



## Impact of Work Experience on Utilization of Electronic Information Resources Use and Research Productivity among Academic Librarians in Northeast Federal University Libraries, Nigeria

HAUWA AHMED

Ramat Library, University of Maiduguri, Borno State

FATIMA ZUBAIRU DIGMA

University of Maiduguri, Borno State, Nigeria

UGOCHUKWU C. EKEH

Lt Faruk Yahaya Library, Nigerian Army University, Biu, Borno State, Nigeria

**Abstract.** This study investigated the impact of work experience on the utilization of electronic information resources (EIRs) and research productivity among academic librarians in North-East Federal University Libraries, Nigeria. Academic libraries increasingly rely on electronic information resources such as e-journals, e-books, licensed databases, institutional repositories, and discovery systems to support scholarship. While research has highlighted the importance of electronic information resources in improving access to current literature and enhancing research productivity, the extent to which work experience influences their use remains unclear. The study adopted survey research design, the study involved the entire population of 120 academic librarians across six federal university libraries in the region. Using census sampling procedure to sample all the respondents in the study. The data were collected through a validated self-developed questionnaire with reliability index of 0.70. Descriptive statistics (frequencies, means, percentages, and standard deviations) and while, t-test was used to identify if there exists a significant difference in types of electronic information resources used for research productivity among academic librarians based on year of work experience. Results revealed no statistically significant difference in the types of electronic information resources used for research productivity based on years of work experience. The study recommends sustained investment in electronic

information resources, continuous professional development, and the redefinition of work experience to include exposure to emerging digital tools, conference participation, and active involvement in professional networks.

**Keywords:** Work Experience, Academic Librarians, Electronic Information Resources (EIRs), Research Productivity and Federal University Libraries, Nigeria

### 1. Introduction

In recent years, academic libraries have refocused their work around electronic information resources (EIRs), such as licensed databases, e-journals, electronic books, institutional repositories, and discovery systems, because of their ability to simplify methods of searching, expand access, and simplify large-scale, multi-author scholarship. In research-intensive settings, academic librarians' ability to handle, teach, and strategically use electronic information resources has become an essential part of the library's support of institutional research goals. Research and publications from African and international sources consistently show that available and well-used electronic information resources enhance research productivity and self-perception of the quality of research by academics (Ani, 2015). However, in the library profession, the mechanistic links by which the attributes of academic librarians, in

particular work experience, affect electronic information resources use and thereby research productivity are not well articulated and are occasionally disputed (Hoffmann, Berg, & Koufogiannakis, 2017; Hoffmann, Berg, Brancolini, & Kennedy, 2023).

Work experience constitutes an important human capital factor which potentially may affect the use of electronic information resources in a number of ways, as for example, the development of tacit knowledge concerning search strategies and platforms, the development of more elaborate mental models of workflows of scholarly communication, and the establishment of professional networks facilitating troubleshooting and keeping up-to-date. Recent findings show that experience – sometimes combined with information literacy skills can predict the confidence with which library staff make selections, conduct searches, and teach with e-resources (Atanda, Luqman, & Maduekwe, 2024). Such a relationship is likely not strictly linear; in a high-turnover electronic information resources ecosystem, the recency of experience of training and platforms may matter more than years on the job. This suggests PoS of itself isn't the problem, but rather the repetition of IP at the workplace, which can encourage use, as opposed to knowledge, which can calcify into bad habits and choke on the move to newer tools (Kassim 2023).

Use of electronic information resources by academic librarians takes a number of forms across the spectrum, from frequency and depth of use (e.g., searching, alerting, analytics) to pedagogical integration (e.g., information literacy instruction, research consultations) and back-end stewardship (e.g., licensing, usage data analysis). Studies in the Nigerian and general African settings show that intensive exposure to and training in electronic information resources are associated with better perceptions of access to researchers, citing of current scholarship and ease of publication all of which would likely mediate improvements in traditional research metrics (Ani, 2015; Asongo, Agbaji, Vamwat, Jiya, Danboyi, Fagam, & Ojo, 2024). However, integration is influenced by infrastructural issues (i.e., bandwidth, authentication mechanisms), and the provision of training and role definition can assist or challenge the benefits associated with experience (Kassim, 2023).

The concept of research productivity for academic librarians typically measured as peer-reviewed publications, conference presentations, and additional scholarly works is a nuanced and evolving concept. Longitudinal bibliometric studies demonstrate changing trends in publications at the level of

discipline areas through career stages (Blecic, Wiberley, De Groote, Cullars, Shultz, & Chan, 2017; Wiberley, Blecic, & De Groote, 2023). What has also been illuminated from survey research are the many factors that enable or hinder professional development at the individual, peer, and institution levels (Hoffmann, Berg, & Koufogiannakis, 2017; Hoffmann et al., 2023). For example, elements of rank, credentials, mentoring, and research culture notably have an equivalent or greater impact than other demographics; direct effects of years of experience on productivity are inconsistent and contingent, even though the patterns are not clear (Hollister, 2016; O'Brien & Cronin, 2016).

The conceptual pathway from the proposed causal pathway work experience, electronic information resources use and research productivity. Although theoretically, the causal linkage work experience, electronic information resources use and research productivity might hold despite having had limited empirical attention in academic librarian populations, especially in Sub-Saharan Africa, where infrastructure constraints and swift platform churn might yield distinctive dynamics. There is some evidence that experience coupled with ICT-savoriness promotes higher use of electronic information resources which in turn may improve literature monitoring, methodological robustness, and sharing proximal progress of scholarly output (Atanda et al., 2024; Ani, 2015). In contrast, some research, particularly in health sciences and the Irish context, has shown that seniority is not a strong predictor of research productivity if organisational supports and research requirement issues are controlled for (Hollister, 2016; O'Brien & Cronin, 2016). This tension highlights the need to model experience both as a predictor and a moderator of the association between electronic information resources use and research productivity when controlling for context.

The study considers work experience as a multi-dimensional characteristic, years of librarianship, tenure in role, and use of electronic information resources platforms and proposes that these have positive indirect impact on research productivity through increased use of electronic information resources. The impact is additionally facilitated/moderated by training opportunities, peer networks, and workplace factors, the study also suggests. Through a combination of self-report and objective measures when possible, and embedding our work in the contemporary theoretical and empirical contexts available regarding academic librarians' research ecosystems, the study aims to disentangle the circumstances in which professional experience

translates into productive and use of electronic information resources fuelled scholarship (Hoffmann et al., 2023; Bleic et al., 2017).

**1.1 Hypothesis**

There is no significant difference in types of electronic information resources used for research productivity among academic librarians based on year of work experience in North-East Federal University Libraries, Nigeria.

**2. Research Methodology**

This research adopted survey research design, which is appropriate method for gathering data about a large population to make inferences about the population. The target population of the study consist of 120 academic librarians from the selected federal university libraries in North-East, Nigeria. The entire group of academic librarians from these libraries participated in the study through the use of a census sampling technique. The instrument adopted for this study was self-developed questionnaire. The questionnaire for the study was validated for face and

content validity. A pretest of the instrument, in the form of a pilot study was carried out to determine reliability coefficient of the questionnaire, using 30 academic librarians from Bayero University Kano. The reliability coefficient was determined using Cronbach's Alpha, and the reliability coefficient was 0.70, indicating that the instrument was reliable for use in the study. Data were analyzed using mainly descriptive statistics; frequency counts, percentages, means and standard deviations, while, t-test was used to identify if there exists a significant difference in types of electronic information resources used for research productivity among academic librarians based on year of work experience in North-East Federal University Libraries, Nigeria. All statistical analysis was performed using SPSS Version 22.

**3. Results**

There is no significant difference in types of electronic information resources used for research productivity among academic librarians based on year of work experience in North-East Federal University Libraries, Nigeria.

**Table 4.1:** Descriptive

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval	
					Lower Bound	Upper Bound
0-5 yrs.	331	2929.20742		.03611	1.2194	1.3665
6-10 yrs	161	2187.18226		.04556	1.1216	1.3159
11-14 yrs	121	2500.17408		.05025	1.1394	1.3606
15-20 yrs	101	3500.18758		.05932	1.2158	1.4842
21-24 yrs	3	1.2500.22048		.12729	.7023	1.7977
25-30 yrs	9	1.4167.13176		.04392	1.3154	1.5179
31 and above	141	2917.15929		.04257	1.1997	1.3836
Total	971	2912.18755		.01904	1.2534	1.3290

The descriptive analysis shows that there are small differences in the average scores for using electronic resources between work experience groups, but these differences are quite minimal because the confidence intervals of 95% confidence interval overlap and the standard errors are similar. This suggests that academic librarians with varying years of work experience in North-East Federal University Libraries exhibit similar levels of electronic information resource usage for research productivity.

**Table 4.2:** Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Types	Based on Mean	.574	6	90	.750
	Based on Median	.451	6	90	.842
	Based on Median and with adjusted df	.451	6	73.214	.842
	Based on trimmed mean	.517	6	90	.794

The Tests of Homogeneity of Variances table presents Levene's test results, which determine whether the variance in electronic information resource usage for research productivity is consistent across groups of academic librarians with different years of work experience. The findings show that, based on the mean, the Levene statistic is 0.574 with a p-value of 0.750, indicating no significant difference in variances across the groups. Similarly, the tests based on the median (Levene statistic = 0.451, p-value = 0.842), the median with adjusted degrees of freedom (Levene statistic =

0.451,  $p$ -value = 0.842), and the trimmed mean (Levene statistic = 0.517,  $p$ -value = 0.794) all suggest that the assumption of equal variances holds. Since all  $p$ -values exceed 0.05, it is concluded that the variance in electronic information resource usage across the different years of work experience is relatively equal, allowing further analyses to proceed without corrections for unequal variances.

**Table 4.3:** Summary of ANOVA results on types of electronic information resources used for research productivity among academic librarians based on year of work experience

	Sum of Squares	Df	Mean Square	F	Sig.	Decision
Between Groups	.286	6	.048	1.387	.228	Retained
Within Groups	3.091	90	.034			
Total	3.377	96				

The null hypothesis states there is no significant difference in types of electronic information resources used for research productivity among academic librarians based on year of work experience in North-East Federal University Libraries, Nigeria. An ANOVA was conducted to compare the mean scores between the 7 groups. The F-test value is 1.387 with a  $p$ -value of .228. Since the  $p$ -value is greater than 0.05, fail to reject the null hypothesis. This indicates there is no statistically significant difference in the mean scores between the 7 groups. The ANOVA results show, it cannot reject the null hypothesis of no difference in between the 7 groups. The findings suggest there is no significant difference in types of electronic information resources used for research productivity among academic librarians based on year of work experience in North-East Federal University Libraries, Nigeria.

#### 4. Discussions

There was no significant difference in the category of electronic information resources used and research productivity among academic librarians in terms of their years of library experience, suggests that regardless of the period of service, academic librarians use a particular class of electronic resources. They used the same category of electronic information resources. This may not be surprising as where the electronic information resources are located (academic environments such as online catalogs, databases, ejournals, ebooks, and discovery systems) are often standardized, which serves the interest of researchers in terms of generic initiatives across institutions (Aina, 2017). Ambiance materials were available to challenge users across all levels of experience at libraries with more mature ambiance resources in place were more often found to be included in the subscription or procurement structures of the institution resulting in more consistent use in libraries of both seasoned and less experienced users. Thus, junior librarians are quick to pick up how to use such resources as these are part of the warp and weft of research practice (Asare & Agyemang, 2017) with the more senior librarians often doing so, if only because

the same sources are so deeply interwoven into the fabric of research practice.

Resource use similarity may further be attributed to institutional training programmes and activities that encourage the use of specific electronic information resources. Some academic libraries offer them orientation exercises and on-the-job training for librarians on core e-resources to minimize personal experience having an effect on the resource chosen (Oduwole & Oladipo, 2019). This standardized training has allowed all librarians to have, when they are a minimum of 2 years in their position at their respective institution, the capability to access and use the major electronic resources that relate to their research and instructional duties. This uniformity of sign exposure and training yields a homogeneous practice of electronic information resources modalities and reduces the overall differences between the various years of experience.

In addition, research productivity per se-the successful use of basic electronic information resources is often a stimulus to initiative researchers to seek out similar resources to enable the achievement of research goals (Aina, 2017). Learning in higher education is very reliant on real sources (theory, empirical evidence, expert opinion), scholarly journals and e-books, and databases (Web of Science, Scopus), which presupposes use of resources more by databases than by skill level between learners (Asare & Agyemang, 2017). Therefore, it may be that, however recently a librarian has started in the role, or however long they have been working as one, their level of use of such foundational resources is relatively the same: Perhaps a function of to the extent research support services are applied, and their standards of application, being standard across academic libraries. This shared resource utilization hopefully will illuminate the degree that institutional azimuth and resource availability effects research behavior more than personal experience.

## 5. Conclusion

In conclusion, the study established that work experience does not significantly influence the types of electronic information resources utilized for research productivity among academic librarians in North-East Federal University Libraries, Nigeria. The ANOVA test results ( $F = 1.387$ ,  $p = .228$ ) revealed no statistically significant variation across different experience groups, indicating that whether librarians were relatively new or had many years of service, their patterns of electronic information resources use remained broadly similar.

## 6. Recommendations

The following were recommended based on the findings:

There is need for universities in North-East Nigeria to invest in infrastructure for effective use of EIRs such as high-speed internet connection, steady power supply, and modern digital equipment.

Furthermore, libraries need to develop professional development schemes for librarians, replete with consistent training on recent technologies and research devices.

Academic libraries need to establish a research-supportive climate to motivate librarians to produce research results. This could be done by providing protected research time and research grants and facilitating collaboration with faculty and researchers. Institutions can also encourage librarians to be productive researchers by acknowledging and rewarding their scholarship contributions.

The concept of work experience for academic librarians needs to be redefined to encompass professional development, conference participation, and experience with new research tools. Academic librarian would attempt to be in professional networks, attend trainings, and join in research-based activities too.

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