Research Mentoring as a Predictor of Research Productivity of Academic Librarians Universities in South-South, Nigeria.

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Abstract

Research productivity is an essential criteria for the recognition, promotion and career advancement of librarians. However, previous studies have established low level of research productivity of librarians in South-South, Nigeria making it a subject of concern to the university and library management. While existing studies have analyzed bibliometric data of librarians' publications, some studies have shown that research mentoring can have an effect on research productivity. However, the variable has not been fully measured in the literature to determine its influence on research productivity. Therefore, this study investigated the influence research mentoring (problem identification, literature search, collaboration, research design and time management) on research productivity of academic librarians in universities in South-South, Nigeria.

The study adopted survey research design. The population comprised 229 academic librarians in 30 universities in South-South, Nigeria. Total enumeration sampling technique was used for the study. A structured and validated questionnaire was used for data collection. Cronbach's alpha reliability coefficients for the constructs ranged from 0.82 to 0.88. The response rate was 86.4%. Data were analyzed using descriptive and inferential (simple and multiple regression) statistics at 5% level of significance.

Findings revealed that research mentoring (Adj.R^2 = 0.68, $F(1, 198) = 439.50$, $p < 0.05$) had a significant influence on research productivity. The study concluded that research mentoring had a significant influence on research productivity of academic librarians in universities in South-South, Nigeria. Therefore, it was recommended that the management of universities, should also institutionalize research mentoring programs to enhance research productivity.

Introduction

Academic institutions are created to build future scholars/ professionals in various career paths equipping them with the necessary skills to secure gainful employment. In ensuring that this mission is met, academias engage in teaching, research, and community services. Despite the wide range of academic activities of academic staff in the university system which encompasses teaching, assessing students' performance, taking students on field trips, conducting research, engaging community services, mentoring the students, among others, they are appraised for promotion and career growth primarily by their research productivity (Adetomiwa & Okwilagwe, 2018). This suggests that career progression of academics is largely determined by their research productivity assessed through publications by recognized publishers and peer-reviewed journals.Research productivity commonly refers to the number of publications per researcher. Due to its measurement parameters, research productivity is quite difficult to measure. However, attempts have been made by researchers to come up with very accurate and research indicators but such attempts have only caused an increasing confusion (Abramo & D'Angelo, 2014). It is easier to measure articles published in mainstream scientific journals than books, online and open access publications (Altback, 2014).

Research productivity is a vital element in enhancing the university ranking and, it is an important metric to measure the performance of academic staff. For academic librarians to be productive in research, they ought to be adequately mentored by senior colleagues on important things that might lead to research productivity. Finding a mentor is an integral and important part of plan for career progression, as it aids professionals in identifying the required skills and the psychological support needed for success. Such success in the context of this study is research productivity. Mentoring is focused primarily on the career development of someone less experience in field such as business and academic, (Chopra, Arora and Saint 2018). Mentoring is a developmental partnership in which a more experienced or knowledgeable individual (the mentor) provides guidance, support, and feedback to a less experienced or knowledgeable individual (the mentee) to help them navigate their personal and professional growth. This relationship is built on trust, respect, and mutual learning, with the mentor offering insights, advice, and resources tailored to the mentee's goals and aspirations. In contemporary contexts, mentoring often extends beyond traditional face-to-face interactions, leveraging technology such as virtual platforms, social media, and online communities to facilitate connections and knowledge exchange. Moreover, there is a growing recognition of the importance of diversity

and inclusion in mentoring relationships, with efforts to ensure equitable access to mentoring opportunities for individuals from marginalized or underrepresented backgrounds.

It has been established that research mentorship can predict favorable outcomes, such as higher academic output, less attrition, and enhanced satisfaction with education and/or employment, which could ultimately improve the caliber of the research industry. Studies have indicated that research mentorship is advantageous to both early-career and tenured librarians, and this involves cooperation and peer support (Sassen & Brannon, 2021). Research mentoring is when a junior colleague collaborates with a senior one in research, this would enable the junior colleague to grasp research skills as they undertake the study together. Research collaboration is linked to productivity, according to Sassen and Brannon's (2021) study, investigations showed the rising trend of co-authorship among librarians, which has been between 40% and 50% of research, published in LIS journals over the past 25 years and is continuing to rise. Also, Gray and Garvey (2016) assert that mentoring fosters improved self-awareness and more informed problem-solving and decision-making. It helps to develop wisdom and the capacity to adapt abilities, knowledge, and experience to novel circumstances and procedures.

Although many university libraries have adopted mentorship programmes to help new librarians socialise and advance, only a small number of programmes have been created to encourage librarians' involvement in research. Participants can gain information and expertise from a variety of sources through group peer mentoring (Ackerman, Hunter, & Wilkinson, 2018). In academic libraries, mentoring has been cited as a practical method for managing staff abilities, time, and talent as well as a tool for preparing new and younger staff members for future leadership positions (Ogunrewo & Ngema, 2013). Numerous studies have shown the advantages of mentoring, which include improved research output, quicker academic advancement, and job happiness (Tjan, 2017). The mentee gains knowledge from the mentoring process that they may use at work to further their careers. The mentee and mentor might both grow and change as a result of the encounter, which can elicit various emotions (Allen & Eby, 2011).

There is no gainsaying the fact that research mentoring can help to enhance the research productivity of academic librarians. Drawing from the inescapability of research productivity as a central determinant of career progression, this study seeks to assess the influence of research mentoring on research productivity of academic librarians in universities in South-South, Nigeria.

Statement of the Problem

Research productivity is one of the requirements for career progression for all academic staff, including librarians in Nigerian universities. However, low level of research productivity has been reported among university librarians in Nigeria (Mbachu & Unachukwu, 2022). A study by Umar and Babalola (2021) also found that the level of research productivity of academic staff in universities in North-Eastern Nigeria is very low. This could be attributed to inadequate research mentorship, which in turn impact negatively on their level their research productivity. Since research output is one of the major considerations for promotion and career development of academics, analysing their research productivity is very important because the pressure to publish is not abating hence, examining factors that may lead to increased academic librarians' scholarly productivity is worthwhile.

Adequate research mentoring can guide librarians in their publishing practices, which could enhance their research productivity and career progression. This necessitates inquiry into how mentoring can expose novice librarians to experienced researchers who can provide advice, support, and connections for collaboration. There is a benefit to creating a supportive environment and interacting with librarians who are more experienced and are actively involved in research. Based on the submission of Umar and Kabir (2018) that librarians are lagging behind in publication may be suggestive of poor mentoring. The low level of research productivity of librarians would ultimately result in stagnation on the same rank, frustration, low morale and poor visibility locally and internationally in their field of study.In view of the fact that research productivity may have been researched independently, there seems to be a scarcity or dearth of literature in linking the relationship between research mentoring and research productivity of academic librarians in universities in South-South, Nigeria. This is the gap that this study is aiming to fill. Based on this, the aim of this study is to investigate the influence of research mentoring on research productivity of academic librarians in universities in South-South, Nigeria.

Objectives of the Study

The main objective of the study is to investigate the influence of research mentoring on research productivity of academic librarians in universities in South-South, Nigeria. The specific objectives are to:

    1. find out the research mentoring strategiesof librarians in universities in South-South, Nigeria.

2. Ascertain the level of research productivity of academic librarians in universities in South-South, Nigeria

3. determine the influence of research mentoring on research productivity of academic librarians in universities in South-South, Nigeria.

Research Questions

The research sought to answer the following questions:

1. What are the research mentoring strategies among academic librarians in universities South-South Nigeria?
2. What is the level of research productivity of academic librarians in universities in South-South Nigeria?

Hypotheses

The null hypotheses guided this study and they were tested at 0.05 level of significance and they

are:

1. There is no significant influence of research mentoring on research productivity of academic librarians in universities in South-South, Nigeria.

2.0   Literature Review

2.1   Conceptual Review

2.1.1 Research Productivity

Research is an investigation that utilizes scientific methods to get results. It is the careful study of a subject in order to discover new information or facts about a problem with the aim of providing solution (Uwizeye, Karimi & Thiong'o, 2021). The aim of research is the discovery and development of methods and systems for advancement of human knowledge (Okafor, 2011). Research productivity is a crucial factor for academic staff appointments and promotions. Scholarly publications and community service are required of all academic staff members who wish to advance from one academic position to another; however, the latter carries a higher score. Because of the enormous value attached to research productivity, universities all over the world are rated based on how productive their academic staff are in the aspect of research on a global scale. This has made it mandatory for every institution to include in its condition of service the required number of publications for the promotion of academics depending on the academic position starting from graduate assistant/assistant librarian to professor/university librarian.

In universities, recognition and advancement of individual academic staff members depend largely on the quantity and quality of their research productivity (Adetomiwa and Okwilagwe

2018). Okonedo, Popoola, Emmanuel and Bamigboye (2015) noted that research productivity is often used interchangeably with publication output, publication productivity, research output and sometimes knowledge productivity. Simisaye (2019) defined research productivity as the publications published by academic staff in the research institutes surveyed. Such publications include books, journal articles, chapters in books, conference papers and proceedings, technical reports, patents, scientific peer- review bulletin, occasional papers, monographs, co-authored books, theses/dissertations and Journal publications published.

Aside the use of ordinary publications counts, there are other ways of measuring academic productivity, this include the use of citation analysis for evaluating or ranking performance of research productivity. (Dulle &Minishi-Majanja, 2010). These other ways include adopting measurement scales for different publication types such as referred journals, non-referred journals, textbooks, monographs, books and chapter in books, and using publication length as well as journal reputation. Delello, McWhorter and Marmion (2018) noted that publication and research is now the priority of universities' faculty even in universities that were previously teaching oriented hence the need to invest in quality research and education. Additionally, universities might assess external grants and funding obtained by researchers, which demonstrates the recognition and support their research attracts from funding agencies. Collaborative research and interdisciplinary contributions are also valued, as they showcase a researcher's ability to engage with peers beyond their immediate field.

Concept of Research Mentoring

Mentoring is a term that has Greek roots and means "enduring." The first documented use of the word mentor is in Homer's epic poem, The Odyssey. Mentor was the sage who was entrusted with the duty of grooming Telemachus the son of Odysseus. Mentor is thus considered as being protective, wise, and trusted to the growth and development of Telemachus. Therefore, a mentor is seen as a trusted counselor who accepts a guiding role in a younger or less experienced person. Mentor is characterized as a helper, teacher, and adviser. According to Yoder (1990), historically significant forms of mentoring include discipleship traditions practiced in Hindu and Christian churches, and apprenticing under the medieval guild system.

The Merriam- Webster (2024) dictionary defines a mentor as a trusted counselor or guide. Oxford learner online dictionary (2024) defines mentoring as a progression whereby a knowledgeable person in an organization or educational institution counsels and trains new students or employees; regular meetings between mentor and trainee help guide young engineers

through their early years. Mentoring can be defined as the process of helping a less experienced person to improve their skills, typically in their job, by providing support and guidance. As reported by Pritchard (2017), mentoring is relationship-oriented and takes place in a setting where the mentee can openly discuss both personal and professional matters. Gipson (2019) equally added that modern mentoring strategies that are effectively implemented are crucial for easing employee transitions into new jobs, increasing employee retention, and promoting a culture of teamwork throughout the entire organization. According to kram and Lynn (1985), mentors provide young adults with career-enhancing functions, such as sponsorship, coaching, facilitating exposure and visibility, and offering challenging work or protection, all of which help the younger person to establish a role in the organization, learn the ropes, and prepare for advancement. Kram (1985) noted that mentoring involves an intense relationship whereby a senior or more experienced person (the mentor) provides two functions for a junior person (the protégé), one function being advice or modeling about career development behaviors and the second function being personal support, especially psychosocial support Mentoring in organizations have been described as a viable vehicle for the effective management of employees' capabilities, time and talent as well as a tool for grooming new and junior employees for future leadership roles (Ogunrewo & Ngema, 2013). According to Burke and Tumbleson (2019), mentorship is beneficial at all professional stages and is not a one-size-fits-all experience. This implies that at any given stage in one's career, mentoring from a more experience person can improve one's productivity.

According to ldoko, Ugwuanyi and Osadebe (2016), "mentoring in librarianship is a process of learning and development based on a personal relationship in which an experienced librarian called a mentor helps a new librarian called mentee to develop as a professional and achieve professional goals. Hence, it goes beyond acquiring skills and/or taking on challenges in the workplace, but rather focuses on helping the individual develop into the best version of them-selves (Hussey and Campbell-Meier, 2021). Mentoring is a professional relationship helping someone figure out how to navigate a career. Mentoring may be part of a formal, required, dyadic experience, but so may it arise informally among peers (Williams, 2019). Howland (2018) asserts that mentoring offers numerous advantages for libraries, librarians, and patrons. Additionally, he said that the development of mentoring relationships has been shown to be one of the most crucial elements in the retention, advancement, and long-term success of librarians.

Research mentoring has historically been described as the process by which early career researchers learn the norms and rules of their academic environments, develop and strengthen

their research skills, and acquire the values and behaviors necessary to further their careers (Mathews, 2003; Keyser et al., 2008; Lumpkin, 2011; Rath, 2012). This is often accomplished through a partnership between a less experienced researcher, known as the mentee, and a more experienced researcher, known as the mentor (Savage, Karp, & Logue, 2004; Sorcinelli & Yun, 2007; Keyser et al., 2008; Mullen & Hutinger, 2008; ;Xu & Payne, 2014; Bean, Lucas, & Hyers, 2014)

Methodology

Survey research design was adopted for the study. population of the study was drawn from 229 librarians working in 30 (federal, state and private) universities in South-South, Nigeria .The total enumeration sampling was used to include the 229 academic librarians working in university libraries in South-South zone of Nigeria.However, structured and validated questionnaire was used to collect data. The research instrument was subjected to reliability and validity test. The Cronbach's alpha reliability coefficients for the constructs ranged from 0.82 to 0.88 while the return rate of 86.4% of research instrument was achieved. Data were analyzed using descriptive and inferential statistics. The inferential statistics comprised simple and multiple regression.

Data Analysis, Results and Discussion of Finding

Research Question 1: What is the level of research productivity of academic librarians in universities in South-South Nigeria?

Table 1.

	VH (4) 5-6	H (3) 3-4	L(2) 1-2	VL(1) 0	Mean	Std. Deviation
Quantity (number of published materials in the last three years)						
Textbooks	0 (0%)	5(2.5%)	24 (12.1)	169(85.4%)	1.17	0.44
Book chapters	4 (2%)	53(26.8)	36 (18.2)	105(53.0%)	1.79	0.91
Co- authored textbooks	2(1%)	25(12.6)	10 (5.1)	161(81.3%)	1.33	0.73

Journals articles	50 (25.3%)	114 (57.6%)	5(2.5)	29 (14.6%)	2.93	0.93
Monographs	32 (16.2%)	16(8.1%)	62 (31.3)	88 (44.4%)	1.96	1.08
Conference proceedings	81(40.9%)	44(22.2)	36 (18.2)	37(18.7)	2.85	1.15
Technical reports	58(29.3%)	41(20.7)	52 (26.3)	47 (23.7%)	2.56	1.15
Grand mean					**2.08**	**0.58**
Quality (published in SCOPUS, Web of Science, Google scholar)						
Textbooks	25 (12.6%)	7 (3.5%)	7 (3.5)	139 (70.2%)	1.59	1.04
Book chapters	57(28.8%)	7 (3.5%)	7 (3.5)	127 (64.1%)	1.97	1.36
Co-authored textbooks	57(28.8%)	7 (3.5%)	7 (3.5)	127 (64.1%)	1.97	1.36
Journal articles	69 (34.8%)	71(35.9)	12 (6.1)	46(23.2)	2.82	1.15
Grand Mean					**2.09**	**0.98**
Overall mean					**2.09**	**0.73**

Decision Rule: 1.0-1.74 = Very low; 1.75-2.49 = Low; 2.50-3.24 = High; 3.25-4.0 = Very high

Table 1 revealed that the overall mean score for research productivity among the surveyed academic librarians is 2.09 out of 4, which falls in the low range based on the provided decision rule scale. This indicates that the librarians' self-reported research output over the past 3 years is fairly low across the different publication types measured. Looking at the quantity dimension, journal articles had the highest productivity with a mean of 2.93 and this was followed by

conference proceedings which had a mean of 2.85 . This suggests librarians are actively engaged in producing journal articles and conference papers, which allow for sharing scholarly work with peers at professional events. However, other publication types showed lower output , monographs (1.96), technical reports (2.56), book chapters (1.78), co-authored textbooks (1.33), and textbooks (1.17). The low means for books and book chapters indicates limited involvement in long-form publication.

For quality, the highest score was journal articles (mean 2.82) published in reputable databases/indexes. This shows that librarians are producing some manuscripts in visible scholarly journals. However, scores were lower for other formats - book chapters (1.97), co-authored textbooks (1.97), and textbooks (1.56) in prestigious indexes. This implies librarians need to aim for higher quality journals for on-line publications.

Research Question 2: What are the research mentoring strategies experienced by academic librarians in universities in South-South, Nigeria?

Table 2.
Research Mentoring

	Strongly Agree (4)	Agree (3)	Disagree (2)	Strongly Disagree (1)	Mean	Std.
Mentoring Styles Prevalent in Your Library					**2.65**	**0.83**
Formal	19 (9.6%)	60 (30.3%)	38 (18.2%)	83 (41.29%)	2.1	1.05
Informal	93 (47.0%)	64 (32.3%)	23 (11.6%)	18 (15.2%)	3.2	0.96
Problem Identification					**3.25**	**0.77**
My mentor assists in topic choice	86 (43.4%)	93 (46.8%)	12 (6.3%)	7 (3.4%)	3.30	0.74

My mentor helps in refining research questions	87 (43.9%)	86 (43.4%)	20 (10.2%)	5 (2.4%)	3.29	0.75
My mentor gives me literature review guidance	80 (40.5%)	91 (45.9%)	17 (8.8%)	10 (4.9%)	3.22	0.80
My mentor helps in identifying research gaps	78 (39.5%)	90 (45.4%)	21 (10.7%)	9 (4.4%)	3.20	0.80
My mentor assists in defining research objectives	80 (40.4%)	90 (45.5%)	20 (10.1%)	8 (4.0%)	3.20	0.80
My mentor assists me setting research scope	77 (38.9%)	92 (46.5%)	20 (10.1%)	9 (4.5%)	3.20	0.79
My mentor helps out in ethical consideration	79 (39.9%)	89 (44.9%)	21 (10.6%)	9 (4.5%)	3.20	0.80
Literature search					**2.99**	**1.22**
My mentor helps me to find relevant library resources for my research	93 (47%)	20 (10.1%)	37 (18.7%)	48 (24.2%)	2.80	1.26
My mentor directs me to databases for my research	121 (61.1%)	16 (8.1%)	16 (8.1%)	45 (22.7%)	3.08	1.27
My mentor assist me with online resources	105 (53.0%)	31 (15.7%)	17 (8.6%)	45 (22.7%)	2.99	1.23
My mentor assist me with data sources	115 (58.1%)	22 (11.1%)	16 (8.1%)	45 (22.7%)	3.04	1.26

My mentor teaches me how to find and access funding opportunities	100 (50.5%)	37 (18.7%)	16 (8.1%)	45 (22.7%)	2.97	1.23
My mentor offers me expert assistance in finding relevant resources	121 (61.1%)	16 (8.1%)	16 (8.1%)	45 (22.7%)	3.07	1.27
Research Design					**3.18**	**0.80**
My mentor helps me in understanding research goals	79 (39.9%)	96 (48.5%)	15 (7.6%)	8 (4.0%)	3.24	0.76
My mentor assist me in methodology selection	75 (37.9%)	97 (49.0%)	15 (7.6%)	11 (5.6%)	3.18	0.81
My mentor teaches and helps me with sampling strategies	78 (39.4%)	89 (44.9%)	19 (9.6%)	12 (6.1%)	3.17	0.85
My mentor aids me with useful data collection techniques	64 (32.3%)	100 (50.5%)	27 (13.6%)	7 (3.5%)	3.11	0.78
Collaboration					**3.19**	**0.90**
My mentor aids me in identifying collaborators	73 (36.9%)	97 (49.0%)	20 (10.1%)	8 (4.0%)	3.18	0.80
My mentor advocates for professional networking	76 (38.4%)	93 (47.0%)	22 (11.1%)	7 (3.5%)	3.21	0.78
My mentor encourages	71	95	24	8 (4.0%)	3.15	0.80

interdisciplinary collaboration	(35.9%)	(48.0%)	(12.1%)		
My mentor encourages global collaboration	77 (38.9%)	89 (44.9%)	23 (11.6%)	9 (4.5%)	3.17	0.83
My mentor helps to improve my communication skills in order to collaborate	79 (39.9%)	91 (46.0%)	21 (10.6%)	7 (3.5%)	3.22	0.79
My mentor encourages team building	75 (37.9%)	94 (47.5%)	22 (11.1%)	7 (3.5%)	3.19	0.79
My mentor advocates for resource sharing with potential collaborators	78 (39.4%)	92 (46.5%)	20 (10.1%)	8 (4.0%)	3.21	0.80
My mentor encourages me to engage in peer review processes	80 (40.4%)	90 (45.5%)	20 (10.1%)	8 (4.0%)	3.20	0.80
Time management					**3.21**	**0.76**
My mentor helps me in setting priorities when it comes to research	94 (47.5%)	75 (37.9%)	20 (10.1%)	9 (4.5%)	3.27	0.84
My mentor aids in project planning	79 (39.9%)	87 (43.9%)	31 (15.7%)	1 (0.5%)	3.22	0.74
My mentor guides me in goal setting	81 (40.9%)	85 (42.9%)	24 (12.1%)	8 (4.0%)	3.20	0.82

My mentor teaches me task scheduling	71 (35.9%)	89 (44.9%)	33 (16.7%)	5 (2.5%)	3.13	0.79
My mentor guides me to avoid procrastination	77 (38.9%)	86 (43.4%)	27 (13.6%)	8 (4.0%)	3.18	0.80
My mentor guides me in balancing other responsibilities	73 (36.9%)	92 (46.5%)	24 (12.1%)	9 (4.5%)	3.16	0.82
My mentor helps in creating timelines and milestones for a project	79 (39.9%)	85 (42.9%)	25 (12.6%)	9 (4.5%)	3.19	0.83

Decision Rule: 1.0-1.74 = Strongly disagree; 1.75-2.49 = Disagree; 2.50-3.24 = Agree; 3.25-4.0 = Strongly agree

From Table 2, formal mentoring received a mean score of 2.1, indicating a relatively low level of agreement among respondents. Informal mentoring received a higher mean score of 3.2, suggesting a stronger agreement among respondents regarding its prevalence. Based on the results presented in this table, mentors seem to have the most influence when it comes to "Problem Identification", which had the highest mean score of ($\overline{x}$ =3.25) out of 4. This indicates that on average, respondents agreed that their mentors provided helpful assistance with topic selection ($\overline{x}$ = 3.30), refining research questions ($\overline{x}$ = 3.29), literature review guidance ($\overline{x}$ = 3.22), identifying research gaps (3.20), defining research objectives (3.20), and setting the research scope ($\overline{x}$ =3.20). By aiding mentees in narrowing down their focus and scoping their inquiry, mentors appear to provide significant value in shaping effective research projects.

Additionally, "literature search" had a lower mean of 2.99, indicating mentors were seen as moderately helpful with assisting in locating research materials, databases, datasets, and funding opportunities. The "Other Aspects" category related to publication support also had a lower mean of 2.93, suggesting mentors were viewed as moderately impactful when it came to goals, writing feedback, and publication recommendations.

In summary, with a problem identification mean of 3.25, the data shows mentees viewed this as the area where mentors provided the most helpful guidance and influence on average. Their assistance with scoping and focusing research projects appears to be their most valuable contribution according to this study. The overall grand mean score is 3.12 out of 4, indicating generally positive assessments of research mentoring across the various categories.

Test of hypothesis

HypothesisOne: Research Mentoring has no significant influence on research productivity of academic librarians in universities in South-South, Nigeria.

In order to test hypothesis one, the researcher employed linear regression analysis. The data for Research Mentoring and Research Productivity of academic librarians in universities in South-South, Nigeria.were generated by adding scores of responses of all items for each of the variables. The results of the analysis are presented in Table 3

Table 4.3

Simple Linear Regression Analysis of Research Mentoring andResearch Productivity

Predictors	B	Std. Error	Beta (β)	T	P	R2	Adj. R2	F	ANOVA (Sig.)
(Constant)	0.333	0.135		2.467	0.000	0.684	0.682	439.502	0.000
Research mentoring	0.869	0.041	.827	20.964	0.000				
Dependent Variable: Research Productivity Predictor: (Constant), Research Mentoring F-Statistics = 1, 198 T-Statistics = 20.964 DF = 197									

Source: Field Survey Results, 2024

The results presented in Table 3 show that research mentoring has a positive and significant influence on research productivity of academic librarians in universities in South-South, Nigeria ($Adj.R^2$= 0.682, $F(1, 198) = 439.502$, $p < 0.05$). The regression output revealed that research mentoring predictor variable is significant because $p < 0.05$. The result further shows an

adjusted R^2 value of 0.682 which reveals that there is a 68.2% positive influence of research mentoring on research productivity. The F statistics of 439.502 of research mentoringis statistically significant at $p < 0.05$, this further gives the empirical evidence that research mentoring has significant influence on research productivity The $\beta = 0.869$ and t-value of 20.964 affirms that the regression coefficient for research mentoring is statistically significant, this further gives the empirical evidence that research mentoring has a significant influence on research productivity. Hence, the null hypothesis (H_01) which states that Research Mentoring has no significant influence on research productivity of academic librarians in universities in South-South, Nigeria was rejected. The hypothesis is therefore restated as: Research Mentoring has a positive significant influence on research productivity of academic librarians in universities in South-South, Nigeria.

Discussion of Findings

The study examined research mentoring and research productivity of academic librarians in universities in South-South, Nigeria. Two research questions and one hypotheses were developed for the study with the intention to determine how the independent variable (Research mentoring) influenced the dependent variable (research productivity) of academic librarians in universities in South-South, Nigeria.

Research question one sought to determine the level of research productivity of academic librarians in universities in South-South Nigeria. The finding of the study revealed that there was a low level research productivity among academic librarians in universities in South-South Nigeria. The result is supported by the submission of Shonhe (2020) who reported a low level of research productivity in CPD of librarians. With the low level of research productivity of librarians as found in this study, it is assumed to be directly possible for the present study to fully align with the earlier study of Mbachu & Unachukwu, (2022) which investigated the research output of academics in public and private universities in South-East, Nigeria and found the level of research productivity of academics to be low. This finding is in consonance with Umar and Babalola (2021) who found that the level of research productivity of academic staff in universities in North-Eastern Nigeria is very low. This finding corroborates with Lawal and Olawale (2020) who reported that research productivity of librarians in Bowen University is low. In the same vein, this finding agrees with the study of Adenekan and Solomon (2022) who reported a low level of research productivity of librarians in Ambrose Alli University Library. Furthermore, the finding of this study negates the findings Oyeyemi, Ejakpovi, Oyeyemi, and

Adeniji (2019) who examined the research output of the academic staff of a college of medical sciences at a Nigerian university and found research output to be high.

The outcome of this present study on research question two revealed that research mentoring strategies are adopted and implemented in academic libraries in South-South, Nigeria. The findings of the study showed that informal mentoring was more in common among academic librarians than formal mentoring. This is in line with the studies by James, Rayner and Bruno (2015) who investigated whether informal mentoring is of value and on par with formal mentoring in academic librarianship and the finding of their research revealed that informal mentoring could be a very practical model for libraries. The findings of the study is in consonance with Adetayo, Oketunji, and Hamzat (2022) who found out that informal mentoring is more common among librarians. Aside the strategies of mentoring, the study also investigated the research mentoring experiences of academic librarians. The study found out that problem identification was one of the aspects mentees found mentors to be very relevant and this support the study of Barnes et al. (2012) that emphasized the value of mentor assistance with refining research ideas in the early stages. Their feedback improved research quality.

Conclusion

The study investigated the   research mentoring experiencesand research productivity among academic librarians in universities across South-South Nigeria. The results provided empirical and statistical evidence on the influence research mentoring, and their association with research productivity outcomes among this population of academic librarians. The study found out that academic librarians in South-South Nigeria experience some form of mentoring for their career growth which is usually hinged on their research productivity. Formal research mentoring opportunities were limited and informal research style was more available among the surveyed librarians.The study concludes that access to quality mentoring influence the research productivity of academic librarians in South-South Nigerian universities. Further research can build on these results to promote evidence-based initiatives aimed at   mentoring provisionand overall research culture for increased research productivity of academic librarians in Nigeria.

Recommendations

The following recommendations were made based on the findings:

Research mentoring opportunities are currently inadequate for university librarians. Universities should to institute formal mentoring programs to pair junior librarians with senior faculty mentors to guide research skill development.

Librarians should be supported by university and library management to attend academic writing and research methodology workshops to enhance their research acumen and publication outcomes.

University libraries should to increase institutional support for librarian scholarship through research seed grants, travel funding, and mechanisms to reward publications. Lastly, academic associations should offer writing retreats, manuscript clinics, and opportunities for collaborative projects to increase librarians' publication output.

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