

Provision and utilization of core cited journals in library and information science theses by postgraduate researchers in Nigeria

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Abstract

The study investigated the influence of availability of core cited journals (local print, foreign print and electronic journals) in Library and Information Science (LIS) theses on their utilization by postgraduate researchers in university libraries in South-East Zone of Nigeria. Five research questions and two null hypotheses were formulated to guide the study. The study adopted the ex-post facto research design. A total of 706 masters and doctoral theses in LIS discipline constituted the population. Complete census was used to select all 83 doctoral dissertations while the 270 masters' theses were chosen through systematic sampling. This gives a total sample of 353 (50%). A customized research instrument titled: "Checklist on Provision and Utilization of Core Cited Journals in LIS Theses" (CPUCCJLIST) was used for data collection. The instrument had a reliability index of .85 determined using Cronbach Alpha Reliability Testing Technique. Data generated from the field were analyzed using simple percentages, bar chart, mean and standard deviation to answer the research questions while the hypotheses were tested at .05 level of significance using t-test and analysis of variance (ANOVA). The findings show that the availability of core cited journals (local print, foreign print and electronic) in LIS theses have a significant influence on their utilization in university libraries in South-East Zone of Nigeria. Consequent upon the findings, it was concluded that the availability of local print journals, foreign print journals and electronic journals are significant determinant of utilization. It was recommended, among others, that university management should publicize the core journals in their collection and make adequate budgetary provision for the acquisition of recent and relevant journals in LIS to support postgraduate studies in the discipline.

Keywords: Journal usage, Core-cited Journals, LIS Theses, South-East - Nigeria.

Introduction

Journals are professional publications devoted to disseminating original researches and commentaries on current developments within a specific discipline, sub-discipline or field of study (Bello, Oluleye, Choji & Azubuike, 2014). These specialized periodical publications usually appear on annual, biannual, quarterly, bimonthly or monthly and issues sold by subscription. It is a medium that stimulates the communication of scholarly information as research results are discussed, reviewed and disseminated by experts in the same discipline or profession. Journals convey research findings based on latest development in a given field; finds out what has been studied on one's topic and provide bibliographic details that point to other relevant researches (Echezona, Ugwu & Ukwoma, 2010). In the

past, journals were only published in print which can either be foreign or local. However, with scientific advances and the advent of ICTs and online capabilities, journals are now published electronically. Foreign journals address the issues in a discipline from an international perspective and create room for comparative analysis while local journals addresses issues affecting a discipline from a local viewpoint and have direct impact on the local society and community (Rahman, Khatun & Mezbah-Ul-Islam, 2008; Lariviere, 2014).

Journals specialize in particular subject areas and disciplines. A journal contains series of articles and short communications which convey highly specific knowledge to experts and students. It is a valuable primary source of information which covers new research-based information and ideas. The primary defining characteristics of journals are authorship, audience, language, format, content, review, quality, focus and currency. Journal articles are written by experts (professors, scholars and researchers) for a specific audience (students, researchers, scholars and professors) in a particular technical language of a discipline or sub-discipline. This implies that journals are intended for an audience with the knowledge of the subject that is being written about. Similarly, articles in journal publications are not presented haphazardly as they follow a predetermined format be they opinion or empirical papers. Journals contain original researches, discoveries or experimentations; publish research projects, their methodology and significance that are current and up to date.

The emergence of journals and the perfection of the techniques for their publishing is, largely, responsible for the exponential growth in human knowledge. This situation is at the root of academic expansion and intellectual sophistication. Thanuskodi and Venkatalakshi (2012) note that in recent years, and at the global level, about 5 million articles are being published annually in about 1 lakh (100,000) journals. This underscores the need for processing, filtering and choosing from this ever increasing volume of information store to arrive at core journals. Core journals or core cited journals simply denote journals that are regularly cited in the writings and researches of others in a given subject or discipline. The term 'core journals' is, therefore, used to demonstrate that a relatively small number of journals publish the majority of significant scholarly result, especially, in a given discipline. This principle is often referred to as Bradford Law. In the mid-1930s, S. C. Bradford, a British mathematician and librarian, realized that the core literature for any given scientific discipline composed of relatively few journals with very strong relevance to the field. In essence, the core journals in any field denote those that provide current and comprehensive coverage of topics in the discipline. In statistical or mathematical terms, the core journals simply describe those with the highest citation counts. These journals are in every field where they keep track of development of topics and narratives on issues of contemporary concern.

A basic feature of core journals is the fact that the articles published therein go through the peer review process. This is a process whereby experts are carefully selected based on their academic qualification, expertise and competence in a field to evaluate manuscript for potential publication so as to ascertain the validity of its methodology and conclusion (Gannon, cited in Rogel-Salazar & Rogel-Salazar, 2014). The peer review process is indeed at the heart of scholarship and intellectualism. Although there are a number of criticisms against it, it is still the most widespread method to assess the quality and accuracy of scientific results (Bohannon, 2013). The above goes to attest to the quality of

information contained in core journals.

In the light of the above, there is no doubt that the Library and Information Science (LIS) discipline has its core journals. The core journals in LIS refer to academic and professional journal publications that convey the majority of significant scholarly results and are cited extensively and regularly by scholars and researchers in the discipline. The articles in such publications are written by experts in the field to disseminate recent research findings and keep scholars and practitioners abreast of current trends in LIS and librarianship. Articles in these journals go through peer review during which more experienced and highly published scholars and practitioners evaluate their relevance and factual accuracy, as well as contribution to knowledge in the field. It is expected that postgraduate scholars in LIS should cite these core journals extensively in their theses researches which attempts to either discover new knowledge or proffer solution to identified problem situations. Citation of the core journals in LIS is of interest because it is one way of measuring their availability in the collections of the university in which the Library School is domiciled. Availability of core journals means ensuring their presence for immediate use. Hence, availability of core journals in LIS, to a very large extent, predicts their relevance and utilization.

Though it is the responsibility of university libraries to support teaching, learning, research and publication, most struggle with diminishing funds as budgetary allocation to most libraries is grossly inadequate for the acquisition of information resources. Besides, the price of journals generally, and particularly core journals in LIS, continues to rise. The problem is further compounded by the geometric growth in publications in all fields with specific reference to the core journals in LIS. This has resulted in difficulty for both the university libraries and LIS researchers to stay abreast of recent developments in the field. It is against this background that this study examines availability and utilization of core cited journals in LIS masters and doctoral theses in university libraries in South-East Zone of Nigerian. The emphasis is on local print journals, foreign print and electronic journals.

Research questions

The following research questions were posed in the study:

- What are the core cited journals in postgraduate theses in LIS in university libraries in South-East Zone of Nigeria?
- To what extent does availability of core local print journals in LIS influence their citation in LIS postgraduate theses in university libraries in South-East Zone of Nigeria?
- To what extent does availability of core foreign print journals in LIS influence their citation in LIS postgraduate theses in university libraries in South-East Zone of Nigeria?
- To what extent does availability of core cited electronic journals in LIS influence their citation in LIS postgraduate theses in university libraries in South-East Zone of Nigeria?
- What is the mean difference in citation of core local print, foreign print and electronic journals in LIS postgraduate theses based on their availability in university libraries in South-East Zone of Nigeria?

Hypotheses

The following null hypotheses were formulated based on the research questions:

- The influence of availability of core local print journals in LIS on their citation in postgraduate theses in LIS in university libraries in South-East Zone of Nigeria is not statistically significant.
- There is no statistically significant difference in utilization of core cited local print, foreign print and electronic journals in LIS postgraduate theses based on their availability in university libraries in South-East Zone of Nigeria.

Literature review

Journals are professional publications devoted to disseminating original researches and commentaries on current developments within a specific discipline, sub-discipline or field of study (Bello, Oluleye, Choji & Azubuike, 2014). They are usually published quarterly, bimonthly or monthly and issues sold by subscription (Reitz, 2004). Journals convey research result based on latest development in a given field; find out what has been studied on one's topic and provide bibliographic details that point to other relevant researches (Echezona, Ugwu & Ukwoma, 2010). It has been reported that journals perform a tripartite functions as a medium for the communication and exchange of ideas and current information, a platform for authors (professors, researchers, scholars, institution and countries) to establish and improve their professional reputation and a vehicle that provide guidance and empowerment for further research (Nnadozie, Akidi & Onyekweodiri, 2015). Nnadozie (2006 & 2008) posits that journals provide guidance and direction for further research by highlighting already established facts and gaps in knowledge. This is very relevant to literature review in which the surveyor is expected to ascertain the gaps in knowledge as a basis for the investigation. The premise of empowerment and guidance for research emphasize the importance of journals to postgraduate students. The most important information sources needed at the postgraduate level are journals and this is because journals provide recent and very often, original information (Salaam and Opeke, 2009).

Core journals or core cited journals simply denote journals with the highest citation counts. It is used to demonstrate that a relatively small number of journals publish the majority of significant scholarly result (Okechukwu, 2016). In essence, the core journals in every field/discipline are those that provide current and comprehensive coverage of topics in the discipline. In line with the above, Gooden (2010) did a citation analysis of chemistry doctoral dissertations and revealed that there are 20 core cited journals in chemistry with *Journal of the American Chemical Society* (361), *Journal of Chemical Physics* (341), *Journal of Physical Chemistry* (175), *Chemical Physics Letters* (144) and *Analytical Chemistry* (100) occupying the 1st, 2nd, 3rd, 4th and 5th ranks based on the number of citations gotten. Similarly, Gohain and Saikia (in Okechukwu, 2016) analyzed 10,983 citations in 30 PhD theses in chemical sciences. The study revealed that journals are the most preferred sources of information used by the researchers in the chemical sciences with *Journal of American Chemical Society* occupying the first rank having been cited 617 times, *Journal of Molecular Catalysis* occupied the second rank with 569 citations, followed by *Macromolecules* with 543 citations occupied the 3rd rank. In the field of commerce, Devi and Sankar (2014) did citation analysis of doctoral dissertations and revealed that

Economic and Political Weekly, *Cashew Bulletin*, *Journal of Applied Psychology*, *Pranjan*, *Indian Journal of Industrial Relations* and *The Management Accountant* occupied the 1st to 5th ranking respectively as the core cited journals.

In the field of economics, Mahammad and Khalid (2004) carried out citation analysis of two core Pakistani economics journals, namely: *Pakistan Development Review* and *Pakistan Economic and Social Review*. The study revealed that though the *Pakistan Development Review* was the more cited journal, majority of the citations appended to the journals articles were from monographs. In the field of Library and Information Science, Kherde (cited in Okechukwu, 2016) identified core journals through a citation analysis using nine journals as source of data. The findings identified 30 journals as core having gotten 10 citations and above. The journals with the highest citations are *Annals of Library Science and Documentation* (114), *College and Research Libraries* (78), *IASLIC* (65), *Journal of Documentation* (63), *Library Science with a Slant of Documentation* (63), *Herald of Library Science* (61), *Library Trends* (60), *Scientometrics* (49), *IFLA Bulletin* (48), *Journal of the American Society for Information Science* (43) amongst others. Furthermore, Chikate and Patil (2008) did a citation analysis of LIS doctoral theses submitted to the University of Pune and found that the top ten core cited journals were: *College and Research Libraries* (141 citations), *Scientometrics* (129), *Journal of the American Society for Information Science* (113), *Journal of Documentation* (99), *ASLIB Proceedings* (82), *Library Quarterly* (78), *Library Trends* (62), *IFLA Bulletin* (61), *Library Science with a slant to Documentation* (54) and *Herald of Library Science*. Eight journals were named core in the two studies though with different ranking. In Nigeria, Ahmed and Osinaike (2010) carried out a citation analysis which showed that the core cited journals in Library and Information Science in the country are *African Journal of Library, Archive and Information Science*, *Nigerian Libraries*, *Gateway Library Journal*, *Nigerian School Library Journal* and *Journal of Library and Information Science*.

As stated above core journals are journals that are most relevant to a particular discipline. According to Herring as quoted by Okechukwu (2016), a core journal is one of a group of journals that publish the majority of articles in given topic, subject, field or discipline. In support of the above, Garfield (1979) stated that a small number of journals account for the bulk of scientific result and identifying the core journals is key to keeping abreast with the latest developments in any field. Though scientists use frequency of citation of article to gauge its value on other researches, a factor that plays an importance role in making tenure and promotion decision but the results of citation studies focused on dissertation bibliographies have been useful in identifying core journals and formulating a core journal list for specific discipline (Kuyper-Rushing in Okechukwu, 2016). In view of the above, several studies were carried out to assess the availability and utilization of journals. Kagra (2013) did a citation analysis of 12 doctoral theses in psychology. The study revealed that 25 journals were core cited but only 9 were available in the university library thus showing there is low journal availability in psychology. Similarly, Kagra and Sharma (2014) did a citation analysis of doctoral theses in the field of education using 35 doctoral theses submitted to the Department of Education, Kurukshetra University from 1995-2008. The findings revealed that out of the 27 core journals cited by postgraduate students in their theses, only 7 were available in the university library thus underlining the low availability of core cited journals. Another assessment of the availability of journals used by postgraduate agricultural students of Ahmadu

Bello University, Zaria discovered that the core journals cited were available in the library (Okanlawon cited in Okechukwu, 2016). Also at the Ahmadu Bello University, Zaria, in an earlier study to determine the literature cited in research projects and dissertations in community medicine and their availability in Nigerian medical libraries, Abubakar (2002) found that journals were the most cited format with 58.56% followed by monographs 30.36% and the core cited journal were available in the medical library. It was further revealed by the study that thirteen out of the fifteen core journals identified were available in other medical libraries in Nigeria. In the same vein, Okiy (2003), in citation analysis of 4,012 citations in dissertations, revealed that though monograph were cited more than journals, the most cited journals were available in the library. Furthermore, Okwueze (2012) did an analysis of journal citation in theses and dissertation of postgraduate students of political science at the University of Calabar and found the journal resources to be slightly adequate since out of the five most cited journal, the library had three. In contrast to the above studies, Anunobi, Okoye and James-Chima (2012) in their citation analysis of postgraduate masters theses of agriculture and agricultural technology to find out the preferred citation sources, revealed that the students preferred journals but the current issues of the journals were not available in the library hence the age of citations were more than twenty years. In support of the above, Salaam and Opeke (2009) carried out a study on journal utilization by postgraduate students at the libraries of Agriculture in Nigeria. The findings showed that there was non-availability of relevant journals for research at University of Agriculture Markudi and Michael Okpara University of Agriculture, Umudike (68.2% and 69.0%, respectively). However, there were more relevant journals at University of Agriculture, Abeokuta than at the other two libraries. It was further revealed that the journals at the Universities of Agriculture libraries in Nigeria were not current enough to support research. This implies that postgraduate students using the libraries very often make references to outdated journals.

Core journal lists help librarians evaluate the adequacy of their institutions' collections and make decisions about which journals to retain and which to cancel (Nnadozie, 2006 & 2008). They also are a useful resource when prioritizing requests for new subscriptions or in evaluating the content of full text aggregated databases. Every librarian author faces the question of where to submit the manuscript in the bid to expand the literature in librarianship, write about successful programs, or report on research findings. The choice can have significant consequences on how many librarians will read it, how often the article will be cited, and the impact or influence it will have. This dilemma is especially critical for those in faculty status positions seeking promotion and tenure, as they are advised to have a steady flow of refereed articles in the major journals in the field. The advice applies to all librarian-authors at all stages of the career as submitting to peer-reviewed journals is a well-recognized step (Bradigan & Mularski, 1996, Nixon, 2014)

Methodology

This study adopted the ex-post facto research design which represents a situation where it is not possible for the researcher to manipulate the variables under study since it has already occurred. According to Simon and Goes (2013), ex-post facto research uses data already collected but not necessarily for research purposes. This design is appropriate because the basis for the study which is the

core-cited journals has already been used and cannot be manipulated by the researcher in the course of the study. The population consists of 706 postgraduate research reports made up of 623 masters dissertations and 83 doctoral theses in LIS at the University of Nigeria, Nsukka; Nnamdi Azikiwe University, Awka; Abia State University, Uturu and Imo State University, Owerri. The sample comprised of 353 (50%) of postgraduate theses produced between 1998 to 2015. Complete census was used to select all 83 doctoral dissertations while the 270 masters theses were chosen through systematic sampling. The references/bibliographies in the selected theses were physically examined to ascertain the core cited journals. The use of fifty percent (50%) of the available theses was a deliberate attempt to obtain a good representation of the core cited journals. This was particularly influenced by the submission of Omoba and Fabunmi (2010) that a larger sample of theses give rise to a more accurate outcome. Data were collected through a customized instrument captioned "Checklist on Provision and Utilization of Core Cited Journals in LIS Theses (CPUCCJLIST) made up of sections 'A', 'B' and 'C'. Section 'A' elicited such demographic data as name of the institution and degree (MLIS or PhD). Section 'B' contained a list of core cited journals while Section 'C' contained item statements on citation of core-cited journals which observations were weighted on a four-point scale, namely: Very Often (VO = 4), Often (O = 3), Sparingly (S = 2) and Never (N = 1) to determine the citation of the core cited journals. Two experts (one each from LIS and Measurement and Evaluation) scrutinized and validated the instrument to confirm its clarity, appropriateness of language, ability to elicit accurate information and suitability in line with the objectives of the study. Copies of the instrument was further subjected to a trial test after which the data obtained were subjected to Cronbach's Alpha Statistical Analysis that yielded a reliability coefficient index of .85 showing that the instrument is reliable and capable of measuring the intended variables with consistency. Physical inspection of theses and count of cited core journals were done by the researchers with the help of research assistants who were final year students in the Library Schools under study. Simple percentages, bar chart were used to answer research question one while mean and standard deviation were used to answer research questions two, three and four. t-test was used to test hypothesis 1 (H_{01}) while Analysis of Variance (ANOVA) was used to test hypothesis 2 (H_{02}). All hypotheses were tested at 0.05 level of significance. The results of the analyses are presented in *Tables 1 - 7*.

Findings and discussion

Research Question One: What are the Core Cited Journal in Postgraduate Theses in Library and Information Science in University Libraries in South-East Zone of Nigeria?

Table1: Rank Table of Core Cited Journals in Postgraduate Theses in Library and Information in University Libraries in South-East Zone of Nigeria with at least Twenty (20) Citations.

S/N	ALL JOURNALS	CITATIONS	%	RANK
1	Library Philosophy and Practice	576	15.61	1
2	International J. of Lib. and Info Science	201	5.45	2
3	African J. of Lib, Archives and Info Science	168	4.55	3

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4	The Information Technologist	155	4.20	4
5	Nigerian Libraries	155	4.20	4
6	College and Research Libraries	146	3.96	5
7	Library Review	117	3.17	6
8	Electronic J. of Special & Aca. Librarianship	114	3.09	7
9	Library Trends	84	2.28	8
10	Library Management	80	2.17	9
11	Libri	78	2.11	10
12	Gateway Library Journal	78	2.11	10
13	Borno J. of Lib., Archival & Info Science	76	2.06	11
14	IFLA Journal	70	1.90	12
15	Library Journal	70	1.90	12
16	Journal of Librarianship and Info. Science	70	1.90	12
17	Coal City Libraries	70	1.90	12
18	International J. of Gender & Health Studies	69	1.87	13
19	Journal of Information Science	67	1.82	14
20	Heartland J. of Lib. & Information Science	66	1.79	15
21	Global Rev. of Lib. & Info. Science	66	1.79	15
22	Medical Reference Service Quarterly	65	1.76	16
23	Nigerian Library Link	63	1.71	17
24	Nigerian Lib. & Info Science Review	60	1.63	18
25	Nigerbiblios	59	1.60	19
26	Literature and Reading in Nigeria	55	1.49	20
27	Journal of Library Administration	50	1.36	21
28	Information Development	46	1.25	22
29	Reference Librarian	41	1.11	23
30	International Library Review	39	1.06	24
31	Library and Archival Security	35	0.95	25
32	Journal of Documentation	33	0.89	26
33	World Libraries	33	0.89	26
34	Reference Service Review	33	0.89	26
35	Journal of the American Society for Info. Sc.	32	0.87	27
36	International Info. and Lib. Rev.	30	0.81	28
37	Lagos Librarian	30	0.81	28
38	Portal Library and Academy	28	0.76	29
39	Collection Building	28	0.76	29
40	Afr. J. of Educational & Info Mgt	28	0.76	29
41	Nigerian Lib. and Info. Sc. Trend	28	0.76	29
42	Library & Info Science Research	25	0.68	30
43	ASLIB Proceedings	25	0.68	30

44	Special Librarian	25	0.68	30
45	Leading Libraries & Info. Centre	24	0.65	31
46	Middlebelt J. of Lib. and Info. Science	24	0.65	31
47	Communicate: J. of Lib. & Info. Science	24	0.65	31
48	Nigeria University Library System	23	0.62	32
49	Journal of Info. and Knowledge Mgt	23	0.62	32
50	Journal of Academic Librarianship	22	0.60	33
51	Information Research	22	0.60	33
52	Electronic J. of Knowledge Mgt	21	0.57	34
53	Lagos J. of Lib. and Info. Science	20	0.54	35
54	Electronic Library	20	0.54	35
TOTAL		3690	100.00	

N-54 Journals

Table 1 above shows the core cited journals in LIS postgraduate theses in university libraries in South-East Zone of Nigeria with at least twenty (20) citations. There are 3690 citations appended to Fifty-four journals in LIS. From the table, it can be seen that *Library Philosophy and Practice* took the first rank with 576 (15.61%) citations followed by *International Journal of Library and Information Science* 201 (5.45%) at the second rank, *African Journal of Library, Archives and Information Science* 168 (4.56%) took the third rank, *The Information Technologist* and *Nigerian Libraries* 155 (4.20%) shared the fourth rank, *College and Research Libraries* 146 (3.96%) took the fifth rank, *Library Review* 117 (3.17%) at sixth rank, *Electronic Journal of Academic and Special Librarianship* 114 (3.09%) occupied the seventh rank, *Library Trends* 84 (2.28%) took the eight rank, *Library Management* 80 (2.17%) stood at the ninth rank while *Libri* 78 (2.11%) and *Gateway Library Journal* both shared the tenth rank. The *Electronic Library*, *Lagos Journal of Library and Information Science* and *Lagos Librarian* occupied the rear position at 34th and 35th position respectively.

From the analysis, it is clear that *Library Philosophy and Practice* has double the citations in the second ranked LIS journal and almost triple the citations in the third ranked journal. It could be seen also that only eight journals have more than 100 citations. Among these journals are three local journals (*African Journal of Library, Archives and Information Science*, *Nigerian Libraries and Information Technologists*), two foreign journals (*College and Research Libraries* and *Library Review*) and three electronic journals (*Library Philosophy and Practice*, *International Journal of Library and Information Science* and *Electronic Journal of Special and Academic Librarianship*). A graphic illustration of the distribution of these citations across local, foreign and electronic journals is shown below:

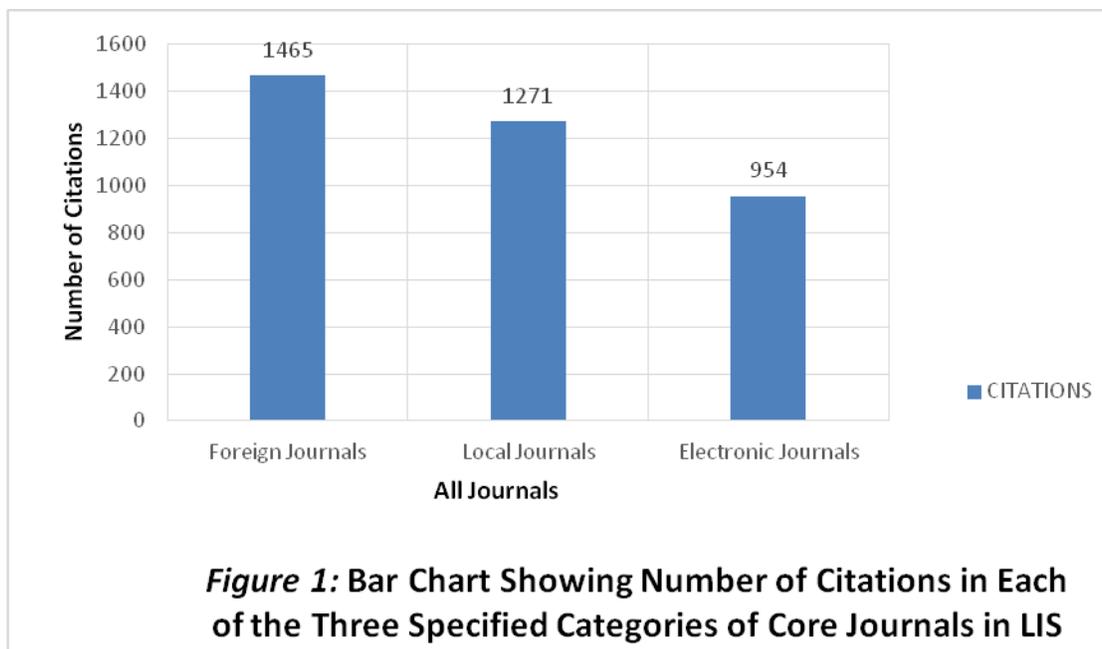


Figure 1 shows that out of the total citations of 3,690, local journals had 1271 (35%); foreign journals had 1465 (39%) while electronic journals had 954 (26%). It is evident that though the use of foreign journals is high among LIS postgraduate students in South-East Zone of Nigeria, both the local print and electronic journals are not totally far behind as they constitute a major source of information for the postgraduate students in the area of this study. The core cited journals in LIS theses in university libraries in South-Eastern Nigeria, especially, the first twenty cited core journals contrasted with findings of Kumar and Reddy (2012) and Wardikar (in Okechukwu, 2016) in their respective analysis of theses in LIS at the Sri Venkateswara University and University of Maharashtra both in India as the studies have only four journals in common: *College and Research Libraries*, *Library Trends*, *Library Journal* and *Library Management*. All the journals in common with this present study are foreign journals from the United States of America. This goes to show that what constitutes a core journal of LIS in one university or country may not constitute a core in another.

Research Question Two: To what Extent does Availability of Core Local Print Journals in LIS Influence their Citation in LIS Postgraduate Theses in University Libraries in South-East Zone of Nigeria?

Table 2: Mean and Standard Deviation of the Influence of Availability of Core Local Print Journals in LIS on their Utilization in University Libraries in South-East Zone of Nigeria

Core Local Print Journals	N	Mean of Utilization	SD
Available	262	70.54	4.47
Not Available	91	47.62	16.08

The analysis in *Table 2* reveals that a higher citation (utilization) mean of 70.54 for when the core cited local print journals in LIS are available and a lower mean of 47.62 when they are not. Specifically, out of the first twenty core-cited journals in LIS theses, eight (8) are local journals. The result means that the core local journals are used (cited) more in LIS postgraduate theses when they are available than when they are not. This result infers a high influence of availability of core local print journals in LIS on their citation (utilization) in postgraduate theses in university libraries in South-Eastern Nigeria. The result is in line with the findings of Kumar and Reddy (2012) and Wardikar and Okechukwu (2016) whose separate citation analyses of dissertations revealed that nine (9) and ten (10) journals respectively, out of their first twenty core cited journals in LIS theses, were local journals. The findings of this study is also in line with Fasae's (2012) citation analysis of dissertations and theses in the Department of Agricultural Economics and Extensions, Federal University of Agriculture, Akure where out of the twenty (20) core cited journals, eight (8) local print journals emerged. However, this result contrasts with Anunobi, Okoye and James-Chima (2012) where only one (1) local print journal emerged among the ten (10) core cited journals in a citation analysis of postgraduate theses in the School of Agriculture and Agricultural Technology, Federal University of Technology, Owerri. The present study buttresses the earlier reports that postgraduate researchers cite more of foreign journals in their theses and dissertations. In support of the use of local journals, Lariviere (2014) states there is need for more publications on the local scene as local journals provide avenue for the publication of research findings related to national topics which are likely to have direct impact on the societies concerned. The use of local journals will no doubt create an understanding of the LIS discipline and librarianship profession in the Nigerian local context because every nation and society has its own peculiarities.

Research Question Three: To what Extent does Availability of Core Foreign Print Journals in LIS Influence their Citation in LIS Postgraduate Theses in University Libraries in South-East Zone of Nigeria?

Table 3: Mean and Standard Deviation of the Influence of Availability of Core Foreign Print Journals in LIS on their Utilization in Postgraduate Theses University Libraries in South-East Zone of Nigeria.

Core Foreign Print Journals	N	Mean of Utilization	SD
Available	143	91.82	12.96
Not Available	210	54.70	13.78

The presentation in *Table 3* reveals that a higher utilization (citation) mean of 91.82 for when the core foreign print journals in LIS are available. However, a lower mean of 54.70 was recorded when the core cited journals are not available in the university libraries. The result indicates that the core foreign journals are used (cited) more when they are available than when they are not. This suggests a high influence of availability of core foreign print journals in LIS on their utilization in LIS postgraduate theses in university libraries in South-East Zone of Nigeria. The finding of this study is in agreement with that of Echezona, Okafor and Ukwuoma (2012) where a citation analysis of dissertations to

determine the information resources used by postgraduate students of the LIS department at the University of Nigeria, Nsukka revealed an extensive utilization of *College and Research Libraries* as a result of its availability in the university libraries. It is also in line with Rahman, Khatun and Mezbah-Ul-Islam (2008) in which a study of library education in Bangladesh revealed that foreign journals constitute a major information resources for LIS students, scholars and researchers. Furthermore, the findings support Anunobi, Okoye and James-Chima (2012), Fasae (2012), Kumar and Reddy (2012), as well as Wardikar (cited in Okechukwu, 2016) whose separate analysis of citation patterns in dissertations revealed that foreign journal constitute a major part in the research endeavours of postgraduate students. This infers that availability constitute a major influence on the citation (utilization) of core foreign journals in LIS postgraduate theses in university libraries South-East Zone of Nigeria.

Research Question Four: To what Extent does Availability of Core Electronic Journals in LIS Influence their Citation in LIS Postgraduate Theses in University Libraries in South-East Zone of Nigeria?

Table 4: Mean and Standard Deviation of the Influence of Availability of Core Cited Electronic Journals on their Utilization in LIS Postgraduate Theses in University Libraries in South-East Zone of Nigeria

Core cited Electronic Journals	N	Mean of Utilization	SD
Available	159	19.40	3.13
Not Available	194	8.92	3.01

The analysis in *Table 4* reveal that a higher utilization mean when the core cited electronic journals are available and a lower mean when they are not, with 19.40 and 8.92 mean scores, respectively. This means that the core electronic journals in LIS are used (cited) more when they are available than when they are not. This result, therefore, indicates a high influence of availability of core electronic journals on their utilization (citation) in LIS postgraduate theses in university libraries in South-Eastern Nigeria.

The findings from this study agrees with Edewor (2013) who studied the citation pattern of a LIS journal: *Information Impact: Journal of Information and Knowledge Management* between 2000 to 2013 and revealed that *Library Philosophy and Practice*, was the most cited journal. The reason for this is not farfetched. *Library Philosophy and Practice* is an open access online journal thus making it available all the time to postgraduate scholars and lecturers alike for their research activities. *Library Philosophy and Practice* is equally a popular journal among LIS professionals in Africa with particular reference to Nigeria as the journal provides a platform for visibility for Nigerian authors at little or no cost. The study shows that there is a positive correlation between availability of electronic journals and their citation in LIS postgraduate theses in university libraries in South-East Zone of Nigeria.

Research Question Five: What is the mean Difference in Citation of Core Local Print, Foreign Print and Electronic Journals in LIS Postgraduate Theses Based on their Availability in University Libraries in South-East Zone of Nigeria?

Table 5: Mean and Standard Deviation of Difference in Citation of Core Cited Local Print, Foreign Print and Electronic Journals based on Availability in University Libraries in South-East Zone of Nigeria.

Core Cited Local Print, Foreign Print and Electronic Journal	Universities Under Study	N	Mean of Utilization	SD
Available	UNN	58	167.72	22.24
	NAU	52	170.46	23.37
	ABSU	52	166.27	19.95
	IMSU	62	168.45	21.54
	Total	224	168.22	21.54
Not Available	UNN	25	117.72	15.35
	NAU	33	109.24	16.95
	ABSU	31	116.55	15.45
	IMSU	40	110.15	19.49
	Total	129	112.92	17.36

Key: UNN = University of Nigeria, Nsukka; NAU = Nnamdi Azikwe University, Awka; ABSU = Abia State University, Uturu and IMSU = Imo State University, Owerri.

Table 5 reveals a higher citation mean of 167.72 and a lower mean of 117.72 for UNN; higher citation mean of 170 and a lower mean of 109.24 for NAU; higher citation mean of 166.27 and a lower mean of 116.55 for ABSU; a higher citation mean of 168.22 and 110.15 for IMSU. The implication of this result is that the core local print, foreign print and electronic journals are used (cited) more in LIS postgraduate theses when they are available than when they are not. This result, therefore, infers a high influence of availability of core local print, foreign print and electronic journals on their citation or utilization in LIS postgraduate theses in university libraries in South-East Zone of Nigeria. The findings mean that while there is a significant influence of availability on utilization of core cited journals, there is no significant difference in the level of availability and utilization of these journals in the university libraries under study. This goes to show that journal availability and utilization in library and information science discipline is invariably the same in university libraries in South-Eastern Nigeria. The findings this study contrast with that of Salaam and Opeke (2009) whose investigation of journal utilization by postgraduate students at the universities of agriculture in Nigeria revealed that journal availability was more at the University of Agriculture Abeokuta than any other university of agriculture thus having a significant difference on journal utilization by postgraduate based on availability in university libraries.

Hypothesis One (H0₁): The Influence of Availability of Core Local Print Journals in LIS on their

Citation in Postgraduate Theses in LIS in University Libraries in South-East Zone of Nigeria is not statistically significant.

Table 6: Independent t-test of the Influence of Availability of Core Cited Local Print Journals in LIS Postgraduate Theses on their Utilization in University Libraries in South-East Zone of Nigeria

Core Cited Local Print	N	Mean of Journal Utilization	SD	t _{cal}	t _{crit}
Available	262	70.54	4.47	20.92*	1.968
Not Available	91	47.62	16.08		

*Significant at .05 level, df = 351

Table 6 shows that the calculated t-value of 20.92 is greater than the critical value of 1.968 at .05 alpha level with 351 degree of freedom. The difference between the t-cal and the t-crit is statistically significant. Therefore, the null hypothesis that availability of core cited local print journals in LIS postgraduate theses does not statistically significantly influence their utilization in university libraries in South-East Zone of Nigeria is rejected. This result means that the utilization of core cited local print journals in library and information science theses in university libraries in South-Eastern Nigeria is significantly influenced by their availability.

Hypothesis Two (Ho2): There is no Statistically Significant Difference in Utilization of Core Cited Local Print, Foreign Print and Electronic Journals in LIS Postgraduate Theses based on their Availability in University Libraries in South-East Zone of Nigeria.

Table 7: Analysis of Variance (ANOVA) of Difference in Utilization of Core Cited Local Print, Foreign Print and Electronic Journals based on Availability and University Libraries under Study

Source of Variation	Type III Sum of Squares	Df	Mean Square	F	Sig
Intercept	6365086.371	1	6365086.371	15704.464	.000
ALP_FP_EJ	241075.013	1	241075.013	594.800	.000
Universities_Under_Study	573.018	3	191.006	.471	.703
ALP_FP_EJ*	2020.007	3	673.336	1.661*	.175
Universities_Under_Study					
Error	139829.973	345	405.304		
Total	8125973.000	353			
Corrected Total	392380.929				

*Not Significant at .05 level, df = 3 and 345.

Key: LP- Local Print, FP- Foreign, Print, EJ- Electronic Journal

Table 7 shows that the f-calculated value of 1.661 is less than the f-critical value of 2.65 at .05 alpha level with 3 and 350 degree of freedom. The result is not statistically significant hence the null hypothesis that there is no statistically significant difference in the utilization of core cited local print, foreign print and electronic journals in LIS postgraduate theses based on availability and university libraries is accepted. This means that there is no difference in the utilization of core cited local print, foreign print and electronic journals among the university libraries under study based on availability.

Conclusion and recommendations

Based on the findings of the study, it is concluded that the provision of core cited local print, foreign print and electronic journals in LIS have a significant influence on their citation in LIS postgraduate theses in university libraries in South-East zone of Nigeria. This means that citation of core journals in postgraduate theses presupposes their availability. The result of the test of hypotheses also leads to the conclusion that there is no statistically significant difference in the utilization of core cited journals in LIS postgraduate theses based on provision in the university libraries under study. This reinforces the submission that the availability of core cited journals in LIS influence their citation (utilization) by postgraduate researchers. Based on the findings of the study, the following recommendations are made:

1. Since postgraduate programmes are research oriented, it is important that university and library management make considerable effort to improve on their existing journal collection in LIS discipline to reflect the needs of postgraduate research students. Consequently, only relevant and current journals should be acquired for the use of postgraduate students of LIS in Nigerian universities.
2. As a corollary, it is of paramount importance that budgetary allocations to Nigerian university libraries for collection development should be improved. This will facilitate the provision of core cited journals in both LIS and other disciplines within Nigerian university libraries.
3. Journal acquisitions by university libraries should reflect a balance in local print, foreign print and electronic journals as none is significantly more important than the other. Foreign journals provide international understanding of a discipline; local journals reflect national issues as it concerns a discipline while electronic journals simply provide an alternative access that is not constrained by time and space.
4. University authorities and administrators of their libraries should provide efficient internet connectivity and facilities within and outside the library to enable their patrons access resources in the network. This is of immense value to LIS postgraduate scholars and scholars as it allows for academic growth, interactions and collaborations with research peers and academic collaborators around the world.
5. More relevant open access databases such as Academic Journals ([Http://academicjournals.org/journals.html](http://academicjournals.org/journals.html)) and ArXiv ([Http://arxiv.org](http://arxiv.org)) and also web resources should be made accessible to postgraduate students since there is growing trend towards electronic journal usage. The managers of university libraries in Nigeria should seek license from database producers and check out the privileges offered by journal publishers. This will enable

postgraduate students and their lecturers to access archived journals. With electronic resources, postgraduate research students in LIS and other disciplines can access very current researches of authors worldwide in a timely manner.

6. There is need for the management of university libraries in Nigeria to publicize the core journals in their libraries' collections. The lack of use of these journals is often attributed to lack of awareness of their availability. Hence, it is very important for awareness to be created about the journal collections in LIS so that postgraduate students in the discipline can take advantage of these information resources to improve the quality of their theses.

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