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INFORMATION PLANNING SKILLS AND THE RESEARCH OUTPUT OF ACADEMIC LIBRARIANS IN UNIVERSITIES IN SOUTH-SOUTH GEOPOLITICAL ZONE OF NIGERIA

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Abstract

This study investigated the relationship between information planning skills and the research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria with corresponding specific objective, research question, and research hypothesis. To effectively drive the study two theories were adopted. The theory of social cultural learning for the independent variable(s) (information planning skills), and the theory of self-efficacy for the dependent variable (research output of academic librarians). More so, conceptual review of literature on information planning skills and research out were carried, and specific empirical review of literature with extrinsic similarity and dissimilarity to the study was also done. The study adopted the correlational research design as the research design while the study area was South-South Geopolitical Zone of Nigeria. The population of study comprised of 252 academic librarians from 14 libraries and faculties. The census technique was used as the sampling technique with a sampling size of 252. The researcher-developed questionnaire entitled: “Information Planning Skills and the Research Output of Academic Librarians Questionnaire (IPSROALQ)” was used to collect data while the reliability test results using Cronbach Alpha formula in SPSS showed an average coefficient of .79 which signified that the instrument was reliable for the study. Data was collected from the various universities by the researchers and their trained assistants by following the requisite ethical procedures. The data collected was analysed using frequencies and percentages for the research question, while the test of hypothesis at ≤ 0.05 level of significant was carried with Chi-Square Test of Independence. The result showed that information planning skills have positive significant relationship with the research output of academic librarians with p value = 0.00, and Phi coefficient of 2.62 indicating of very large extent of positive relationship. In conclusion, it was recommended that the National University commission should make proficient utilization of information literacy skills by academic librarians as part of the requirement to assess their suitability for performance within the scholarly communities. Also, the university management should consider constant information literacy skills programs to improve the literacy skill of the academic staff to be able to carry out sound and rich research output.

INTRODUCTION

Academic planning in universities are carried out to enable the university to position itself for sustainable success in the future, gain efficiencies in the short term, match its academic offerings with the needs of learners, and identify and commit to research priorities. In Nigeria, academics in any higher institutions, especially the universities do not only involve in academic planning but are given time and opportunity to carry out researches that will help to create knowledge and share the acquired knowledge in the drive towards professional development. . Nevertheless, part of the core

function of academic librarians as academics in the university is research and teaching is to produce trained human resources for academic and social development. This function requires adequate planning and tact. This effort demands the use of a modern skill set such as information planning skill.

Information planning Skill (IPS) is used by academic librarians (AL) to develop a structured approach to assist the AL to establish an arrangement to satisfy short and long-term information requirements. The AL uses IPS to arrange research questions clearly and in an appropriate language and to define search strategies by using appropriate keywords and concepts to identify controlled vocabularies and taxonomies to aid in searching and develop specialist search tools that will be adequate for individual needs (Bartol *et al.*, 2018). In this context, an AL can construct strategies for locating information and data. Furthermore, an AL uses IPS to investigate the range of searching techniques available and the differences between search tools. IPS enables the AL to understand why complex search strategies can make a difference to the breadth and depth of information found, and the need to develop approaches to searching such that the new tools are sought for in each new question (Durodolu, 2018). Nevertheless, to support the planning of the research work to be more fully inclusive, an AL requires information planning skills to assemble available facts with regards to objective information, including demographics, stakeholders' perspectives, supporting and contrary opinions of other authors, and best practices. More so, at the centre of intellectual and scholarly research such as universities and other higher institutions of learning, academic librarians are expected to carry out researches that are capable of solving certain observed challenges in librarianship (Gabbay and Shoham, 2019). Most of these researches are published in journals, textbooks, working papers, technical reports, conference papers, and other scholarly materials which are consulted on regular basis to provide solutions to issues that might pose problems in the profession. An academic librarian is recognized and respected through the quality and quantity of research works published. These researches carried out are the research output.

Research output (RO) can be referred to as the effort that has been investigated upon and published in different formats such as journals, technical reports, working papers, books, book chapters, monographs, articles, bulletin, short communication papers, conference papers, patents, standards, indexes, abstracts, and bibliographies. To be competitive in the academic environment, librarians, like other faculty members, have received more and more pressure to carry out research and to show the records of publications. Like other universities worldwide, academic librarians working in tertiary institutions, especially universities, must fulfill the research and publication requirements for promotion and tenure (Adeyemi, 2021). Pressure to publish, which has increased over recent years, may cause some changes in the library literature, as academic librarians strive to meet this requirement. The number of publications an author has published is the first criteria for assessing a researcher's output. RO is the ability of the researcher to use his/her intelligent quotient (IQ) to collect, modify, critically analyse and utilise information and come out with reliable results that will help in the advancement of knowledge. Research output enables the researchers to be recognized nationally and internationally through the qualitative studies carried out. Research output is used as a yardstick for measuring success in an academic circle which in turn may lead to promotion and probably an increase in salary. RO is not only meant for solving practical problems but also provides opportunities in acquiring new ideas that will help to improve human understanding, social, economic, and cultural phenomena. In this era of the knowledge economy, it is satisfactory that research output shows an important role in promoting the prosperity of a nation and its citizens. Qualitative research can only be carried out with qualitative information resources, and without information literacy skills for successful

information resource retrieval, academic librarians cannot carry out qualitative research. Core among the information literacy skills required for academic planning and to foster research output is information planning skill.

Statement of the problem

Information planning skill (IPS) is essential to develop structured approach in meeting the information needs of academic librarians' research output. IPS can assist academic librarians to define search strategies by using appropriate keywords and concepts to identify controlled vocabularies and taxonomies to aid in searching and develop specialist search tools that will be adequate for individual academic librarian's needs in the research cycle. Poor planning can have negative impact on the integrity of research because it can be tempting to try to compensate for a lack of proper planning by cutting corners and bending a few rules. However, the use of information planning skill in research output has been found to be a complex and challenging task. The employment of IPS requires integration of structured techniques in information seeking and evaluation for the research process. This approach has been observed by Okiki (2013) as challenging for academic librarians, and has affected the quality of their research output. More so, any lapse in proper planning of how to meet the information needs of a research work by academic librarians will affect the quality, and integrity of the research output. In day to day work, lack of self discipline and planning constitutes a major barrier for productivity. In research these barriers can inhibit the information needs of an academic librarian. These information needs represent gaps in the current knowledge of the user. In fact, the information needs a planner. It was against this background that this study was carried out to find the relationship between information planning skill and the research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria.

Purpose of the study

The overall objective was to determine the extent to which information planning skill relates to the research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria.

Research question

The study provided answer to the following research question: To what extent does information planning skill relates to the research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria?

Research Hypotheses

The following null hypothesis was tested at 0.05 level of significance: There is no extensive significant relationship between information planning skill and academic librarians' research output in universities in South-South Geopolitical Zone of Nigeria.

Significance of the Study

This study would have immense benefits on the major stakeholders in the academic environment such as the information literacy providers, academic librarians, academic libraries, other academics, and researchers in the universities, and the universities management. The results of this study provides platform for information literacy providers to take logical decision to facilitate information literacy. Academic libraries and librarians will benefit from this study as it has created the robust atmosphere for institutional decision making in terms of setting up library outreach centres for information literacy, and enabling academics to invest more on developing information planning skill as a means towards unlocking great opportunities in research output.

For academics, the findings of this study would highlight the necessary information planning skills that are needed for research output. It would expose the skills

that the academics need, especially academic librarians, whether they have it or not, which would now encourage them to acquire the necessary skills that would enable them to produce high-quality research work that could meet international standards, and as such would help to raise their status and that of the institution's standard to which they belong.

This research will contribute to theory related to library services for academic librarians as well as practice related to planning specific library services and library instruction for diverse groups of library users. This study may prove significant in contributing to the overlooked area of research related to the information literacy needs of academic librarians. The findings of the study can be used to make recommendations about future planning for library outreach as well as the utilization and delivery of library services by academic librarians. The outcome of this research can also be useful in providing insights that academic librarians can benefit from in creating and developing customized support and library services for different groups of users and addressing related knowledge gaps and also to increase their research productivity. Moreover, the findings can help training units of academic libraries to see specific information literacy needs of librarians and reform their in-service training programs accordingly. In addition, the information systems and utilities can be better designed in light of the information gathering skill and preferences of academic librarians.

Scope of the Study

This study focused on the extent to which information planning skill relates to the research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria. It covered the information planning skills variables, and their relationship with the research output of the academic librarians. This study covered the academic librarians in the federal and state universities in Akwa Ibom State, Cross River State, Rivers State, Bayelsa State, Delta State, and Edo State in the faculties and libraries. A total of fourteen (14) universities were covered in this study.

REVIEW OF LITERATURE

Theoretical Framework

This study adopted the Lev Vygotsky theory of sociocultural learning for the independent variable(s) (information planning skill) and the Albert Bandura theory of self-efficacy for the dependent variable (research output of academic librarians).

The Theory of Sociocultural Learning (Vygotsky, 1934).

The theory of sociocultural learning was propounded by Lev Vygotsky in 1934 and the theory of socio cultural learning posits that "learning has its basis in interacting with other people, once this has occurred the information is then integrated on the individual level". The sociocultural standpoint on learning establishes the relationship between individuals and various forms of collective practices. For example, a student is part of a university programme, which in turn makes part of a discipline which is situated in a specific university; a librarian is active in a place of work and is at the same time a member of an occupational group. Practices are shaped through interaction between tools and people and, at the same time, the meaning of these tools varies across different practices. While people always act concerning the tools that are accessible within a practice these tools are reshaped through a practice's repeated activities. Tools and practices are thus neither static nor predetermined; as collective resources, they are always dynamic and developing. Hence, within the context of this study, these tools as stated above are information planning skills and the practice is academic librarianship. Thus, tools are not neutral to academic librarianship activities; they are impregnated with perspectives, norms, and values that mediate understanding of the academic world. For

information literacy education, this implies that it is important to reveal and make explicit the perspectives, values, and beliefs connected to specific skills for information seeking, and how the application and understanding of these skills differ in different practices.

This theory frames the study because it explains not just how the academic librarian can use information planning skills to influence the output of their research activities, but also increase research output productively.

The Theory of Self-efficacy (Bandura, 1977).

The theory of self-efficacy was propounded by Albert Bandura in 1977, and the theory of self-efficacy posits that “seeing people similar to oneself succeed by sustained effort raises the observers’ beliefs that they too possess the capabilities to master comparable activities to succeed”. Perceived self-efficacy is defined as people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves, and behave. Such beliefs produce these diverse effects through four major processes. They include cognitive, motivational, affective, and selection processes.

Academic librarians can use self-efficacy judgments because of the likely prediction of success in research outputs. Overall, self-efficacy is positively and strongly related to the research output of academic librarians because an academic librarian understands that using information planning skills effectively in research work will lead to positive outcomes, therefore, they will become self-efficacious through cognitive, motivational, affective, and selection processes, consequently, taking responsibilities for their actions and inactions and employing the required resources to achieve the desired results in their research output. Self-efficacy theory in this study implies that university management should provide accurate descriptions of tasks and provide clear and concise instructions and the necessary supporting elements for academics especially academic librarians to be successful in the pursuit of research output.

This theory is also related to this study as it provides an understanding of various attributes and efforts required of a person to succeed in a job. It measures efficiency on the job as a product of personal concerted efforts and influence from immediate work environments. The self-efficacy theory showed that if academic librarians believe in their ability to succeed in specific situations or accomplish a task such as the research works, then develop skills that are exclusively or primarily within a social group and get information clues from various sources through self-efficacious activities their research output will yield maximum returns. Furthermore, with the proper articulation of self-efficacy ideals, academic librarians will be better trained, make better choices on the job and overall develop improved efforts towards achieving quality and productive research output.

Conceptual framework

The Concept of Information Planning Skill (IPS) and Research Output of Academic Librarians (AL)

Information planning skill (IPS) is an information literacy skill used in constructing techniques for locating information and data. According to Okoye and Ejikeme (2011) with IPS academic librarians understand the range of searching techniques available for finding information, and the differences between search tools, recognising and limitations of search tools usage. AL as researchers plays a key role in providing data for decision-making within higher education institutions, which includes data to support academic planning. AL also provides data for public accountability and government steering which can result in mechanisms of planning, quality, and funding of research work. This can be achieved by exploring shifts in LIS practices that support academic planning. These shifts move beyond merely producing research outputs to meet the minimum research output

requirements, towards enriched research, which include interpreted and contextualised institutional intelligence (McMillan and Schumacher, 2010).

Information planning skill (IPS) is a tool for supporting the various information processes that are conducted in academic research planning processes. In developing these systems, different aspects are considered by AL regarding the characteristics of the research problems, the required processes to solve these problems, and the main feature of the information that is needed, processed or produced in these processes. In addition, this information is processed and produced by humans. Hence, the characteristics of the human processing of information in general and especially in planning and decision-making should also be considered (Botha, 2015).

Furthermore, complex research planning situations in Library and Information Science (LIS) have specific characteristics that distinguish such a situation from a normal one. Calderon and Webber (2015) argued that a complex situation is not a repetitive task; there are a variety of indigenous and exogenous interconnections and dynamics that influence the subject matter of information planning and the results of the planned actions. In such a situation the solution options are not given or well known in advance. They could be generated. For instance, in large-scale LIS research handling complex information planning tasks is usually conducted in a collaborative process among a group of researchers or experts from different disciplines. In addition, information in these situations is characterized by being imperfect and uncertain. Bearing in mind these characteristics of complex planning situations, collaborative planning processes, and planning information on one hand, and on the other hand witnessing the fast-evolving world of information and communication technology, which introduces innovations and opens new opportunities, it is the AL as information planners' task to think about the requirements of the different tasks in academic research process planning, then to explore the potentials of the new technology and to develop tools such as IPS that meet the requirements of such situations. However, it is not enough to utilize the new technology by dressing up traditional concepts of the use of information with a new technology facade (Okiki and Asiru, 2011). The new technology encourages exploring new forms of communication and new conceptual frameworks, which consequently leads to a more desirable and effective use of information in academic research output.

Raazi and Murray (2019) argued that while the desirability for academic research planning had increased, its meaning remained imprecise and conceptually ambiguous. Raazi and Murray asserted the importance of assessing values and assumptions, clarifying objectives, collecting data, determining institutional priorities and strategies for implementation, and engaging in a continuous and open planning process within the scholarly communities. Academic planning is planning for the provision of, and resource allocation for, the academic research endeavours of an institution (Lange *et al.*, 2013). The process of information planning in academic research by AL requires the need to revise keywords and adapt search strategies according to the resources available and/or found. The value of controlled vocabularies and taxonomies in searching is emphasised by not relying always on familiar resources.

Calderon and Webber (2015) identified several challenges that require information and data planning and analysis, including the increasing expectations of higher education's contribution to economic development and the continued evolution of institutions of higher education into complex organisations. For higher education institutions to remain relevant in a globalised world there is a need to use data and information to draw inferences to support decision-making. Creswell (2012) argued that by creating a culture of evidence, the role of academic research practice could shift from providing data for mandatory reporting to a more outcomes-orientated approach of information planning in

which data and information are provided for the internal functioning of the institutions in addition to meeting external obligations. A culture of evidence and continuous improvement using information planning skills is necessary to achieve the outcomes for successful research output by AL. Quality research improves the accreditation status, therefore, creates an opportunity for institutional researchers to provide more research-based evidence solutions (Calderon and Mathies, 2013). Swan *et al.*, (2015) suggested that AL researchers could play several roles in support of research programme planning, including the provision of evidence emanating from the identification of specialist search tools appropriate to each information need, and from data relating to course and student levels, and from the assessment of faculty performance in teaching, scholarship research and service. By becoming “knowledge analysts” and “knowledge brokers” (Delaney 2009:29), academic librarians researchers can also expand their role into policy development, assessment, accreditation, programme evaluation, and academically focused research studies.

The Concept of Research Output (RO)

The creation of new knowledge lies at the heart of a university and results from tremendous investments in research and researchers by universities aimed at improving and benefiting society. In this process, those research products also advance further research and scholarship, along with the teaching and service missions of the university (Adeyemi, 2021). Ocholla *et al.*, (2012), defined research to be a way of finding answers to unknown problems emerging from natural and artificial phenomena, within our environment, through a systematic, logical, and verifiable process. What motivates individuals and organizations to research the subject is not uniform. The ideal and, perhaps, main reasons are to find solutions to the challenges or problems affecting humanity that stem from natural and artificial phenomena, confirm or contest or refute theories or hypotheses, develop scientific and professional practices, and construct creative, analytical, and rational thinking for informed decision making (Ani and Okwueze, 2016). Individuals conduct research every day. They do so in various ways on a different theme and in many different settings. One important area is education. Researching an educational setting should be a significant aspect of every educator’s professional life and activities. On a more practical basis, research is done to fulfil learning, domestic, and career needs; to satisfy curiosity; for egoistic reasons, such as recognition and visibility; for career-related rewards, such as promotion, securing tenure or permanent appointment; and for self-development or growth, among others (Ojeniyi and Adetimiri, 2016). The collection of these researches over time by a researcher is regarded as research output.

The study of research output has attracted growing attention in the library field for more than fifty years and especially since issues of academic tenure have come to the fore (Makori, 2012). Andrew (2012) defined research output as the totality of research performed by academics in universities and related contents within a given period. Øvern (2014) maintained that academic research represents the backbone of human activity in the way that it improves the quality of life through expanding frontiers of academic knowledge and making further research possible throughout the world. Academic researchers publish to establish their claim to a specific result at a specific point in time. When researchers publish their academic studies, it is an opportunity for their peers to access their research and communicate with other academics interested in a similar subject area. Oduwole and Ikhizama, (2007); and Obaseki *et al.*, (2010), agreed that the publication of research results is a significant link between the areas of communication and academic awards. The research output of an academic librarian in any university is a

major index of a librarian's quality and the determinant of advancement in terms of prestige, recognition for creative thinking, promotion, salary increase, and acceptability in the university setting (Salaam and Agboola, (2002); Bassey *et al.*,(2007); Okiki, (2013), Anyaogu and Mabawonku, (2014) and Adetomiwa, (2018). In addition, research output provides a good justification for librarians to become successful academics. This is so because research activity develops academic knowledge and reinforces the skills for effective knowledge transfer

Empirical Framework

Information Planning Skill

Anyaoku, *et al.*, (2015) studied: "Information literacy practices of librarians in universities in South-East Nigeria". The objective of the study was to examine the planning methods for information literacy practices, skills, level of involvement of librarians, and inhibitors to information literacy programmes in universities in South-East Nigeria. The survey research method was used for this study and the sample was 76 librarians working in Federal and State University Libraries in South-East Nigerian. The Census sampling technique was adopted for the study. Data for the study was collected through questionnaire and interview. Descriptive statistics were used for data analysis with results showing that the majority of the libraries teach library use skills under the General Studies programme. There was also low use of ICT tools for the teaching of information literacy. Challenges faced include lack of institutional information literacy policy and support to drive information literacy, among others. The findings also showed that librarians possess planning skills on traditional information literacy methods such as locating information physically to tackle users' queries but are least skilled in some information technology skills such as creating web pages, use of reference managers, and Boolean search techniques. The study recommends that academic librarians in Nigeria should plan and lobby for the effective implementation of information literacy standalone credit-bearing courses in Nigerian Universities.

The empirical work is related to this study because examined the planning methods for information literacy practices, skills, level of involvement of librarians, and inhibitors to information literacy programmes in universities in South-East Nigeria. More so, it adopts the same sampling technique which is the census sampling technique in the study. It is however different because of the different areas of study and smaller sample size.

Ejernot and Timothy (2014) researched on the innovation strategies in Nigerian universities: assessment of research uptake practice. The purpose of the study was to plan and assess the extent to which research uptake strategies informed research practice in universities in the South-South geopolitical zone of Nigeria. This study adopted a mixed methodology. A quantitative research approach was triangulated with a qualitative paradigm. 2 research questions were formulated to guide the study. For quantitative data, it relied on self-structured, face validated 40-item Likert-type questionnaires that yielded 80.3 Cronbach alpha reliability estimates. Questionnaires were administered to 400 lecturers. Furthermore, interview schedules were administered to 8 key informants drawn from 4 universities in the South-South geopolitical zone of Nigeria. The result showed a low degree of uptake practices in the universities both at institutional and at individual levels. Based on the findings recommendations of strategies to bridge the gaps between research and uptake components were offered.

The empirical work is related to this study because it investigated how to plan and assess the extent to which research uptake strategies informed research practice in universities in the South-South geopolitical zone of Nigeria. But it is different from this study because of the use of mixed-method in data collection.

Asogwa *et al.*, (2014) studied: “Investigated challenges encountered and coping strategies adopted by postgraduate students of agricultural education in writing a thesis in Nigerian universities”. The purpose of the study was to understand the planning (coping) techniques employed by postgraduate students in writing their thesis in Nigeria. A survey research design was adopted for the study. Two research questions and two hypotheses guided the study. The study was conducted in Nigerian universities offering a post-graduate programme in agricultural education. The population for the study was 118 made up of 14 postgraduate diplomas, 66 masters, and 38 doctoral students writing a thesis in agricultural education. The entire population was involved in the study. An instrument titled: Challenges and Coping Strategies Questionnaire (CCSQ) was used for data collection. Three experts validated the questionnaire. Cronbach alpha reliability method was used to determine the internal consistency of the questionnaire. A reliability coefficient of 0.85 was obtained. A total of 97 copies of the questionnaire were returned representing a 93 percent return rate. Data collected for the study were analyzed using mean and standard deviation to answer the research questions while Analysis of Variance was used to test the hypothesis of no significant difference at $P \leq 0.05$ level of significance. The statistical package for social sciences (SPSS) was the tool employed to analyze the data collected. It was found out that 28 challenges were encountered by postgraduate students of agricultural education in thesis writing while 15 coping strategies were adopted by postgraduate students of agricultural education in thesis writing. The recommendations were that postgraduate students of agricultural education who have abandoned their thesis writing should adopt the identified coping strategies to complete their programme among others.

The empirical work is related to this study as providing an understanding of the planning (coping) techniques employed by postgraduate students in writing their thesis in Nigeria. However, it is different from this study because of the different populations of the study.

RESEARCH METHODOLOGY

The research design for this study is correlation research design. A correlational research design investigates relationships between variables without the researcher controlling or manipulating any of them. A correlation reflects the strength and/or direction of the relationship between two (or more) variables. The study was carried out in the South-South Geopolitical Zone of Nigeria. Specifically, South-South states which included Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers states. The population consisted of 250 academic librarians in the federal and state universities in South-South Geopolitical Zone of Nigeria. A sample size of 250 academic librarians was used for the study, while the sampling technique was census technique was used to select the sample of 250 academic librarians. The researcher-developed questionnaire entitled “Information Planning Skill and Research Output of Academic Librarians Questionnaire (IPSROALQ)” was used to collect data. The instrument was face validated by three experts, one from the department of Educational Foundation, Guidance and Counselling (Test and Measurement Unit), and two from the department of Educational Technology and Library Science Department (Library and Information Science Unit), University of Uyo who checked each item and ascertained if they agree with the research questions and objectives. To establish the reliability of the instrument, thirty (30) academic librarians in Ambrose Ali University, Ekpoma, Edo State, which are not part of the study were used. The instrument was administered, and the obtained data were subjected to Cronbach’s Alpha formula using SPSS which produced average coefficients of .79 (see appendix B).

According to Ursachi *et al.*, (2015); and Hulin *et al.*, (2001), a general accepted rule is that α of 0.6-0.7 indicates an acceptable level of reliability, and 0.8 or greater, a very good level. However, values higher than 0.95 are not necessary good, since they might be an indication of redundancy.

After obtaining permission the researchers administered the instrument with the help of three trained research assistants who were trained and given a proper orientation on the focus and scope of the study. Completed copies of the questionnaire were collected by the researchers and the research assistants. 252 copies of the questionnaires were distributed but 232 were returned and found useable, making 92% response rate which is considered representative and adequate for the study. The administration and data collection lasted for eight weeks. The data obtained were statistically analysed using percentages to answer the research questions by merging the responses of very great extent (VGE), and great extent (GE) as great extent (GE); and responses of little extent (LE), and very little extent (VLE) as little extent (LE) while Chi-Square Test of Independence was used to analyse the hypothesis. All the hypotheses were tested at the 0.05 level of significance, and Phi coefficient of $\geq +.40$ is considered strong positive relationship. The research was conducted by following strict ethical procedures deemed necessary for research of this nature.

RESULTS AND DISCUSSION

Data having satisfied Kolmogorov-Smirnov test of the results of the data analysis are presented as follows:

Research Question

To what extent does information planning skill relates to the research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria?

Table 1: Frequency distribution of information planning skill and the research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria.

Constructs	Great Extent		Little Extent	
	Freq.	%	Freq.	%
1. I can develop structured approaches to enhance information search	191	82.3	41	17.7
2. I can develop search tools for each new query	163	70.3	69	29.7
3. I can establish an arrangement to satisfy short or long term information requirements	174	75.0	58	25.0
4. I organise keywords to adapt to search strategies in the available resources	205	88.4	27	11.6
5. I can comprehend the value of controlled vocabularies in searching	189	81.5	43	18.5
6. I know the value of controlled Taxonomies	157	67.7	75	32.3
7. I can develop search questions using appropriate language	207	89.2	25	10.8
8. I can design a search strategy				

using appropriate concepts	205	88.4	27	11.6
9. I can appropriate search techniques for use	208	89.7	24	10.3
10. I can proficiently utilise specialist search tools appropriate to each information need	184	79.3	48	20.7

Table 1 above shows the responses to item 1-10 on information planning skill and research output of academic librarians where most of the respondents reveal that to a great extent there is a relationship between their information planning skill and research output with percentage scores as follows in descending order: Q9 (89.7%), Q4 (88.4%), Q8 (88.4%), Q1 (82.3), Q5 (81.5%), Q7 (89.2%), Q3 (75.0%), Q10 (79.3%), Q2 (70.3%), and Q6 (67.7%). These imply that in this study information planning skill has a major association with research output. Consequently, in answering the research question it is to a great extent that that information planning skill relates to the research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria.

Hypothesis

There is no significant relationship between information planning skill and academic librarians' research output in universities in South-South Geopolitical Zone of Nigeria.

Table 2: Chi-Square test of independence results for information planning skill and the research output of academic librarians.

	Value	Df	Asymptotic Significance (2-sided)	Phi
Pearson Chi-Square	60251.944 ^a	738	.000	2.62
Likelihood Ratio	29205.100	738	.000	
Linear-by-Linear Association	449.894	1	.000	
N of Valid Cases	8802			

a. 396 cells (49.6%) have expected count less than 5. The minimum expected count is .15.

Table 2 shows the results for Chi Square test of independence to determine the extent of relationship between information planning skill and research output of academic librarians. There was a strong positive association between information planning skill and research output, which was statistically significant ($X^2 = 60251.944$, $df = 738$, $p = .000$, $\phi = 2.62$). The value of the phi-coefficient was 2.62 ($> +.70$) which indicated very large effect size. With this result the null hypothesis was rejected. This implies that there was a very strong positive relationship between information planning skill and the research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria.

Findings

The findings of the study are as follows:

Academic librarians to a great extent use information planning skill in their research output. Also, there was a very strong positive relationship between information planning skill and the research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria.

Discussion of Findings

The extent of relationship between information planning skill and the research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria.

The result of the analysis of the extent of relationship between information planning skill and research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria revealed that information planning skill has a very strong positive relationship with the research output of academic librarians.

The relationship exists because academic librarians can develop structured approaches to enhance information searching and new query, establish an arrangement to satisfy short or long term information requirements, organise keywords to adapt to search strategies according to the available resources, comprehend the value of controlled vocabularies and taxonomies in searching, and recognise the appropriate search techniques to use as necessary. Okiki (2012) stated that good research output is more than just collecting information. It entails planning, making decisions on which source to get information, think of how to synthesize the information gathered, and determine how effective research work would be.

The findings of this work was supported by Okoye and Ejikeme (2011) who declared that with information planning skill, academic librarians understand the range of searching techniques available for finding information, and the differences between search tools, recognising and limitations of search tools usage. This can be achieved by exploring shifts in LIS practices that support academic planning. In addition, Raazi and Murray (2019) enhanced the credibility of the findings of this study on the relationship between information planning skill and research output of academic librarians by arguing that while the desirability for academic research planning had increased, its meaning remained imprecise and conceptually ambiguous. Raazi and Murray asserted the importance of assessing values and assumptions, clarifying objectives, collecting data, determining institutional priorities and strategies for implementation, and engaging in a continuous and open planning process within the scholarly communities. This was further supported by Lange *et al.*, (2013) who submitted that academic planning is planning for the provision of, and resource allocation for, the academic research endeavours of an institution. Lending more credence to this work: Calderon and Webber (2015) identified several challenges that require information and data planning and analysis, including the increasing expectations of higher education's contribution to economic development and the continued evolution of institutions of higher education into complex organisations.

In addition to the authority of the finding of this McMillan and Schumacher, (2010) argued that the shifts provided by information planning skill move beyond merely producing research outputs to meet the minimum research output requirements, towards enriched research, which include interpreted and contextualised institutional intelligence. In support of these, Creswell (2012) argued that by creating a culture of evidence, the role of academic research practice could shift from providing data for mandatory reporting to a more outcomes-orientated approach of information planning in which data and information are provided for the internal functioning of the institutions in addition to meeting external obligations. A culture of evidence and continuous improvement using information planning skills is necessary to achieve the outcomes for successful research output by academic librarians.

SUMMARY, CONCLUSION AND RECOMMENDATION

Summary

This study was carried out to determine the extent of relationship between information planning skills and the research output of academic librarians in universities

in South-South Geopolitical Zone of Nigeria. Objective with corresponding research questions, and hypotheses were used for this work, while two theories were adopted which included the theory of social cultural learning and the theory of self-efficacy. Literatures on information planning skills (IPS) were equally reviewed. The IPS variables reviewed included ability to develop structured approaches to enhance information searching, ability to develop search tools for each new query, ability to establish an arrange to satisfy short or long term information requirements, ability to organize keywords to adapt to search strategies according to the resources available, ability to comprehend the value of controlled vocabularies, and taxonomies in searching, ability to recognize specialists search tools appropriate to each individual needs, and determine their relationship with the research output of the academic librarians. In addition, literatures in research output of academic librarians were also reviewed. Empirical works on information planning skills and research output were reviewed which enriched the work and also gave a further academic boost to the present study by establishing explicit similarities and dissimilarities with the present study. Correlational research design was adopted for the study using South-South Geopolitical Zone as study area with a population of 252 individuals consisting of academic librarians in the faculty and library units in the various universities studied. The census technique was used to select the sample with a sample size of 252, while the researcher designed questionnaire was used to collect data. Reviewed literature was used to determine the construct validity of the instrument while the reliability of the instrument was evaluated with Cronbach Alpha formula of SPSS which indicated an acceptable level of reliability. The researcher administered the instrument with the help of three trained research assistants to gather and review the questionnaires collected from each institution under study by following ethical procedures. Frequencies and percentages were used to answer the research questions while Chi-Square test of independence was used to test the hypotheses. Findings showed that information, planning, was extensively positively related to research output of academic librarians. Nevertheless, the educational implications, recommendations and suggestions for further studies were also stated.

Conclusion

Based on the findings of the study it was concluded that for academic librarians to thrive in their research output they need to fully utilize information planning skills as lifelong skills for advancement.

Educational Implication of Findings

The findings of the study indicate that educational institutions have to make concerted efforts to ensure and encourage academic librarians to acquire and fully utilize the necessary information planning skills that would enable them to produce high-quality research work that could meet international standards and as such would help to raise their status and that of the institution's standard to which they belong. This study provides theoretical insights related to library services for academic librarians as well as practice related to planning specific library services and library instruction for diverse groups of library users. This study has revealed overlooked areas of research related to the information literacy needs of academic librarians. The findings of the study are useful in making recommendations about future planning for library outreach as well as the utilization and delivery of library services by academic librarians. The outcome of this research is also useful as it has provided insights that academic librarians can benefit from in creating and developing customized support and library services for different groups of users and addressing related knowledge gaps and also to increase their research productivity. Moreover, the findings could be used in training units of academic libraries by identifying specific information literacy needs of librarians and reform their in-service training programs accordingly. In addition, the information systems and utilities can be

better designed in with reference to the information skills and preferences of academic librarians.

Contribution to Knowledge

This study has contributed a lot to knowledge to include:

- i. Whereas other studies have been carried out on information literacy and research output, this is the first time a study is been conducted to determine the extent of relationship between information planning skills and research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria.
- ii. The findings from this research work reveal that information planning skills could be put in place for academic staff, most especially librarians as benchmarks. Consequently, information planning skills could be used as metrics in assessing academic librarians in their research output and other career related activities.
- iii. It was also observed from the study that other related studies on information literacy skills use theories and models that are just skill based or work based but this study used the theories of socio-cultural learning and self-efficacy which amalgamate skill proficiency situated within a cultural (professional) contexts and the leveraging of human capital within the scholarly communities for better research output and standards.

Recommendations

Based on the findings of the study it is recommended that:

- i. The National University commission should make proficient utilization of information literacy skills by academic librarians as part of the requirement to assess their suitability for performance within the scholarly communities.
- ii. The university management should consider constant information literacy skills programs to improve the literacy skill of the academic staff to be able to carry out sound and rich research output.
- iii. Training and retraining should be regularly carried out by the training units of academic libraries to identify specific information literacy needs of librarians and reform their in-service training programs accordingly.
- iv. The information literacy providers should through the findings of this research work decide the best way or means of providing adequate facilities and services that would enhance the research output of the academic librarians in Nigerian universities.
- v. The information literacy providers who are those people that are saddled with the responsibilities of providing information literacy services and facilities such as the Internet Service Providers (ISP), website designers, and computer software packages programmers should provide professional support that could unveil the best information literacy skills hard and software packages that are needed for research by the academic librarians, and could make the services and facilities available to them, and enhance their skill to carry out good research work that meets the standards of acceptance.
- vi. Library centres and outreaches should consider opening specialized units tagged information literacy centres/units to boost information literacy education in our universities.
- vii. Certification programmes and courses should be developed in the academic institutions to raise the bar for information literacy skill practice thereby giving information literacy skill professionals' added advantage when opportunities come, this could encourage other librarians to pursue career in information literacy practice.

- viii. Academic librarians, academic library management, managements of higher institutions, software and hardware vendors, and other stakeholders in information literacy practice should encourage not just the use of information literacy skills but to ensure that the advantages and benefits derivable from information evaluation skill, information planning skill, and information gathering skill are maximized since this study has shown them as top information literacy skills. Special trainings should be conducted on information evaluation, planning, and the sources those information have been gathered from as they play active role in the change process in research cycle.

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APPENDIX A

INFORMATION PLANNING SKILL AND THE RESEARCH OUTPUT OF ACADEMIC LIBRARIANS QUESTIONNAIRE (ILSROALQ)

INSTRUCTION: Please tick (√) where appropriate

KEY: **ILS:** Information Planning Skill; **RO:** Research Output; **AL:** Academic Librarian; **(ROAL):** Research Output of Academic Librarians

SECTION A

PERSONAL INFORMATION AND DEMOGRAPHIC DATA

Qualification: First degree (), Masters (), PhD ()

University: _____

SECTION B

Note: In filling section B, the following 4-point scale and representations are given as: **VGE** (Very Great Extent); **GE** (Great Extent); **LE** (Little Extent); **VLE** (Very Little Extent).

Information planning skill and research output of academic librarians

S/N	ITEM	VGE	GE	LE	VLE
	Information Planning Skill In order to carry out academic researches:				
1.	I can develop structured approaches to enhance information search				
2.	I can develop search tools for each new query				
3.	I can establish an arrangement to satisfy short or long term information requirements				
4.	I organise keywords to adapt to search strategies in the available resources				
5.	I can comprehend the value of controlled				

	vocabularies in searching				
6.	I know the value of controlled taxonomies				
7.	I can develop search questions using appropriate language				
8.	I can design a search strategy using appropriate concepts				
9.	I can appropriate search techniques for use				
10.	I can proficiently utilise specialist search tools appropriate to each information need				

Research Output of Academic Librarians

S/N	ITEM	QUANTITY OF RESEARCH OUTPUT			
		1-10	11-20	21-30	31 and above
	Publication				
55.	Textbooks				
56.	Chapters in books				
57.	Co-authored textbooks				
58.	Monographs				
59.	Occasional Papers				
60.	Articles in learned journals				
61.	Technical Reports				
62.	Scientific peer-reviewed bulletin				
63.	Conference proceedings				
64.	Edited books				
65.	Indexes				
66.	Abstracts				
67.	Bibliographies				

APPENDIX B

Reliability Statistics for IPS

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.790	.803	10