UNIJERPS
Unizik Journal of Educational Research and Policy Studies VOL.15 (4);
https://unijerps.org
2021 Impact Factor: 5.641; 2020 Impact Factor: 5.355.
January-June, 2023
Indexing and Impact Factor URL: http://sjifactor.com/passport.php?id=21363

SCHOLARLY COMMUNICATION CHANNELS EASILY REACHED BY LIBRARY AND INFORMATION SCIENCE (LIS) STUDENTS

Dr. Joseph Chukwusa & Dr. Onowhakpor, E. Josephine
Email: chukwusajoseph@yahoo.com; Email: onohwakpor@delsu.edu.ng
Delta State University Library, Abraka, Nigeria

ABSTRACT

Various researches are focusing attention on universal leaning to research productivity in a number of wide-ranging disciplines. Therefore, this study was undertaken to examine scholarly communication channels available for use and extent of use by LIS students in two universities (Delta State University, Abraka and Ambrose Alli University, Ekpoma, Nigeria). Population of the study was 240 LIS students, that is, 120 students randomly selected from the two universities selected. The study used the entire population as the sample size. Descriptive survey was used for the study. A structured questionnaire was used as the instrument for data collection, and 240 copies of the questionnaire were administered, but 225copies were retrieved and found useable, thereby indicating a response rate of 93.6%. Data were analyzed using frequencies and statistical mean. The study revealed that scholarly communication channels were readily available for use by the LIS students; they were used to a high extent; aside databases, other scholarly communication channels mostly used were books/chapters, scholarly periodical/journals and research/project reports in that order. There is no gain saying the fact that scholarly communication channels usage is the in thing in the academic world. As a result, institutions of higher learning should make consistent effort in the area of database subscription such as DOAJ, AJOL etc. Challenges encountered include lack of institutional repositories, inadequate subscription-based databases in the library and inadequate skills on how to navigate scholarly communication channels. The authors argued that institutions of learning should make consistent effort in the area of database subscription through the provision of adequate funds.

K**eywords**: Academic institutions, scholarly communication channels usage, LIS students, Nigerian universities

Introduction

Human knowledge management has to do with understanding our present information generation and exchange system. This seems a crucial social challenge of our age and time. Identifying a number of communication channels as well as information swap opportunities is not negotiable in this era (Maxwell, Abah, Abalaka & Maxwell, 2018). Numerical and bibliometric means of examination characterize information exchange and knowledge generation through learning the scientific invention in a particular discipline. Various bibliometric researches are focusing attention on universal leaning to research productivity in a number of wide-ranging disciplines. It is very vital that we delve into provisions across different subject areas as it relates to several disciplines (library science inclusive).

Library science discipline is among such bodies of knowledge; and it has to do with the science of information creation, acquisition, organization and distribution to users (Thomas, 2013). The library provides information to users on issues such as leadership problems, violence, drug abuse, insurgency amongst others. Research results communicated by means of scholarly communication help the society to resolve some social challenges using print as well as digital information materials that are published in the channel.

Research is a relevant tool to society. In addition, it is useful through enabling a good number of persons to enhance their knowledge of the world they live in by, identifying various challenges, ascertaining relationships between the observable facts, and generate and examine theories as well as hypothesis (Ojo, 2011). Exclusive of research, teaching and learning would be out-of-date, monotonous and inert. It is the result of research investigation that academics in higher institutions of learning, experts and specialists in other organizations amongst others make vital and concrete contributions in other to make the society a better place (Okonofa, 2010). Scholars, researchers and scientists central concern is academic communication. This is the avenue where the aforementioned groups communicate with respect to their studies; they extend the boundaries of their knowledge to the world at large. The scholars do question time-honored notions and facts regarding science, phenomenon, challenges, in addition to issues exacting man and his environment. They exchange/distribute their research findings in a mode that is commonly acknowledged as scientific communication or scholarly communication.

This concept historically is driven by the academic societies world-wide through publishing results of their research investigations and discoveries (Maxwell, Abah, Abalaka & Maxwell, 2018). The academic societies were the chief promoters and publishers of the scholarly serials. Learned societies were first established in various European nations in the 17 and 18th century during the era of European renaissance. Though, the term later gained popularity in 1970s when access to scholarly communication became complex.

The notion of scholarly communication was noticeable in the ancient cultures, for example, the Greeks. Scholarly communication was at the onset a creation of universities. The word "scholarly" is commonly used in the educational domain, especially institutions of higher education, for actions that has to do with investigation (Hebre, 2018). The scholar posited further that scholarly communication on the other hand, is universally used to express how results from research are made public and communicated. Novel information arising from scientific investigation guided the development of an information society (this is generated by way of research which is vital to public resources). It is not adequate to focus only on creation of knowledge; equally important is to share out what is generated. Consequently, scholarly communication is here defined as an arrangement that involves

the generation as well as the means of spreading and communicating information.

Statement of the problem

The procedure for disseminating and making public research results of academics, scholars and researchers, and enabling the generated academic contents to be made available to the global academic communities is called scholarly communication. Scholarly communication provide numerous advantages to research scholars, academics and students in a number of unique ways such as: information generated by researchers in scholarly communication channels are exceedingly credible, provides evidence of what they claim, has a wider coverage and information emanating from it are in various forms. These benefits are provided to academics through a variety of scholarly/scientific communication journals. However, all the advantages of the use of scholarly communication channels in research appear to be down played by students of LIS. Therefore, the problems of this study posed in question form are: what are the scholarly communication channels available for LIS students use in Delta State University, Abraka and Ambrose Alli University, Ekpoma, Nigeria? What is the extent of usage of these channels by the LIS students? What are the challenges to scholarly communication channels' use?

Research questions

The following are the research questions:

(1). What are the scholarly communication channels that are available for LIS students use in Delta State University, Abraka and Ambrose Alli University, Ekpoma, Nigeria?

(2). What is the extent of usage of the scholarly communication channels by LIS students?

(3). Which are the mostly used scholarly communication channels by LIS students?

(4). What are the challenging issues linked to scholarly communication channels availability and usage by LIS students?

Literature Review

The Nature of Scholarly Communication

The concept scholarly communication has no distinct definition. Now and again, it is defined to consist of just peer-reviewed literature which is made available upon completion of research. Scholarly communication is the study of how researchers in various fields such as agriculture, accounting, arts, education, law, humanities, natural sciences, library and information science, management, social science, engineering, medicine, etc) make use of and publish information through informal and formal channels.. It is an arrangement through which research investigation and other scientific works are created, assessed for quality, shared to the communities and preserved for use in the future (Wolfram, 2019). The system comprise both formal ways of communication like publication in academic journals, peer-reviewed journals, conference proceedings, working papers, research monographs, thesis dissertation etc. And the informal (Tsuo, et al. 2015). The informal channels are electronic listservs, whatsapp, facebook, google+, twitter. Myspace, youtube, linkedin, flicker, instagram (Samaradiwakara, 2010; Okuonghae, 2018). Scholarly communication, Das (2015) noted is the procedure that entails sharing,

disseminating as well as the publishing of research reports of researchers so as to enable access to the academic content globally. Habre (2018) describe scholarly communication as the contact amongst scientists and researchers with respect to their research methodologies, scientific experiments, keywords along with conclusion. In summary, it is the procedure through which the outcome of research is presented to the society and institutions in an acceptable way to enable the advancement of knowledge in various disciplines.

It is the scholarly process of creating, evaluating; publishing, disseminating, preserving and reuse of research results. It is an idea that involves other persons and proposal writing; and is employed to generate publication (this is what is termed research lifecycle. According to Thomas (2013), scholarly/scientific communication practice is a minute aspect of a bigger research lifecycle. Researchers who are engaged in the advancement of knowledge are participating in collaborative scholarly projects; as a result, plan their investigation with their research partner/funders in addition to their institutional participating group. The scholars put up research proposal and present it to the funding agency who may request that an aspect of the research proposal be amended to align with goal as well as budget. Research procedure begins with assembling research data through replication, experiment plus observation. The created data is evaluated and a report put forward by the research team/group leader, and results of the study communicated to the funders. Any of the communication channels may be chosen to publicize and share findings of the research (to those who the idea was meant to serve).

Maxwell, Abah, Abalaka, and Maxwell (2018) acknowledged that there are two categories of scholarly communication channels. The first category is the primary sources that offer direct information or direct evidence regarding the subject under study and the research findings are employed in producing the following: conference proceedings, academic journals, research
monographs, research reports, thesis and dissertation, working papers, etc. Secondly, the secondary sources are tertiary books, historical scientific journal, indexing and abstracting services, etc.

Scholarly Communication Channels Available for Students' Use

Scholarly communication channels available for LIS students use in their research reports includes: conference proceedings and seminar, thesis and dissertations, projects, African online journal, peer-reviewed journals, Jstor etc. View exchange, information by speech, signals, messages or writings is term communication (Yourdictionary.com, 2016). Also, it is referred to as the process of conveying intended message from one person or group of persons to another by the use of commonly understood symbols and semantic conventions (Popoola, 2014). According to Berge (2017), communication models have a number of basic steps which comprise of the creation of communicative intent, communication composition, communication encoding, signal

transmission using a particular channel or means, signal reception using a particular channel, communication decoding as well as the final interpretation of the communication by the recipient. Communication can be spoken or un-spoken and it may also be by formal or informal method. Librarians/other experts communicate in order to discuss ideas, formulate research problems, resolve experimental or hypothetical problems, publicize results, as well as getting feedback with respect to the findings. Kumar (2014) noted that the journal article that is published, archived, and accessible is just only one aspect of the scholarly communication procedure. Science is essentially social and unofficial scientific message that forms the backbone that connects librarians/other professionals as well as enables scientific progress. Pikas (2009) acknowledged that informal communication is the exchange of information in terms of thoughts, ideas and ways of doing things between experts in order to create or sustain relationships as well as working collaboratively. Unofficial/informal scientific communication is a message between scholars in an unofficial setting, using a non-formal method; for example, exchange of private communication, face to face conversation, and sharing opinions (Talija, 2013). Unofficial scientific communication is now and then used to explain the informal communication arrangement of people with common and identical interest. Formal communication conversely employs public and lasting vehicles like books and journals to transfer information (Raini, 2010). Intellectual/scholarly communication is the practice of generating, organizing, assessing, formatting, dispensing/making accessible, deploying and converting scholarly works using official and unofficial channels. According to Onohwakpor (2003), scholarly communication is about sharing useful innovations equally in thought as well as in practice; aimed at encouraging scholarly information exchange and ensuing advantages which are results of experimentation and discussion. The university/institution of higher education academic community could be seen as a major communicator of science along with technological innovation in the world (Chukwusa, 2015). This according to the scholar is because for scholarly communication to be effective there must be an all time provision of electricity. Creation, organization and dispensing· of information is a crucial facet of an academic vocation. In tertiary institutions academics consist of both male and female. All of them carry out their academic functions and work towards becoming professors. To advance to the professorial rank, the candidate must have excellent records of intellectual achievements as well as being nationally and internationally known in one's discipline. As a result, Wolfram (2019) acknowledged that scholarly research creates, spread and dispense information with respect to the results, methods, new procedures and products. The result findings are distributed and assessed by academic colleagues and students. The need for informal and informal scholarly communication both locally and internationally is a sine qua non.

Extent of Usage of Scholarly Communication Channels

Hew (2011) claimed that new types of scientific channels have evolved during the last 20 years to coexist alongside established channels. Open-access publishing and digital archives were considered new kinds of formal scientific research publishing, while social media tools such as wikis, blogs, social academic networks and preprint repositories were considered informal communication channels (Chukwusa, 2020; Allen, 2013). The introduction of new media (internet or digital technologies) has altered the extent of how individuals access information, communicate with one another, and share it. People now find, read, see, and share the information they want, anywhere, anytime, and on any topic, unlike in the past when people were limited to using traditional media for interpersonal contact. In this way, social media's influence and effectiveness as a route of communication between students, faculty members and librarians are growing. Also, this trend has sparked the growth of numerous popular and obscure search engines as well as bulletin boards, forums, social networking sites, and other new channels for informal scientific discussion (Mcquail, 2011). According to Raini (2010), formal scientific communications, which are typically communicated orally, such as seminars, conference, lectures and one on one interview, are now being profusely done using modem technologies.

Research findings and information are frequently quickly and effectively communicated through formal scientific communication channels. They are simple and enjoyable to use, and they offer a high level of flexibility. There is the potential for two-way communication between the information's producer and receiver, which is embedded in the context of the discipline's scholarly tradition and is shaped by its practices and viewpoints (Folarin, 2006). Additionally, there is a standard model of the flow of scientific information that continues to stand out as the foundation for comprehending the timeline and key milestones for informal scientific communication (Gravey & Graffith, 2010). According to Wolfram (2019), scholarly communication included both formal and informal methods and was essential to the expansion of knowledge and a scholar's career. Academics share ideas they develop with colleagues using informal channels such the phone, letter, telex, and facsimile (fax). Researchers who use informal methods expand on the efforts of others, write up their discoveries, and then freely provide them to publications.

The peer-review procedure is managed by the publishers, who also generate and actively disseminate the content. Such works can be found in publications such as books, journals, tapes, and audio-visual content. Writing in academic journals, books, e-only journals, reviews, preprints, working papers, encyclopedias, dictionaries, annotated material, data, blogs, discussion forums, professional and scholarly hubs, and conference papers are some of the channels that are frequently used(UNESCO, 2015). Multimedia formats including sound and video recording are among the additional forms, notably in the arts and humanities.

Clearly, scholarly communication incorporates significant components,

including scholars, publishers of learned journals and books, academic libraries as well as their academic societies. All components of the scholarly communication system are fundamentally interdependent, according to the 1979 National Enquiry into Communication Report (Maxwell et al. 2018). The system is also highly susceptible to influence from two external factors: the actions of funding agencies and the emergence of new technologies. The processes of conception, assessment, production, and distribution entail the elements. The system involves academics as authors, editors, and editorial board members; peer review is used for evaluation by learned organizations and others; and commercial, institutional, membership-based publishers and professional organizations handle output. Libraries, especially academic libraries, distributors, merchants, aggregators, subscription agencies, and individual and institutional subscribers all play a part in distribution (Thomas, 2013). Because higher institutions of learning place a high priority on communicating their research findings, the volume of scholarly content have improved considerably in recent years.

Mostly Used Scholarly Communication Channels

Students use scholarly communication channels extensively for their research assignments. Most popular scholarly communication channels used by the students includes peer-reviewed journals; thesis and dissertation; conference proceedings/seminar; institutional repositories; books & chapters; African Journals Online; Google scholar; Academic journal; Jstor; Directory of Open Access Journals (DOAJ); Scholarly periodicals; EbscoHost etc. (Das, 2015).

According to UNESCO (2015) there are numerous alternatives that are on hand for academicians and intellectuals with regard to academic communication. There are several primary sources like academic journals, research reports, conference proceedings, working papers, patent and standards, thesis and dissertations. The most distinguished channel of communication amongst academics is periodicals; and it is a highly favoured publication channel in the scientific communities (Thomas, 2013). This is due to its high degree of scholarly impact, credentials, worth, assurance, availability and outreach quality. The scientific seminars are considered as good avenues for reaching out to academic communities in an interactive mode, where they get feedbacks on research papers presented. Research monographs also is another alternative in use to disseminate results of research. It could be books or a compilation of chapters written via different writers with each chapter on a study describing definite amount of results in the research work. The purpose of research reports and project reports is to formally communicate research findings to funding organizations and other parties involved in the research process. The purpose of theses and dissertations is to document and communicate the findings of doctoral and masters level research projects conducted by students enrolled in higher education institutions and universities (Thomas, 2013). In certain nations, institutional or national repositories of electronic theses and dissertations (ETD)

make public-funded doctoral dissertations available. Working papers are used to share the results of ongoing research. Working papers aid researchers in obtaining quick, high-quality feedback for specific adjustments to research design or data analysis. The patents are a method for safeguarding intellectual property. A novel invention that results from scientific study and has applications for improving human life is patentable and its creators can claim ownership of it by registering with the appropriate authorities and completing the relevant legal procedures. These modes of intellectual exchange are often referred to as primary sources, original sources, or primary literature; in global or national indexing and abstracting databases, commonly referred to as alerting services (Maxwell et al., 2018).

Challenges Faced by Students in the Usage of Scholarly Communication Channels

To facilitate academic success, library services to students must provide access to a broad range of information sources and services via effective scholarly communication tools, such as books and journals. These tools provide a gateway to all future information inquiry, not only preparing students for graduate work and research but also teaching them to use information sources as citizens and as professionals (American Library Association Annual Conference, 2005). Challenges encountered in the use of scholarly communication tools include rising cost of online publishing; lack of successful resolution of negotiations between institutions and online access journal subscription, poor economy and no salary syndrome, and crash in currency value and brain drain in our institutions (Maxwell et al. 2018). The least rated challenge in that study was lack of university management support for scholarly communication channels for use of research reporting tools.

Das (2015) noted that the term "serials crisis" is frequently used to describe the rapidly rising cost of many academic journals' subscriptions, especially those produced by for-profit publishers. This academic publishing crisis is "widely perceived," which has to do with the combined pressure of university budget cutbacks, rising journal costs, an intolerable economic recession, and recent global economic downturns. In many nations, the funds accessible to libraries for journal subscriptions have either stayed the same or actually decreased (Onohwakpor & Tiemo, 2006). On the other hand, for many years the cost of institutional admission to journals appears to have increased much more quickly than the Consumer Price Index. Due to price increases for the most important journals, fewer people are subscribing to journal titles. The serials crisis phenomenon sparked the worldwide open access movement, which is assisting researchers in reducing their reliance on monopolistic corporate publishing firms (UNESCO, 2015). As one of the main sources of income to self-sustain an open access journal publishing endeavor, many open access journal publishers charge article processing fees or publishing fees to the authors who submit the articles. There are also free open access journals that receive cross-subsidies

from state exchequers or group funding from members of scholarly societies. Nowadays, predatory publishers are also paying attention to open access publications. There is a strong likelihood that there will be one "predatory" open access publication for every three "recorded" open access journals. Open access journals are typically listed in the Directory of Open Access Journals (DOAJ), which as of January 15th 2014 showed availability of about 9804 open access journals (Das, 2015). In this module, various causes of the serials crisis and mitigation strategies are covered in depth to aid researchers in understanding current issues relating to scholarly publication, particularly journals.

Research Method

The study investigated the extent to which the LIS students use these scholarly communication channels for their research. The descriptive survey approach (design) was used for this study. Population of the study was 120 students randomly selected from each of the universities; this totaled 240 LIS students - that is, 120 students randomly selected from the two universities. The study used the entire population as the sample size. Descriptive survey was used for the study. A 2-point Likert scale structured questionnaire was used as the instrument for data collection. The questionnaire was developed by the researchers, and the face and content validity was done by 2 lecturers in the Department of Library and Information Science, Delta State University, Abraka. 240 copies of the questionnaire were administered, and 225copies were retrieved and found useable, indicating a response rate of 93.6%. Data were analyzed using frequency counts and statistical mean.

Presentation of Results

Table 1: Scholarly Communication Channels Available for Use by LIS Students

	Scholarly communication channels available for use	**Options** A	D	
		A = 2	D = 1	Mean scores
1.	Thesis and dissertation	142	83	1.63
2.	Conference proceedings/seminar	187	38	1.79
3.	Research/project reports	203	22	1.89
4.	Institutional repositories	189	36	1.84
5.	Scholarly periodical/journals	216	9	1.96
6.	Ajol	103	122	1.45
7.	Doaj	80	145	0.91
8.	Books/chapters	214	11	1.95
9.	Ebscohost	58	167	1.26
10.	Working papers	90	135	1.40
11.	Scopus	52	173	1.23
12	Index Copernicus	101	124	1.45
13.	ProQuest	91	134	1.40
	Grand mean score			1-01

Cutoff point = 1.5

Table 1 revealed that aside databases (Scopus, Index Copernicus, ProQuest, Ebscohost, DOAJ and AJOL with mean scores below the cutoff point (1.5), other scholarly communication channels in the

distribution were readily available for use by the LIS students.

Table 2: Extent of Usage of Scholarly Communication Channels by LIS Students

	Extent of usage of scholarly communication channels	**Options**		
		High Extent	**Low Extent**	
		A = 2	D = 1	Mean scores
1.	Thesis and dissertation	105	120	1.47
2.	Conference proceedings/seminar	147	78	1.65
3.	Research/project reports	189	36	1.84
4.	Institutional repositories	128	97	1.57
5.	Scholarly periodical/journals	152	73	1.68
6.	AJOL	76	149	1.34
7.	DOAJ	79	146	1.35
8.	Books/chapters	218	7	1.97
9.	Ebscohost	101	124	1.45
10.	Working papers	137	88	1.61
11.	Scopus	53	172	1.24
12.	Index Copernicus	78	47	1.35
13.	ProQuest	62	163	1.28
	Grand mean score			1.52

On the extent of use of the scholarly communication channels in the distribution, table 2 showed that all the items were used to a high extent. This is because the grand mean score of the distribution was 1.52 which was above the mandatory 1.50.

Table 3: Mostly Used Scholarly Communication Channels by LIS Academics

	Scholarly communication channels available for use	**Options**		
		A	**D**	
		A = 2	**D = 1**	**Mean scores**
1.	Thesis and dissertation	163	62	1.72
2.	Conference proceedings/seminar	89	136	1.40
3.	Research/project reports	122	103	1.54
4.	Institutional repositories	66	159	1.29
5.	Scholarly periodical/journals	189	36	1.84
6.	AJOL	86	139	1.22
7.	DOAJ	75	150	1.33
8.	Books/chapters	203	22	1.90
9.	Ebscohost	67	158	1.30
10.	Working papers	63	162	1.28
11.	Scopus	76	149	1.34
12.	Index Copernicus	59	166	1.26
13.	ProQuest	66	159	1.29
	Grand mean score			1.49

Table 3 revealed that the mostly used communication channels in the distribution are books/chapters (1.90), scholarly periodical/journals (1.84) and research/project reports (1.54) in that order. Also, the least mean score in the distribution goes to Ajol (1.22).

Table 4: Major Challenges Faced by LIS Students in the Usage of Scholarly Communication Channels

	Challenges faced by LIS students as per the use of scholarly communication channels	Options		
		A = 2	D = 1	Mean scores
1.	Poor economy and depreciation of the real income of parents	118	107	1.52
2.	Inadequate skills on how to navigate scholarly communication channels	121	104	1.54
3.	Inadequate subscription-based databases in the library	129	96	1.57
4.	Too many predatory journals	126	89	1.52
5.	Lack of institutional repositories	189	38	1.85
6.	Rising cost in print and online publishing	118	107	1.52
	Grand mean score			1.54

Table 4 revealed that lack of institutional repositories (1.87), inadequate subscription-based databases in the library (1.57), inadequate skills on how to navigate scholarly communication channels (1.54) are major challenges. Poor economy and depreciation of the real income of parents, too many predatory journals, rising cost in print and online publishing had 1.52 as mean score each. In fact, all the items listed in the distribution were seen as challenges.

Discussion of the findings

On availability of scholarly communication channels for students' use, the study revealed that aside databases (Scopus, Index Copernicus, ProQuest, Ebscohost, DOAJ and AJOL other scholarly communication channels in the distribution were readily available for use by the LIS students. In a study by Maxwell et al, (2018) on scholarly communication channels available to social science university lecturers in tertiary institutions in the north central zone, it was discovered that out of the 25 items in the distribution 20 of them were available for use. However, in this study databases were not effectively used by the students.

Again, on extent of use of scholarly communication, Maxwell et al. (2018) in their study found that the extent of use of scholarly communication was high; this corroborates this study' findings. Furthermore, Ubogu and Chukwusa (2023) and Talija (2013) on information sharing in academic communities: types and levels of collaboration in information seeking and use revealed in that study that the use of scholarly communication channels was to a high extent.

Furthermore, the study revealed that the mostly used communication channels in the distribution are books/chapters, scholarly periodical/journals and research/project reports in that order. Also, the least mean score in the distribution goes to AJOL.

This finding differs from Maxwell, Abah, Abalaka and Maxwell (2018) who revealed in their study that although

the existence of new communication technologies such as the internet offers faster and cheaper facilities, face-to-face communication is still the most used and preferred communication channel by academic staff in interacting with their students. In addition, the researchers further reported that there was a significant relationship between the communication channel mostly used by respondents and their perception of media richness and social presence.

Finally, the study revealed that lack of institutional repositories, inadequate subscription-based databases in the library, and inadequate skills on how to navigate scholarly communication channels are major challenges. Others are poor economy and depreciation of the real income of parents, too many predatory journals, and rising cost in print and online publishing.

White and King (2020) were supported by this study. In their study which stated that doctoral students had average levels of research and scholarly communication abilities were confirmed by the students' doctoral advisors. This conundrum was reflected in their answers to the obstacles and tools for academic and research communication.

The following issues with using scholarly communication channels were also mentioned by Maxwell et al. (2018): increasing costs of online publishing, inability to come to an agreement with institutions regarding online access journal subscriptions, a poor economy and collapse in currency value, and brain drain from our institutions. The least problematic issue was the lack of university management support for scholarly communication channels when using social science study reporting tools.

Conclusion

The study conclude that scholarly communication channels were readily available for use by the LIS students; they were used to a high extent and that aside databases, other scholarly communication channels mostly used were books/chapters, scholarly periodical/journals and research/project reports in that order.

Recommendations

There is no gain saying the fact that scholarly communication channels usage is the in thing in the academic world. Be that as it may, it was recommended that institutions of learning should make consistent effort in the area of database subscription such as DOAJ, AJOL etc.

Also, due to the fact that ICTs are majorly used in information transmission, educational institutions must as a matter of urgency make funds available to assuage this challenge.

References

Akhtari-Zavare, M. (2009). *Communication channels used by academic staff in interacting with their students*. https://www.academia.edu/8423931/communication_channels_used_by_academic_staff_in_interacting_with_their_students

Allen, l. (2013). Exploring invisible scientific communities: Studying networking relations within an educational research community. A finished case. *Higher education*, 42(4), 493- 513.

American Library Association Annual Conference (2005). *Guidelines for university*

library services to undergraduate students. http://ala.america.article/assoc

Bar-llan, 1. (2008). Informetrics at the beginning of the 21ST Century: A review. *Journal of Informetric,* 2, 1-52.

Burpee, K. J. & Fernandez, I. (2014). Scholarly communication at Canadian research libraries: Conversations with librarians. http://dx.doi.orgllo.771012162-3309.112

Chukwusa, J. (2020). Blog technology: Constraints to implementation in public university libraries in nigeria. Science & Technology Libraries, 39(1), 83-95.

Chukwusa, J. (2015). Electricity provision in Nigerian university libraries: The solar energy solution. *International Journal of Scientific & Technology Research*, 4(10), 42-46.

Das, A.K (2015). *Scholarly communication* (vol. 1). UNESCO publishing.

Http://undesdoc. Unesco. Org/images/0023/0023 191231938e.pdf

Finlay, C., Tsuo, A. & Sugimoto, C. (2015). Scholarly communication as a core competency: Prevalence activities and concepts of scholarly communication librarianship shown through job advertisements. *Journal of Librarianship and Scholarly communication*, 3(1), 1-27.

Folarin, J. (2006). The impact of knowledge sharing, organisational capacity and partner quality on is outsourcing success. *Information and management*, 38(5), 323-335.

Gravey, W.D & Graffi, O. (2010). *Communication the facilitating information essence of science among scientists, librarians and students etc*. New York: Pergamon.

Hebre, S. (2018). The changing role/future of academic libraries in the scholarly communication system. LLA 4th conference, Lebanese American University.

Hew, K.F (2011). *Students and teachers' use of face book. Computer in human behaviuor* 27: 662-676. Hillsdale, NJ: Lawrence Erlbaum Associates.

Hollister, C. (2017). *Perception of scholarly communication among library and information science students*. https://doi.org/1077102162-3390-2180

Howard, J. (2011). *Social media lure academics frustrated by journals.* http://chronicle .com/article /social-mediatureacademics/126426/

Magnone, E.A. (2015*). Analysis of scholarly communication activities in buddihim and buddhist studies.* www.mdpi.com/journal/information.

Magnone, E.A. (2012). Analysis for estimating the short term effects of Japan's triple disaster on progress in material science, J*ournal of Informetric*, 6, 289-297.

Mcquail, S. (2011). Why communication researchers should study the internet: A dialogue. *Journal of communication*, 46(1), 4-13.

Maxwell, C.E.O. (2016). Utilization of library and information resources for social science research in universities in North Central Zone, Nigeria. PhD dissertation, University of Nigeria, Nsukka.

Maxwell, E.Z., Abah, A., Abalaka, F.B. & Maxwell, M.E (2018). *Scholarly communication channels available for social science academics in tertiary institutions in north central zone, Nigeria. h*ttps://www.ajol.info/index.php/ict/article/view/182063

Okorie, A.M (2010). Use of ICT among academics in Nigerian Universities. PhD dissertation, university of Nigeria, Nsukka.

Okunoghae, O. (2018). *Librarians' awareness of social media usage for*

informal scientific communication in university libraries in South-South, Nigeria. *https:/lwww.digitalcommons.unl.edul/ibphilprac/170 4*

Onohwakpor, J.E & Tiemo, P.A (2006).The pains and gains of publication requirements: A survey of librarians in Delta State University, Nigeria. *Library Philosophy and Practice*, 8 (2), 1-9.

Onohwakpor, J.E (2003). The survey of staff relationship among senior staff in Delta State University library. *Library Philosophy and Practice,* 25(2), 97-107.

Popoola, L.A. (2014). Communication in the communication science. In: D. Dervin and M, Voight (eds). *Progress in Communication Science (ppl-43)*. Norwood, NJ: Ablex.

Pikas, L.A. (2009). Changing patterns of communication among scientists in an era of telescience. *Technology in Society,* 12(4), 457-477.

Raini, C. (2010). New light on the invisible college of the social relations of English science in the twenty first century. *Transactions of the royal historical society*, 5(24), 19-42.

Talija, S. (2013). Information sharing in academic communities: Types and levels of collaboration in information seeking and use. *New Review of Information Behavior Research,* 3, 143-159.

Thomas, W.J. (2013). The structure of scholarly communication within the academic libraries. *Serial Review,* 39(3), 167-171.

Ubogu, J.O. & Chukwusa, J. (2023). Extent of academic librarians' collaboration in research in selected federal universities in Nigeria. *Central Asian Journal of Education and Computer Sciences (CAJECS),* 2(1), 38-50.

UNESCO (2015). *Scholarly communication: Open access for researchers' module*. http://unesco.org/open-access/terms-use-ccbysa-en

White, E. & King, L. (2020). *Shaping scholarly communication guidance channels to meet the research needs and skills of doctoral students at Kwame Nkrumah University of Science and Technology*. Shaping scholarly communication guidance channels to meet the research needs and skills of doctoral students at kwame nkrumah university of science and technology - sciencedirect

Wolfram, D. (2019). *Understanding and navigating the scholarly communication landscape in the twenty-first century.* Doi: 10.3389/frma.2019.00004