environment as perceived by the respondents are Web design and management; and Artificial intelligence and Robotics Skills with a mean score of 3.1 each.

The analysis of the findings above is in line with the study by Randniecki (2013) as he revealed that that the expertise required of a librarian in digital library and information environment are automation and digitization skills, web design and management skills, institutional repositories, robotics and AI skills among others. By implication, librarians need skills that promote remote access to information, ascertain the authenticity and validity of information sources handle artificial intelligence systems and train users on the use of robotics in library setting.

Research Question 3: What are the opportunities available for the future librarians?

Table 4: Perceptions on the opportunities available for the future librarians

Opportunities Available for Future Librarians	Strongly Agree	Agree	Disagree	Strongly Disagree	Mean(± SD)	Remark
Information Broker for both print and electronic media	20 (64.5)	11 (35.5)	0 (0.0)	0 (0.0)	3.6(±0.1)	A
Web Content Management	24 (77.4)	6 (19.4)	1 (3.2)	0 (0.0)	3.7(±0.1)	A
Educator: trains clients on the use of Internet tools , search engines, online databases, etc.	24 (77.4)	7 (22.6)	0 (0.0)	0 (0.0)	3.8(±0.1)	A
Digital archive and repositories	25 (80.6)	6 (19.4)	0 (0.0)	0 (0.0)	3.8(±0.1)	A
Innovator/Web Site Designer/Builder/Manager	24 (77.4)	6 (19.4)	1 (3.2)	0 (0.0)	3.7(±0.1)	A
Database Manager	25 (80.6)	6 (19.4)	0 (0.0)	0 (0.0)	3.8(±0.1)	A
Digital Collections Metadata management	26 (83.9)	5 (16.1)	0 (0.0)	0 (0.0)	3.8(±0.1)	A
Research and development	25 (80.6)	6 (19.4)	0 (0.0)	0 (0.0)	3.8(±0.1)	A
Facilitator and creators of high value content	24 (77.4)	6 (19.4)	1 (3.2)	0 (0.0)	3.7(±0.1)	A

Mean value of 2.5 and above indicates agreement, while less than 2.5 indicates disagreement.

Table 3 outlines the opportunities that lie ahead for future librarians. The calculated mean values provided insights into the perceived significance of each opportunity. The respondents agreed that opportunities abound in the areas of serving as educators to train clients on using Internet tools, search engines and online databases, management of digital archives and repositories, being database managers, managing metadata for digital collections, opportunity for research and development with mean values of (3.8) each and information brokers (3.6) which has the least mean rate though still above the beach mark of (2.5) This indicates general positive acceptance of all the listed items as opportunities available for librarians in a technologically driven environment.

The analysis of the findings above is in line with studies conducted by Gitau (2015), Abowha (2019) and Shivani (2022) in which they emphasized that with the advancement in ICTs in libraries, various job opportunities abounds in the future for librarians such as information broker, technology application leader, digital information facilitator, Innovator/Web Site Designer/Builder/Manager, digital archiving, research and development creators of high value content among others. From the findings of the study, it can be established that great opportunities awaits the librarians even with the advancement in technologies only if they can function as educators, managers of metadata for digital collections, managers of digital archives and repositories, information broker and lots more. It also implies that technological driven environment expands the librarians' jobs and affords them better opportunities ahead.

Summary of the findings

1. The significant moderations brought about by the influx of technologies in library environment positioned libraries as touchscreen information portals resulting to transition to paperless library environment. The perception of respondents towards artificial intelligence and robotic assistants as recent trends were low.

2. The most important new service skills required in an ICT driven environment is the analytic skills. While the perception of the respondent towards acquiring Web design and management; and Artificial intelligence and Robotics Skills were low.
3. The most significant opportunities that are available for librarians in the future include; serving as educators to users on Internet and online databases usage, management of digital archives and repositories, managing metadata for digital collections, opportunity for research and development, web design and web content manager, opportunity to take on roles as innovators and facilitating and creating high-value content. Information brokers received the lowest response among the opportunities awaiting librarians.

Conclusion

From the foregoing study, the researchers identified the connection between information technology and its impacts/transformations on library environment and in the field of librarianship in general. It is true that the university libraries especially in the area of study is gradually transforming into a technologically driven environment as library services are being automated and information resources are digitized. It was also established that there were moderations as a result of the influx of technologies. The study also x-rayed the necessary skills that library staff should acquire so as to be responsive to technological changes in their library environment as they occur in the globalized world. Hence, traditional skills must be improved upon if information professionals are to play vital roles in the new information environment. LIS professionals should bear in mind that they are information managers and must keep abreast the various trends and transformations in their profession as custodians of information.

Recommendations

Within the context of the findings and implications of this study, the following recommendations are proffered.

1. The Management of the university should provide the necessary support to enhance the integration of artificial intelligence and robotic in library operations based on current trends in technological advancement.

2. With the recent changes in the library environment, it is imperative for all library personnel to acquire the necessary skills particularly web design and management; and Artificial intelligence/Robotics Skills.

3. Library associations and regulatory body should continually ensure the librarians of their future jobs and emphasize on skill like Information brokering making them entrepreneurs

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