International Journal of Knowledge Dissemination (IJKD)
November 2023, Volume 4 No 2, PP 105-122
ISSN: Print 2714-4356 / Online 2714-4364
Published by Samuel O. Ogbemudia Library,
University of Abuja, Nigeria

Research Productivity of Academic Librarians in South-West Nigeria

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Abstract

This paper investigates the level of research productivity among academic librarians in the South-West region of Nigeria, focusing on both quantity and quality aspects. Research productivity is a critical indicator of the contributions of academic librarians to scholarly endeavors, and it plays a pivotal role in enhancing the overall academic environment. The study employed a quantitative approach, data was collected through surveys. By assessing the quantity of publications, as well as evaluating the quality through factors such as indexation of scholarly articles in Google scholar, web of Science and Scopus landscape. The findings shed light on the current state of research engagement among academic librarians, highlighting potential challenges and identifying best practices. According to the empirical findings of this study, the total number of all types of publications by academic librarians is on the average judging by the mean score of 3.16 and standard deviation of 1.28. The study found that Google scholar was the most popular indexing database among the academic librarians. The findings emphasize the importance of fostering a research-oriented environment within academic libraries and assisting librarians in their scholarly activities in order to improve knowledge generation and dissemination in Nigeria's academic environment.

Keywords: Research Productivity, Academic Librarians.

Introduction

Research is a systematic analysis to uncover new facts or to gain further information needed to explain or resolve a specific problem. It is investigation undertaken for the creation and advancement of knowledge using verifiable facts, it is the engine that fuels development. Changes that led to civilization in different areas of human existence have been propelled by curiosity of avid and inquisitive scholars who dared to conduct research. It is critical in promoting prosperity and well-being of citizens in communities and the world at large. Research productivity (RP) is the measure of an academics' achievement, mostly in terms of the quantity and quality of publications over a given period (Australian Research Council, 2010). To put it simply, research productivity is the number of publications per researcher over a given period. Research productivity is a production process involving physical, tangible, intangible resource processes. The output of research production may be both tangible and intangible.

Typically, the main goal of research is creation of new knowledge and or insight which can be applied. Research productivity therefore, is a robust measure of academic achievement and recognition among peers. Globally, research productivity is very significant for universities, it is a central task and a key feature of universities. It is the next most valued aspect of academic tasks after teaching (Acord & Harley, 2013). It is one of the main objectives of universities, which reflects their competitive edge and prestige. It also represents a major indicator used to place institutions on the ivy-league table of world ranking universities. There has been increasing emphasis on research productivity around the globe and across various academic disciplines and institutions.

Noting the important role that research productivity plays in the academia, the need to highlight metrics for its measurement becomes germane. Research productivity can be measured in various ways ranging from the quantity, quality and a combination of both. Each measure has its benefit and drawback. Measuring quantity entails counting the sum of research output such as journal articles, conference papers, number of edited works, patents, books and book chapters, etc. produced over a stipulated time frame. It used to be the most popular approach for measuring research productivity of researchers. However, academic librarians like other academics, are increasingly required to show their productivity in terms of quality (Schimanski, & Alperin, 2018). The quality of a research publication can be measured in many ways, some of which includes a consideration of the impact factor of the journal where a publication appears. The journals are often categorized into quality quartiles for instance Q1, Q2, Q3, Q4 journals and many more (Kaba, 2020). Also, quality can be established by considering the author/article impact factor which can be measured using various indicators like h-Index, g-Index, i10-index, age-weighted citation ratio and many more (Ssembatya, 2015).

Similarly, the quality of a research publication can also be measured by rating its inclusion in reputable and prestigious international databases of recognized indexing bodies such

as Scopus, Web of Science (WoS), Google Scholar, Pubmed, etc. (Altbach, 2015; Folk, 2014; Ingvild & Reymert, 2017). Publications that are indexed by prestigious indexing bodies are considered to have higher scientific quality and greater chances of visibility as compared to non-indexed journals. Even though this is arguable, research outputs not listed in these databases are usually not considered relevant in the ever-changing academic publishing landscape and are often underestimated. In view of the overall importance of research productivity, universities are increasingly placing emphasis on it and are periodically reviewing the quality and quantity of research required for career advancement of staff, making RP unarguably an all-time relevant topic (Brew, Boud, Namgung, Lucas, & Crawford, 2016).

Following agreements between (Academic Staff Union of Universities (ASUU) and the Federal Government in 1993, academic librarians were conferred with the same privileges and rights as their academic counterparts (NUC, 1993; Ugah, 2012). This agreement mandated librarians to be productive in their research. The academic librarians are required to contribute to the overall research performance of the universities in which they work. Research has become a significant index or determinant of academic librarian's appointment, promotion/career advancement, reputation and academic acceptance. For them, like any other academic, it is either they publish or perish. The role and status of librarians in universities make them directly involved and embedded in the research process taking place in universities. They provide various resources and services to faculty and students, and act as research consultants in some universities (Klain-Gabbay & Shoham 2017). Librarians are believed to provide information skills and technological expertise to support faculty and students in their teaching, learning and research. Hence, it is expected that the research productivity of the academic librarians themselves would be high. If they can support others, then they ought to be highly productive themselves (Babalola & Allahmagi 2023).

The productivity of research in Africa, particularly in Nigeria, has been characterised as extremely poor on a worldwide scale, accounting for less than 1% of the world's total research productivity (Mba & Ekechukwu, 2019). Nigeria was singled out in AU-NEPAD (2014) as a huge research system producing only a little. Apart from research and allied institutes, polytechnics, and colleges of education, Nigeria had over one hundred seventy (170) universities, but its research output was only ten thousand (10, 000) publications. South Africa, with its twenty universities, had about forty-seven thousand (47, 000) publications; Egypt had thirty thousand (30,000) publications; and Nigeria had only ten thousand (10, 000) publications. Although the situation appears dire, Olumide, Olubukola, Florence, and Otunba (2019) noted that Nigeria is gradually increasing the volume of research publications, suggesting that things are improving. This rise is not consistent across disciplines, either, as there is evidence that the life and health sciences have published more than the social sciences and engineering combined. 2017, the Institute of International Education (IIE), (Babalola & Allahmagi 2023).

Upon examining the discipline of Library and Information Science (LIS) from a worldwide perspective, it was discovered that over 43% of LIS papers written between 2003 and 2012 originated from the United States and the United Kingdom. Chinese scholars actively followed the excellent contributions from Canada (Weller, Hurd & Wiberley, 2014; Jabeen, Yun, Rafiq & Jabeen, 2015). According to Walters and Wilder's (2015) analysis of scholarly contributions published in LIS journals between 2007 and 2012, academic librarians from Europe and Asia were the most prolific. According to Muia and Oringo (2016), South Africa top Africa in the generation of LIS articles. Examining at South-East, Nigeria, Anyanwu (2013)'s study of four university libraries found that academic librarians in this area mostly published in local journals and produced little in the way of research and publications. Similarly, research productivity of Northern Nigerian academic librarians was found to be rather low (Kabir, Dahiru & Amishe, 2017; Tsafe, Chiya, & Aminu, 2016).

However, there seems to be an inconsistency in literature as regarding the quantity of research productivity of academic librarians in Nigeria. Before 2012, some researchers reported that the research output of librarians in Nigeria was at a very poor level (Moahi & Ogbomo, 2010; Okoye & Ejikeme, 2011; Onohwakpor &Tiemo, 2006). More recently, some scholars reported an increase in research productivity (Okonedo, Popoola, Emmanuel, & Bamigboye, 2015). Most recently however, Okeji, (2018) reported a decline in librarians' research productivity. From these studies, it is clear that the zeal of academic librarians and their capacity to achieve and maintain their research productivity has not been consistent, a situation best described as fluctuating.

In terms of quality of research productivity, it is clear that academics (not just academic librarians) in developing countries are not really concerned about publishing in quality or prestigious outlets (AU-NEPAD, 2014); this is due to a number of reasons, most notably the fact that tenure and promotion decisions typically rely on publication counts rather than impact in most Nigerian Universities (AU-NEPAD, 2014). Therefore, many academics are concerned about having their articles published to meet up with promotions criteria irrespective of the quality of the outlet of publication (AU-NEPAD, 2010; AU-NEPAD, 2014; Egwunyenga, 2008). Consequently, this has led to the practice of floating temporary substandard journals by faculties within academic institutions. According to AU-NEPAD (2014), a large number of journals published in Africa, in which research from Africa appears, are fairly obscure, these journals are often not well distributed or circulated, do not measure up to international standards and even die when the pioneer originators attain their desired academic positions.

From literature, it appears that many scholars who have investigated research productivity of librarians in Nigeria have not been able to differentiate between 'international journal' outlets and globally recognized prestigious publishing outlets. A journal may be

international and not prestigious, it could even be predatory. It becomes prestigious when it is indexed by prestigious indexing and abstracting bodies. There are several indexing databases like Web of science (WoS), Scopus, Science Citation Index, EMBASE, the Social Sciences Citation Index, SCIRUS, Medline, Arts and Humanities Citation Index and many more. It is worth emphasizing that there are arguments as to the use of these indexers to measure quality, some scholars have argued that, while the quality of many publications not indexed in these journals are adjudged poor, that there are in fact some very good journals with content that addresses national issues that are not listed in any of the well-known indexes (Martín-Martín, Orduna-Malea, Thelwall & López-Cózar, 2018). Nevertheless, these indexing databases provide quality-assured selection of publications, and offer a ranking of importance based on citations to each publication, indexing is vital to the reputation, reach, and consequently impacts of publications (Elizabeth, 2020). It is also worth noting that Scopus and WoS are the most popular indexers with a wide subject and disciplinary coverage (Mongeon & Paul-Hus, 2016; Thompson, 2005).

The increasing pressure on academics to be productive in research or face stagnation is prompting the need for collaboration which entails team or group approach to research. Collaboration involves researchers working together to advance scientific knowledge. Collaboration has a long history and tradition in the experimental sciences but has also emerged in the social sciences and humanities. In a team or group, members can never be equally endowed. However, through collaboration, researchers interact, pull efforts and resources together among themselves to conduct and produce research and achieve what only an individual may not easily achieve. This underscores the importance of collaboration in research productivity.

Statement of the Problem

Many universities regularly review the quantity and quality of scholarly publications required for appointment and promotion of academics with each review more stringent than the previous. To this end, academic librarians, like every other academic, must either publish or perish or better still, publish and flourish. The situation, however, is not reflective of flourishing. A study by Okonedo (2015) shows that there were academic librarians from the South-West region without a single publication to show in a whole year. Furthermore, a number of scholars have also described the research productivity of librarians as low, unstable and fluctuating (Ani, Ngulube & Onyancha, 2017; Okeji, 2018; Okonedo, Popoola, 2012). Consequently, such librarians would be unable to meet up with the requirements for promotion. Hence, career stagnation, career dissatisfaction and turnover intentions become an inevitable end. Relatedly, the growing emphasis on quality of publication and not just quantity prompts the need for investigation.

Objective of the Study

The main objective of the research is to investigate the level of research productivity of academic librarians in South-West Nigeria.

Specifically, the study investigated

1. the quality level of research productivity of academic librarians in South-West Nigeria
2. the quality level of research productivity of academic librarians in South-West Nigeria

Research Question

The following research questions guided the study

1. What is the quality level of research productivity academic librarians in South-West Nigeria?
2. What is the quality level of research productivity academic librarians in South-West Nigeria?

Literature Review

Research means a systematic, careful study or investigation of a problem or phenomena. It involves collection of data or information about the problem, drawing conclusion and making recommendations that adds to and advances the frontiers of knowledge. Australian Research Council (2010) defined Research as the use of methodologies for the generation of new educational scientific, economic or social concepts to make for better and clearer understanding. Different studies have proposed different types of indicators for measuring research productivity. Some studies considered quantity of journal articles, conference paper presentations, number of edited works, patents, books and book chapters, licenses, artistic or creative works, monographs, public debates and even commentaries (Creswell, 1986). Rotten (1990) measured RP using technical reports, bulletins, book reviews, presentations and grants. Also, Sax et al (2002) suggested that research productivity can be measured by counting the quantity of published articles produced by faculty, the procedure for the research and research fund attracted within two years. Larivière, Lozano and Gingras (2014) trivialized all other measures of productivity while placing more emphasis on articles published in refereed journals.

Kyvik and Reymer (2017) advocate that the use of outlet of publication is important as it determines obscurity or visibility. Scientific journals are often judged on basic journal standards (e.g., publication timeliness, international editorial conventions, international diversity of authorship, etc. as well as the number of times their articles are cited by other researchers (Garfield, 2006). The Thomson Reuters ISI Web of Science (WoS) and Elsevier's Scopus are renowned indexing agencies that offer a wide coverage of journals, conference proceedings and books. Scopus contains the largest number of peer-reviewed multidisciplinary publications with the following outstanding records: (a) over 5,000 publishers (b) more than 22,800 serial titles (c) above 150,000 books (d) approximately

70,000 main institutional profiles (e) 70 million items (f) 60 million author profiles and (g) 1.4 billion cited references dating back to 1970. The Web of Science provides seamless access to current and retrospective multidisciplinary information from approximately 8,700 of the most prestigious, high impact research journals in the world (Thomson Scientific, n.d).

The quality of data captured by these databases are reputed to have a higher research quality as compared to non-indexed publications and so choosing to submit and publish in journals that are indexed increases the chance of visibility of the research be high and reliable (Amara & Landry, 2012). The major and crucial difference between Web of Science, Scopus and Google Scholar, is in their inclusion criteria. Web of Science and Scopus rely on a set of source selection criteria, applied by expert editors, to decide which journals, conference proceedings, and books the database should index. Whereas, Google Scholar follows an inclusive and automated approach. Google Scholar indexes any scholarly document that its robot crawlers are able to find on the academic web. Each approach has its pros and cons. The selective approach of Web of Science and Scopus produces a curated collection of documents, but is sensitive to biases in the selection criteria. Indeed, evidence has shown that these databases have limited coverage in the areas of Social Sciences and Humanities, literature written in languages other than English, and scholarly documents other than journal articles.

Summarily, there are three popular indices for RP measurement in literature. They are research product outcomes (quantity), impact and reputation (Australian Research Council, 2010; Bazeley, 2010). The most common measurement used as direct measure of research productivity by authors is a summative index of research publication derived from counting peer-reviewed journal publications, conference papers, refereed whole books, and refereed book chapters (Altbach, 2015; Print & Hattie; 1997). Ogunrombi (1991) noted that 80% of the academic librarians in Nigerian universities have faculty status and as faculty, they are expected to justify their status by contributing to the research output of the university (Salaam & Fatokun, 2011; Okeuhie & Uzuegbu, 2012). Research productivity of a university is a reflection of the reputation of the institution. It weighs heavily than other criteria for ranking universities; and academic librarians like other faculty should contribute to that. (Lukeman, Krajnc & Glavic, 2010).

Some factors which constitute obstacles that impede research productivity have been gleaned from literature. These factors add up to the challenges that many academic librarians have to contend with, they affect the capacity of academic librarians in initiating and sustaining research productivity. They include: poor research skills, institutional bottlenecks as regards access to research funds and other supports, unwillingness by more experienced researchers to mentor junior researchers, issues of gender, heavy workloads / roles competing with time to complete research, poor research confidence, inadequate training in research methods, inadequate motivation, unwillingness to source research funding, poor salaries which sometimes leads to moonlighting so as to augment incomes,

poor ICT research infrastructure, inadequate LIS post-graduate schools, inadequate international collaborations, persistent higher education strikes (Baro, Oni & Onyenania, 2009; Ibegbulam & Jacintha, 2016; Obinyan, Aidenojie, Ebunuwele & Amune, 2013).

Research Productivity of Academic Librarians

Following a survey carried out by Atanda and Olasupo (2018) to ascertain the research performance of academic staff in Nigeria's university of Ibadan. The research population consisted of all cadre of lecturers comprising the academic staff at the University of Ibadan, with 1,549 academic staff. A total of 340 respondents were sampled via a multi-stage sampling technique representing 22 % of the overall population. The study found that 73.2% published Summary of Empirical Review in learned journals. 67.9 percent have published chapters in books. 60.9 per cent of respondents published conference papers, 38.4 per cent published books, and just 20.5 per cent had patents. In other words, the research output of faculty at the University of Ibadan was reported as very high in in terms of journal articles, chapters in books and conference papers. The study also found that majority of the faculty at the University of Ibadan rely on three publishing outlets, namely journals, chapters in books and conference proceedings.

In order to learn about the patterns of publishing of university librarians in the US, Blecic, Wiberley, De Groote, Cullars, et al. (2017). conducted bibliometric research. Their research investigated the contribution of US academic librarians to literature in the journal over a span of 10 years (i.e., 2003-2012). They revealed that 43% of LIS publications were published by academic librarians in the US between 2003 and 2012. In another research, Ogbomo (2010) employed the descriptive survey method. The research population included both the LIS department's academic staff and the university library's academic staff at Abraka Delta State University. The research included all sixteen academic librarians and thirteen LIS lecturers from the department. All 29 respondents were provided with a questionnaire. The results indicated that the majority of respondents (58.6 %) did not carry out any research and had not published for two years. The study also showed that most of the librarians surveyed experienced stagnation due to their failure to publish.

Okonedo, Popoola, Emmanuel, and Bamigboye used a correlational design for their research, which included 142 academic librarians from 11 universities in South-West Nigeria (2015). The researchers wanted to see if there was a correlation between research productivity, demographic and self-perception variables. The authors measured research productivity by calculating the number of publications (self-reported) published by the librarians between 2009 and 2014. Using sampling technique, they selected 11 out of 16 public universities from South-West region in Nigeria. The enumerative sampling included all librarians in selected universities. Their analysis showed that librarians' research productivity was significantly high during the period 2009-2014.

Okeji (2018) compiled data from abstracts in CIJE and LISTA abstract databases for bibliometric analysis. The emphasis was solely on publications written by academic librarians in university libraries and library schools in Nigeria. Information was gathered from the author's affiliations' websites. The research covered the years 2000 to 2018. A total of 1,106 papers from the CIJE and LISTA abstract databases were collected from 153 accredited universities at the time of the study. The study found that 35.4% of the respondents published more in journals such as LPP, followed closely by AJLAIS (African Journal of Library, Archive and Information Science) with 6.9% and PNLA Quarterly with 6.1 %. Publications in high ranking or quality journal was reported low as gleaned from the output of respondents in some higher-ranking journals such as Library Hi Tech News 4.8% articles and Library Review with 6.1% articles. The study also found that only a few authors in Nigeria were productive in research publications during the course of the research, and that many of the respondents, despite many years of employment, are yet to be promoted due to inadequate publications.

The study by Tsafe, Chiya and Aminu (2016) considered 16 universities in Nigeria's seven North-Western states. The study employed the purposive sampling technique for the selection of one hundred sixty-five (165) librarians. The study used questionnaire as the tool for the data collection. The majority of respondents (56.9 %) had at least one publication. High-ranking librarians (71.7 %) had more publications than low-ranking librarians (9.1%). The most refereed publishing outlet among most librarians (56.1 %) was journal. The study concluded that just 1 percent (1 %) of the librarians surveyed had written up to 16 papers and the survey also showed that the majority of librarians were not active in research. Akpebu and Walt (2019) conducted research aimed at identifying the enhancers and inhibitors of career progression of librarians in academic libraries based in six academic libraries in Ghana. They conducted a survey and selected only 220 academic librarians. The universities were chosen on the grounds that they had been in existence for more than 10 years and have well-structured career development frameworks. The questionnaire was the tool for the research. The study found that female academic librarians between 41 and 50 years of age were not as productive as men in terms of research productivity. This low research performance was also related to their career stagnation.

Wamala and Ssembatya (2015) conducted research using a population of PhD holders aged 70 or below during the period 1990-2010. The authors selected 534 PhD holders from academic databases, doctoral dissertations submitted in libraries, technical and alumni databases. Data was collected using questionnaires based on a cross-sectional approach. The study showed that the productivity of the respondents was low, as only 3 respondents published between 1 and 20 publications. However, they blamed this on factors such as high workload (teaching and supervision), inconducive research conditions, minimal and insufficient collaborative support and poor leadership.

Methods

The study is quantitative in nature, survey research design was adopted. The population for this study was all the 326 academic librarians working with the South-West, Nigerian Universities. Total enumeration or census method was adopted for this study. This is because the researcher considered the population as not too large to manage and that the use of the total enumeration can eliminate any potential bias that may occur if a sample is selected and allowed for the generalization of the findings from the study. The instrument used for data collection was a self-designed questionnaire. In order to accurately provide answers to the research questions, descriptive statistics were used to interpret data obtained through the questionnaire. Frequency counts, means, ranges and standard deviation were descriptive statistics that were used to explore the two research questions.

Results

The level of research productivity of academic librarians in South-West Nigeria

Table 1: Level of Research Productivity (Quantity)

S/N	Please indicate the level of your research productivity	7 & above	5-6	3-4	1-2	0	Mean	SD
		VH	H	AV	L	VL		
1	Total output within the last three years. The total number of all types of publications (conference papers, book chapters)	76(23.3)	41(12.6)	96(29.4)	86(26.4)	27(8.3)	**3.16**	**1.28**
2	My annual research publications	34(10.4)	41(12.6)	126(38.7)	104(31.8)	21(6.4)	**2.88**	**1.05**
3	Number of peer-reviewed journals publications	100(30.7)	47(14.4)	101(31.0)	46(14.1)	32(9.8)	**3.42**	**1.32**
4	Number of my peer-reviewed conferences proceedings	8(2.5)	24(7.4)	76(23.3)	112(34.4)	106(32.5)	**2.13**	**1.02**
5	Number of my workshop certificates	15(4.6)	14(4.3)	57(17.5)	124(38.0)	166(35.6)	**2.04**	**1.05**
6	Number of peer-reviewed textbooks published	9 (2.8)	5 (1.5)	48 (14.7)	51 (15.6)	213 (65.3)	**1.61**	**0.98**
Average Mean							**2.54**	

VH= Very High; H = High; AV = Average; L = Low; VL = Very Low.

Table 1 shows that research productivity of academic librarians in terms of quantity of publication is low judging by the overall mean score of 2.54 on the scale of 5. This implies that the respondents are not productive in their research endeavours. This implies that the respondents may experience career stagnation due to inadequate number of publications, which may be required for promotion. The total number of all types of publications by academic librarians is on the average judging by the mean score of 3.16 and standard deviation of 1.28. The librarians' annual publication is also on the average as indicated by the mean score of 2.88 and standard deviation of 1.05. An attempt to understand the prevalent format of research output by the respondents reveal that research output in peer-reviewed journals was high as indicated by the mean score of 3.42 and standard deviation of 1.32. This implies that journal publications were the most popular form of research output by the respondents. Followed by peer-reviewed conference proceedings with a mean score of 2.13 and standard deviation of 1.02. The next is peer-reviewed Chapters in books which had a mean score of 2.04 and standard deviation of 1.05. The least popular form of research output was whole book publication with a mean score of 1.61 and standard variation of 0.98. This implies that the majority of the respondents had not published whole books at all. This may be due to the time it will take to write a whole book. It could also mean that books were not weighted as high as journals in terms of scoring during promotion exercise.

What is the level of research productivity of academic librarians in South-West Nigeria (Quality)

Table 2 Level of Research Productivity (Quality)

S/N	Please indicate your research output Indexed by:	Seven and above	5-6	3-4	1-2	0	No Idea about Indexing databases	Mean	SD
		VH	H	AV	L	VL			
1.	Google Scholar	74(22.7)	45(13.8)	56(17.2)	76(23.3)	51(15.6)	24(7.4)	**3.83**	**1.60**
2.	SCOPUS	16(4.9)	23(7.1)	43(13.2)	102(31.3)	114(35.0)	28(8.6)	**2.90**	**1.24**
3.	Web of Science: Thomson Reuters	12(3.7)	5(1.5)	31 (9.5)	72 (22.1)	152(46.6)	54(16.6)	**2.44**	**1.14**

VH= Very High; H = High; AV = Average; L = Low; VL = Very Low.

Table 2 shows that the academic librarians are not producing quality research adjudged by the inclusion of their research in the listed indexing databases which represents quality. Findings on the varied constructs for measuring quality of research productivity show that majority of the respondents had between 1-2 publications indexed in Google scholar with the mean score of 3.83 and standard deviation of 1.60. This is followed by Scopus with a mean score of 2.90 and standard deviation of 1.24. The findings reveal that the preponderance of the respondents had zero (0) publication indexed in the Web of Science which reported the lowest mean score of 2.44 and standard deviation of 1.14. This implies that Google scholar is the most popular indexing database among the academic librarians. Despite its automatic ability to crawl the web and generate the greatest citation score, Google Scholar's credibility is still questioned because it lacks specific regulating authorities that regulate the content's authenticity and reputed not to be as thorough and meticulous as WoS and Scopus. From this result, it is clear that the majority of respondents were not aware of Scopus and WoS database.

The academic librarians in the region exhibit varying levels of research productivity, which is influenced by factors such as institutional support, professional development opportunities, workload, and access to resources. It is evident that while some librarians have been able to maintain a consistent and substantial research output, others face challenges that hinder their potential contribution to knowledge creation and dissemination.

Discussion of Findings

This section provides further discussion on the results obtained from the data analysis. The discussion followed the order in which the analysis appeared, i.e. discussing research questions in the order they were analysed. The findings of the study are discussed as follows:

The findings on the level of research productivity of academic librarians indicated that majority of academic librarians have a low level of research productivity. The findings of this study are consistent with the findings of Ogbomo (2010) which revealed that the majority of respondents they studied (58.6 %) did not carry out any research and had not published during a two-year period. It is also consistent with the study of Okeji (2018) who reported that only a few academic librarian authors in Nigeria were productive in research. Similarly, the finding also corroborates that of Tsafe, Chiya and Aminu (2016) who revealed that majority of librarians they studied (56.9 %) had at least one publication within three years. The findings of this study also conform with the findings of Obinyan, Aidenojie, Ebunuwele and Amune (2013) which found that research performance of women in academics was very low, as majority (98 %) of respondents reported publishing between 1 and 5 articles in three years The finding of this study is however at variance with that of Okonedo, Popoola, Emmanuel and Bamigboye (2015) which revealed that

librarians' research productivity was significantly high during the period 2009-2014. It also contradicts the findings of Obinyan, Aidenojie, Ebunuwele and Amune (2013).

Journals accounted for the highest format/mode of research output published by the respondents. This is followed by conference proceedings and chapters in books. Whole book publication constituted only a minor part of research output. This is consistent with findings of Anyanwu (2013) which revealed that academic librarians from South-East region published mainly in journals. Also, Larivière, Lozano and Gingras (2014) reported that researchers often trivialize all other forms of publication while placing more emphasis on articles published in refereed journals. This could be because academic journals carry more weight in promotion discussions than, conference proceedings, book chapters and whole books. Another reason for this, could be that journals have a relatively quick turnaround as they are published regularly, compared to conference proceedings and books which takes longer timeframes to produce.

In terms of the quality of research productivity, the finding of this study show that the academic librarians were not mindful of the quality of their publications, as shown by very low inclusion of their publication in selected indexing databases. Majority of academic librarians' research publications were indexed by Google scholar. This implies that google scholar was the most popular indexing database among the librarians. This finding is consistent with that of Alordiah, Owamah, Ogbinaka and Alordiah (2020) whose study found that Nigeria's contribution to quality indexed journals is low. It also supports the findings of Ezema et al (2016) which revealed that a huge number of research publications from scientists in developing countries end up in predatory and local journals. This phenomenon could be as a result of the 'publish or perish' mentality which could propel many academic librarians to send their manuscripts to publishers that are not credible but known for rapid publishing with little or no reviews. It could also be as a result of the Google Scholar's robot crawlers which indexes any scholarly document, they find on the academic web whether peer reviewed or not. This has implications, Justin Chisenga (2006) found that much of the research generated from African institutions are not being shared or developed further beyond field and laboratory research. This also implies that very useful and valuable knowledge published in poor quality and invisible outlets may become unexploited or lost. Also, not publishing in quality outlets may cause academic librarians' research to be overlooked and undervalued. The academic librarians were more productive in terms of quantity of publications than quality. At a time when quality of research is being emphasized and increasingly becoming the centre of attention in most universities around the globe, academic librarians should tilt their publications towards producing not just quantity of publications but research that would be reckoned with in terms of quality.

Recommendations:

Based on the findings of this research, several recommendations are put forth to improve the research productivity of academic librarians in South-West Nigeria:
Institutional Support: Universities and libraries should provide adequate support for research activities. This includes allocating dedicated time for research, offering financial incentives for publication, and ensuring access to relevant research resources.

1. Training and Skill Development: Offering training programmes and workshops on research methodologies, academic writing, and scholarly communication can equip academic librarians with the necessary skills to enhance their research productivity.

2. Collaborative Initiatives: Encouraging collaboration between academic librarians and faculty members can lead to interdisciplinary research projects, increasing the impact of research and fostering a culture of cooperation.

3. Resource Provision: Libraries should ensure the availability of up-to-date research materials, databases, and other resources necessary for conducting quality research.
4. Recognition and Reward: Institutions should acknowledge and reward academic librarians for their research contributions, potentially through promotion criteria and recognition within the academic community.

5. Time Management: Academic librarians should be provided with reasonable workloads that allow them to allocate time for both administrative responsibilities and research endeavours.

6. Research Networking: Facilitating opportunities for academic librarians to participate in conferences, seminars, and workshops can help them connect with peers, share experiences, and stay updated on research trends.

7. Mentorship: Establishing mentorship programmes where experienced researchers guide early-career academic librarians can provide valuable guidance and motivation to enhance their research productivity.

Conclusion

The research aimed to assess the research productivity of academic librarians in South-West Nigeria. Through the comprehensive analysis of publication output and outlet of publications, valuable insights have been gained regarding the current state of research productivity among academic librarians in the region. It is evident from the research that fostering a culture of research and providing adequate resources can significantly enhance the research productivity of academic librarians. Collaborative initiatives, both within the library community and with academic departments, can also play a pivotal role in

elevating research outcomes. Furthermore, addressing challenges related to time management and workload allocation could help academic librarians strike a balance between their administrative duties and research pursuits.

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