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

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INFORMATION SCOPING SKILL AND RESEARCH OUTPUT OF ACADEMIC LIBRARIANS IN UNIVERSITIES IN SOUTH-SOUTH GEOPOLITICAL ZONE OF NIGERIA

Abstract

This study investigated the relationship between information scoping 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 (information scoping skill), and the theory of self-efficacy for the dependent variable (research output of academic librarians). More so, conceptual review of literature on information scoping 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 working in the various academic library units and faculties. The census technique was used as the sampling technique with a sampling size of 252. The researcher-developed questionnaire entitled: “Information Scoping Skills and the Research Output of Academic Librarians Questionnaire (ISSROALQ)” was used to collect data while the reliability test results using Cronbach Alpha formula in SPSS showed an average coefficient of .85 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 scoping skill has a positive significant relationship with the research output of academic librarians with p value 0.00, and Phi coefficient of 2.53 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

Technology has evolved and so the process of learning and knowledge acquisition with new approaches. These new approaches are adopted by various disciplines to foster growth and development. However, these approaches depend on expertise, innovation, and creativity which are by products of research and development. For effective research in a modern day world the environments, individuals, and skills required for such research have to be available. In this regards, universities all over the world have taking leadership position in scientific research and development. The leadership position means that these universities will have an army of academic researchers to contribute both in theory and in practice, and academic librarians are part and parcel of these academic and research armies. It is noteworthy to state that no military personnel will engage in warfare without the right training and skills. For academic librarians, among the skills needed to be effective researchers are information literacy skills. Information literacy (IL) is an umbrella term that encompasses key concepts such as digital, audio-visual, and media literacies, academic literacy, information skills, information handling, data curation, and data management. Thus, an information literate person can be regarded as an individual

who can demonstrate an awareness of how to gather, use, manage, synthesise and ethically create information and data, and possess the information skills to do so. The fundamental goal of Information Literacy (IL) is to develop critical users of information (Afolabi and Oladokun, 2020). IL is considered a powerful weapon for lifelong learning. It is common to all disciplines, to all learning environments, and all levels of education. It enables learners to master content and extend their investigations, become more self-directed, and assume greater control over their learning. The central mission of educational institutions should be to develop life-long skills and provide the continued growth in the later career. Key among these information literacy skills is information scoping skill. It is against this background that this study investigated the relationship between information scoping skill and the research output of academic librarians in South-South Geopolitical Zone of Nigeria.

Information scoping skill (ISS) is used by AL to determine the extent or range of view, outlook, application, operation, and effectiveness of identifying an information need on a search area. Using ISS, an AL can access information sources that are available to understand what he/she does not know to fill the gaps. According to Jinxuan, *et al.*, (2020) a researcher determines the scope and type of information that is being accessed such as data, people, videos, and published information that will meet the researcher's information needs. ISS enables AL to source for search tools be it general or specific sources at different levels, differentiates data collection methods and formats in which information is provided which could be in print, and digital, or multimedia. The ISS also assists the AL to: 'Know what one did not know', in other words to spot any information gap and to identify which type of information will best meet the need to make search tools available on general or subject-specific resources at different levels (Chaka, 2020). Afterward, the AL can use ISS to make out different formats in which information may be provided, and demonstrate the ability to use new tools as they become available. When an AL has established the scope, the AL requires adequate planning to properly work within the confines of the determined scope. The use of information planning skills is a productive technique that can be used by AL not just to advance from the scoping premise but general progress in the research output.

Statement of the problem

Information scoping skill (ISS) is essential to define the information search boundaries, limits, and needs of academic librarians for a particular research. ISS can assist academic librarians in the design of information systems in general, and the provision of effective information services in particular. However, it has been found to be a difficult task to determine the extent or range of view, outlook, application, operation, and effectiveness of identifying an information need on a search area. The employment of ISS requires the adoption of various methods to decide the required information and limits to such search. For example, in using information scoping skill in research output an academic librarian will be confronted with the challenge of determining the primary audience; the best format for the research or specific requested for; the specific outcome the research will achieve; the stakeholders, limitations or potentials to apply limits; the time frame, legal considerations, regulations, policies, and guidelines that must be taken into account. No single method or tool will serve entirely. This effort has been observed by Okiki (2013) as challenging for academic librarians, and has affected the quality of their research. More so, any lapse in proper scoping of information needs of a research work by academic librarians will affect the quality of the research output. In day to day work, lack of self sufficiency constitutes information search extent. This information search boundary represents gaps in the current knowledge of the user. In fact, the information search extent needs a scooper. It was against this background that this study

was carried out to find the relationship between information scoping 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 scoping 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 scoping 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 scoping 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 to 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 academic invest more on developing information identification skill as a means towards unlocking great opportunities in research output.

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.

Scope of the Study

This study focused on the extent to which information scoping skill relates to the research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria. It covered the following information scoping skills: ability to understand the characteristics of the different types of information sources available, ability to know current information available, ability to understand the range of issues surrounding information accessibility, awareness of what services are available to help access information resources, ability to easily discover information gap, ability to easily determine formats in which information may be provided, ability to use new tools as they become available, ability to source for search tools in general or subject specific areas at different levels, ability to differentiate between different data collection methods, ability to determine the range of effectiveness of identifying information need on a research area and determine 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 thirteen (14) universities were covered in this study.

REVIEW OF LITERATURE

Theoretical Framework

This study will adopt the Lev Vygotsky theory of sociocultural learning for the independent variable(s) (information scoping skills) 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. It is by communicating through cultural tools that academic librarians participate in practices of various kinds such as the use of information literacy skills in librarianship. Hence, information literacy implies learning to communicate appropriately within a specific practice.

Academic librarians regularly devote themselves to a range of activities by maintaining social contacts to carry out academic research, work tasks, and other everyday activities in life. They blog, google, tweet, teach, search for books in library catalogues and scholarly databases, attend to library users' information needs and also engage in productive research activities within the university system. It is impossible to imagine these activities without the tools linked to them. A sociocultural perspective emphasises that information seeking is carried out for a specific purpose in a specific practice, for instance for writing an academic paper, and with the help of tools such as a library catalogue, a bibliographic database, or Google Scholar. Interesting questions for information literacy research are not just for understanding how people learn to seek and use information but relate to how practices and digital media (and other tools for interacting with information) transform each other. But how do contemporary digital environments contribute to the shaping of conditions for learning? What do the new tools used for seeking, assessing, and mediating information, mean for the understanding of expert knowledge and the critical assessment of sources, particularly where texts are increasingly user-generated? Such and similar questions are significant for a sociocultural perspective on information-seeking practices, and learning information literacy.

Information scoping sees problem-solving not just as a cognitive process, but a problem-solving process of tools, and practice of sociocultural perspective in situated learning, which is related to the acquisition, organization, and use of information. These are various applications, models, and standards that seek to explain information seeking and use processes, and research output of academic librarians. The sociocultural perspective is related to the present study because it helps to determine how academic librarians integrate information literacy skills (tools) into research output (practice) through information identification, scoping, planning, gathering, evaluation, management, and presentation. This theory frames the study because it explains not just how the academic librarian can use information literacy 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. A strong sense of efficacy enhances human accomplishment and personal well-being in many ways. People with high assurance in their capabilities approach difficult tasks as challenges to be mastered rather than as threats to be avoided. Such an efficacious outlook fosters intrinsic interest and deep engrossment in activities. They set themselves challenging goals and maintain a strong commitment to them. They heighten and sustain their efforts in the face of failure. They quickly recover their sense of efficacy after failures or setbacks. They attribute failure to insufficient effort or deficient knowledge and skills which are acquirable. They approach threatening situations with assurance that they can exercise control over them. Such an efficacious outlook produces personal accomplishments, reduces stress, and lowers vulnerability to depression.

Self-efficacy is also an individual's belief in their innate ability to achieve goals. Albert Bandura defines it as a personal judgment of "how well one can execute courses of action required dealing with prospective situations". Expectations of self-efficacy determine whether an individual will be able to exhibit coping behaviour and how long effort will be sustained in the face of obstacles. Individuals who have high self-efficacy will exert sufficient effort that, if well-executed, leads to successful outcomes, whereas those with low self-efficacy are likely to cease effort early and fail. Psychologists have studied self-efficacy from several perspectives, noting various paths in the development of self-efficacy; the dynamics of self-efficacy, and lack thereof, in many different settings; interactions between self-efficacy and self-concept; and habits of attribution that contribute to, or detract from, self-efficacy. Belief in innate abilities means valuing one's particular set of cognitive strengths. It also involves determination and perseverance to overcome obstacles that would interfere with utilizing those innate abilities to achieve goals.

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 literacy 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

Information Scoping Skill and Research Output of Academic Librarians

The volume of information resources potentially available in the globe is massive; hence it becomes necessary to examine available information resources for academics research activity in academia. Quality research exposes academics to current information and sharing of research results with others. The significance of research in academia is that it enables academics to share insight, demonstrate academic scholarship, and gain recognition for creative thinking. Okiki (2013) noted that “publish or perish” is a popular cliché among academics in the Nigerian university settings. This phrase underscores the importance attached to research and publication in any university. Availability, accessibility, and use of information resources are indispensable to the teaching, research, and community activities of academic staff members in any university system. The information resources and services available in institutional information systems (library, archives, records offices, documentation centers, and data centers) must be capable of supporting research activities (Leung, 2010).

The characteristics of the different types of information sources available and how they may be affected by the format (digital, print) are essential in making quality decisions in the information scoping process. Information scoping is the ability of an information seeker to assess the extent of current knowledge and recognize the gaps. Oyewusi and Oyeboade (2015) maintained that information scoping is the capability of individuals to locate and critically evaluate information sources available to them. It is also the ability to make effective use of information sources in decision making and knowledge creation. The measure of academic success in academia is research output which requires information resources. The universities and other higher institutions set up libraries to make information resources available to assist academic staff members in their research quest. However, Omolewa (2008) reported that some of the professors in Africa are low on global visibility except their institutions and are not recognized for the quality of their knowledge or scholarship. To be acknowledged as an international scholar, an academic must publish internationally and locally. For this to be possible, the academic must have access to a wide range of information resources, must be current, and know what is going on in his/her field (Edem and Egbe, 2016). To achieve this AL will have to deploy information scoping skills to understand the publication processes in terms of individual publish and currency of information. More so, information scoping skill provides an understanding of information accessibility, and what information services are available to help and how to access them.

Information scoping skill enables academic librarians to carry out robust literature search which is needed to limit publication bias. A literature search is a considered and organised search to find key literature on a topic. To complete a thorough literature search an individual would have to define what he/she is searching for, decide where to search, develop a search strategy, refine the search strategy, and save the search for future use (Luhn, 2012). In defining this AL will be able to decide which search best meets the information needs for the research output. More so, information scoping skills decide which format in which the sourced information may be provided.

In LIS to complete a research project, its scope must be clearly defined. The research question and the specific aims or objectives should guide the study. In LIS research, the setting is the most likely source to find important research questions. The

research idea should be realistic and relevant to the interests of academic librarians, institutions of learning, and library users. Once the AL has developed a research idea, a comprehensive literature review should be performed. The aims of the research output should be new, relevant, concise, and feasible. The AL must budget adequate time to carefully consider, develop, and seek input on the research question and objectives using the principles of project management. Identifying a group of individuals that can work together to ensure the successful completion of the proposed academic research should be one of the first steps in developing the research plan on a large scale. If the research is group research, dividing work tasks can alleviate the workload for individual members of the research team (Raazia and Murray, 2019). The development of a timeline to help guide the execution of the research project plan is critical. Steps that can be especially time-consuming include obtaining financial support, garnering support from key stakeholders, and getting institutional review board consent (Botha, 2015). One of the primary goals of researching by AL is to share the knowledge that has been gained through presentations at national and international conferences and publications in peer-reviewed LIS journals. Practice-based research such as LIS presents numerous challenges, especially for new researchers. Integration of the principles of research project management into research planning can lead to more efficient study execution and higher-quality results evidenced in the research output.

The Concept of Research Output

Research output has become essential for universities' success, academic employment and promotion prospects for academic staff including librarians (Okiki and Asiru, 2011). According to Dubicki (2013) librarians in an academic setting are integrally involved with providing research services to faculty, students, and staff of higher education institutions. Okonedo and Popoola (2012) reported that the research output of librarians in public universities in Nigeria rests largely upon the quality, and often the quantity of research in form of books, journal articles, technical reports, and others. Okafor and Dike, (2010); and Boshoff, (2012) asserted that the level of education, skills, motivation, and self-perception of academics play an important role in their research output. Utulu and Ngwenyama (2019) affirmed that education and skills acquired in the early days of professional practice also determine the ability to produce scholarly papers. Utulu and Ngwenyama added that one of the motivating factors for scholarly publications by librarians is the availability of other publications which contain the needed language for publication and how to use them. In affirmation, Adamu *et al.*, (2018) inferred that motivation by a desire to help academic librarians improve their research skills and, thus, the quantity and quality of their research is of paramount importance. Furthermore, Okeji (2019) asserted that publication is motivated by eagerness or enthusiasm to publish, presence of enabling environment, self-perception of individual librarians for their role, the will power on the individual academic librarian to succeed and the determination not to perish in the academic high seas is a product of critical survival skill.

One of the strategies for determining research output is to examine the number of publications that researchers communicated through primary or other sources. Academic staffs conduct research and their productivity is measured in various ways. Academic institutions primarily measure research productivity based on published works, externally funded grants, and the number of citations the published works received (Adetomiwa, 2018). The published work could be journaling articles, books, monographs, conference papers, and research proposals awaiting external and internal grants (Okiki and Mabawonku, 2013). 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.

Empirical Framework

Adetomiwa (2018) investigated the Level of research productivity of academic staff in private universities in South-West, Nigeria. The central objective of the study was to examine the scope of research productivity of academic staff in private universities in South-West, Nigeria by ascertaining the totality of research performed by academic staff members within a given time. The descriptive survey research design approach was adopted. A total of 935 academics from a population of 3116 academic staff members in 21 private universities were sampled using stratified random sampling technique which was used to examine the quality of teaching, research, and community service of lecturers coupled with the electronic database they use. The analysis of weighted average of 2.02 showed a low level of publication output among the academic staff, an indication that the academic staffs have a moderately low level of research productivity in private universities in South-West Nigeria. It was recommended that academics in private universities increase their productivity on copyrighted inventions and research works.

This empirical work is related to this study because of its focus on studying the extent of research productivity among academic staff but it is different from this study because it adopts different sampling techniques and sampled all categories of academic staff in the university whereas this study focuses on academic librarians.

A similar study was conducted by Adeyemi (2021) titled: “ Awareness, knowledge, and use of altermetrics as a measure of research impact: Nigerian librarians’ perspectives”. The purpose of the study was to examine the scope of scholarly communication and librarians’ relationship with research impact indicators. Five objectives, five research questions, and two hypotheses guided the study. A descriptive survey research design was used for the study and total population sampling. The survey concentrated on academic librarians’ familiarity with and usage of research impact indicators. To ensure the reliability of the questionnaires, Cronbach Alpha was tested for using Microsoft Excel and that results in 0.823 coefficients. All 285 responses were automatically analysed on Google Forms using descriptive statistics of frequency counts and simple percentages. However, the hypotheses were tested using Pearson’ s Product Moment Correlation (PPMC) on Microsoft excel. It was concluded that Nigerian librarians did not use altermetrics as a non-traditional complement for measuring their research impact. The finding showed that there was no adequate knowledge of altermetrics and it was unpopular among Nigerian librarians in measuring research impact. It was recommended that academic librarians are continually challenged to keep pace with the changing landscape of research impact metrics and research assessment models by responsibly employing research impact indicators in their practices, and academic librarians can provide a crucial service in educating the wider academic community.

This empirical work is different as it provides various researches as non-traditional citation index on evaluating academic librarians’ research output in universities in south-south Nigeria. Academic librarians will understand how not only consider citations and usage indexes as metrics in considering research output but also altmetrics which could be applied to research filter, promotion and tenure dossiers, grant applications, and for ranking newly-published articles in academic search engines. It is relevant to this work because of its approach to studying the extent (scope) to which research outputs are being assessed and the practices among academic librarians.

Ullah and Ameen (2014) examined the status of information literacy instruction in medical libraries of Pakistan: an appraisal. The central objective of the study was to

explore the scope of the current practices of information literacy (IL) instruction in medical libraries of Pakistan. 5 objectives and 5 research questions were formulated for the study. The study adopted sequential mixed methods research design based on quantitative data collection followed by qualitative data collection. Total population sampling technique was employed in the study and instrument for data collection was a semi-structured questionnaire which was administered to 114 head librarians. Data was analysed using descriptive statistics of frequency counts and percentages to describe the research questions. The result indicates that medical librarians lack systematic approaches to IL instruction. However, it was recommended that medical librarians need to develop educational partnerships with faculty for integrating IL instruction into the mainstream curriculum.

This empirical work is related to this study because its central objective of the study was to explore the scope of the current practices of information literacy (IL) instruction in medical libraries of Pakistan but it is different from this study as it was carried out among it was carried out in another area of study and it adopted mixed method of both quantitative and qualitative technique.

Summary of Reviewed Literature

This section undertook the review of literature in information scoping skills and research output of academic librarians in universities in the South-South of Nigeria. Two theories related to this work were adopted which are Lev Vygotsky's theory of sociocultural learning and Albert Bandura's self-efficacy theory. The sociocultural standpoint on learning establishes the relationship between individuals (AL) and various forms part of collective practices (ILS), additionally the sociocultural learning theory posits that learning has its basis in interacting with other people, once this has occurred the information is then integrated on the individual level, 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. Self-efficacy beliefs determine how people feel, think, motivate themselves, and behave (in this context how AL motivates themselves on RO). Literatures on information scoping skills (ISS) were equally reviewed. The ISS variables reviewed included ability to understand the characteristics of the different types of information sources, ability to know current information available in the publication process, ability to understand the range of issues surrounding information accessibility, ability to know what services are available to help to access information resources, ability to easily discover information gap, ability to determine formats in which information may be provided, ability to use new tools as they become available, ability to source for search tools in general or subject specific areas at different levels, ability to differentiate between different data collection methods, ability to determine the range of effectiveness of identifying information need on a research area. In addition, literatures in research output of academic librarians were equally observed. Three empirical works 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.

From the reviewed literature it was observed that although academic librarians have had successes and achievements in research output, they have also been confronted with certain challenges such as work overload, information overload, poor funding among others. These challenges have affected the academic librarians' research output. It was opined by the various schools of thoughts in the reviewed literature that adequate use of information scoping skills in carrying out research works will facilitate and enhance the research output of academic librarians. However, this study seeks to determine the veracity of these claims by ascertaining the extent of the relationship between information scoping

skills (ILS) and the research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria using the appropriated theories and requisite research methods to fill the existing gaps of academic librarians publishing at low rate, individually and mostly in local journals, and the lack of using modern methods in the research output process as revealed in the reviewed literature. Furthermore, from the reviewed literature there is no empirical evidence of a study conducted to investigate the influence of information scoping skills on academic librarians' research output in Nigeria, this study seeks to fill these evidence, theoretical, empirical, population, and practical-knowledge gaps.

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 scoping Skill and Research Output of Academic Librarians Questionnaire (ISSROALQ)” 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 .85. 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 (see appendix) the results of the data analysis are presented as follows:

Research Question

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

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

Constructs In order to carry out academic researches:	Great Extent		Little Extent	
	Freq.	%	Freq.	%
1. I understand the characteristics of the different types of information sources available to me	219	94.4	13	6.6
2. I know current information available to me in the publication process	211	90.9	21	9.9
3. I understand the range of issues surrounding information accessibility	226	97.4	6	2.5
4. I am aware of what services are available to help me access information resources	219	94.4	13	5.6
5. I can easily discover information gap	199	85.8	30	12.9
6. I can easily determine formats in which information may be provided	222	95.7	10	4.3
7. I have the ability to use new tools as they become available	209	90.1	23	9.9
8. I can source for search tools in general or subject specific areas at different levels	197	84.9	35	15.1
9. I can differentiate between different data collection methods	177	76.3	55	23.7
10. I can determine the range of effectiveness of identifying information need on a research area	195	84.1	37	15.9

Table 1 above indicates the responses to items 1-10 on information scoping 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 scoping skill and research output with percentage scores as follows in descending order: Q3 (97.4%), Q6 (95.7%), Q1 (94.4%), Q4 (94.4%), Q2 (90.9%), Q7 (90.1%), Q5 (85.8%), Q8 (84.9%), 10 (Q84.1%), and Q9 (76.3%). These imply that in this study information scoping skill has a major association with research output. Consequently, in answering the research question it is to a great extent that that information scoping 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 scoping skill and academic librarians' research output in universities in South-South Geopolitical Zone of Nigeria.

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

	Value	Df	Asymptotic Significance (2-sided)	Phi
Pearson Chi-Square	48405.433 ^a	574	.000	2.35
Likelihood Ratio	27604.346	574	.000	
Linear-by-Linear Association	1041.672	1	.000	
N of Valid Cases	8802			

Table 2 shows the results for Chi Square test of independence to determine the extent of relationship between information scoping skill and research output of academic librarians. There was a strong positive association between information scoping skill and research output, which was statistically significant ($X^2 = 48405.433$, $df = 574$, $p = .000$, $\phi = 2.35$). The value of the phi-coefficient was 2.35 ($> +.70$) 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 scoping 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 scoping 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 scoping skill and research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria revealed that information scoping skill has a very strong positive relationship with the research output of academic librarians.

The relationship exists because academic librarians understand the characteristics of different types of information sources, know the current information available in the publication process, understand issues surrounding information accessibility, are aware of what services are available to help get access to information resources, easily discover the extent of any information gaps, recognize formats in which information may be provided, demonstrate the ability to use new tools as they become available, source for search tools be it general or subject specific at different levels, differentiate data collection methods, and determine the range of effectiveness of identifying the need on a research area. The findings of this work is supported by Oyewusi and Oyeboade (2015) who maintained that information scoping is the capability of individuals to locate and critically evaluate information sources available to them. Also, in support of the findings of this work are Edem and Egbe, (2016), who concluded that to be acknowledged as an international scholar, an academic must publish internationally and locally. For this to be possible, the academic must have access to a wide range of information resources, must be current, and know what is going on in his/her field.

To lend more credence to this work Luhn (2012) asserts that to complete a thorough literature search an individual would have to define what he/she is searching for, decide where to search, develop a search strategy, refine the search strategy, and save the search for future use. On the contrary Raazia and Murray (2010) argued that it is not just enough to define the scope of a research output using information scoping skill, but that when the research is group research, dividing work scope and tasks can alleviate the workload for individual members of the research team. Information scoping skill help

provide limits, timeline, and boundaries for a research activity that facilitate effectiveness, and ingenuity of research output.

SUMMARY, CONCLUSION, AND RECOMMENDATION

Summary

This study was carried out to determine the extent of relationship between information identification skills and the research output of academic librarians in universities in South-South Geopolitical Zone of Nigeria. The objective, with corresponding research questions, and hypotheses used for this work were stated, while two theories were adopted which included the theory of social cultural learning and the theory of self-efficacy. Literatures on information scoping skills (ISS) were equally reviewed. The ISS variables reviewed included ability to understand the characteristics of the different types of information sources available, ability to know current information available, ability to understand the range of issues surrounding information accessibility, awareness of what services are available to help access information resources, ability to easily discover information gap, ability to easily determine formats in which information may be provided, ability to use new tools as they become available, ability to source for search tools in general or subject specific areas at different levels, ability to differentiate between different data collection methods, ability to determine the range of effectiveness of identifying information need on a research area. In addition, literatures in research output of academic librarians were also reviewed. Three empirical works on information scoping 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 researchers 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 scoping skills were 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 scoping skills as lifelong skills for advancement.

Educational Implication of Findings

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 identification 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 identification skills could be put in place for academic staff, most especially librarians as benchmarks. Consequently, information literacy 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

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. 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.

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APPENDIX A

INFORMATION SCOPING SKILLS AND THE RESEARCH OUTPUT OF ACADEMIC LIBRARIANS QUESTIONNAIRE (ILSROALQ)

INSTRUCTION: Please tick (√) where appropriate

KEY: **ISS:** Information Scoping Skills; **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 scoping skill and research output of academic librarians

S/N	ITEM	VGE	GE	LE	VLE
	Information Scoping Skill In order to carry out academic researches:				
1.	I understand the characteristics of the different types of information sources available to me				
2.	I know current information available to me in the publication process				
3.	I understand the range of issues surrounding information accessibility				
4.	I am aware of what services are available to help me access information resources				
5.	I can easily discover information gap				
6.	I can easily determine formats in which information may be provided				
7.	I have the ability to use new tools as they become available				
8.	I can source for search tools in general or subject specific areas at different levels				
9.	I can differentiate between different data collection methods				
10.	I can determine the range of effectiveness				

	of identifying information need on a research area				
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APPENDIX B

Case Processing Summary

		N	%
Cases	Valid	30	93.8
	Excluded ^a	2	6.3
	Total	32	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.853	.853	10

APPENDIX C

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
I understand the characteristics of the different types of information sources available to me	.309	212	.000	.743	212	.000
I know current information available to me in the publication process	.284	212	.000	.749	212	.000
I understand the issues surrounding information accessibility	.420	212	.000	.633	212	.000
I am aware of what services are available to help me access information resources	.407	212	.000	.655	212	.000
I can easily discover the extent of any information gaps	.333	212	.000	.446	212	.000
I am able to recognize formats in which information may be provided	.322	212	.000	.730	212	.000
I can demonstrate the ability to use new tools as they become available	.282	212	.000	.769	212	.000
I can source for search tools be it general or subject specific at different levels	.263	212	.000	.797	212	.000
I can differentiate data collection methods	.245	212	.000	.814	212	.000

I can determine the range of effectiveness of identifying information need on a research area	.278	212	.000	.772	212	.000
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a. Lilliefors Significance Correction