Mapping Publication Pattern in African Journal of Library, Archives and Information Science, 2009–2018: An Informetric Study

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ABSTRACT

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This informetrics study was conducted to find out the distribution of articles and authors that published in African Journal of Library, Archives and Information Studies [AJLAIS]) from 2009 to 2018; considering the year-wise growth of research articles; authorship pattern and collaboration ratio; subject and geographical distributions of authors; and authors' productivity level. A descriptive informetrics research design was adopted. Quota sampling technique was used to select all the articles published within the ten-year period. Data collected through a self-designed checklist was analyzed using frequency count and percentage. The findings revealed that 141 articles, contributed by 266 authors were published by AJLAIS during the period. An annual average growth of 1.20% was recorded. Overall year-wise authorship pattern revealed that majority of articles (62.41%) published in AJLAIS were multiple authored. Also, articles on Informetrics and ICT dominated the journal. Some subject areas not covered were identified such as: indexing and serial collections management. Average collaborative index across the 10-year period for the journal was 0.62. South Africa and Nigeria were the two major prolific contributors to AJLAIS, just as evidence-based research papers of survey type (65.25%) were the most common to the journal. There should be increased numbers of articles in each edition over the coming years, and awareness should be created by the publishers to familiarize the researchers with the publishing requirements of the journal. Also, LIS researchers should concentrate more on areas usually left untouched by previous studies. The study is original as no other similar study was found on publication pattern of articles in AJLAIS covering a ten year period of 2009-2018. The findings of the study will also serve as a feedback mechanism for the Publisher of the Journal and LIS researchers on how to improve the journal and LIS research in general.

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1. Introduction

Information contained in scholarly journals is very useful to the success of research activities, and as such several efforts were consolidated to ensure that it comes out as planned and meets requisite professional and academic standards. While it is one thing for a scholarly article to be published, it is another thing entirely for such published work to be measured in terms of its impact or quantitative variables such as the citation patterns used, level of acceptability and readership among users. This need gave rise to the development and application of the statistical methods and quantitative reasoning to measuring published information, commonly known today as Informetrics. Informetrics is a generic term which comprises of the following fields: Librametrics, Scientometric, Webometrics, Cybermetrics and Bibliometrics.

According to Siluo and Qingli (2017), informetrics can be defined as the study of quantitative aspects of recorded information in any form. They also maintained that the advancement in the use of the Internet has also widen the scope of bibliometrics into electronic communication media; such new areas are known as webometrics and cybermetrics. This view was shared by The STANDS4 Network (2019) portraying informetrics as the study of information through its quantitative aspects, irrespective of their forms or where such originated from. Such quantitative aspects include the creation, dissemination and use of such information. From the above, it can be gathered that informetrics is a general term that describes the study of quantitative aspects of information. It is the application of statistical methods to the study of tangible aspects of information, irrespective of their physical form or where it was being published. Such tangible aspects include: chronological distribution of citations, average number of cited sources, productivity index of authors, type of research articles published, etc.

According to the African Journals Online (AJOL) (2019), the African Journal of Library, Archives and Information Studies (AJLAIS) was first published in 1991. It is published twice a year (April and October) by Archlib and Information Service, Ibadan Nigeria. AJLAIS is a peer-reviewed academic journal covering empirical and original research in library science with a special focus on Africa. AJLAIS is published both as print version and electronic versions and is also available in the African Journals Online (AJOL) database.

As at December 2018, AJLAIS has published 28 volumes (56 numbers) with varying numbers of articles per issue. Scimago Lab (2019) ranked AJLAIS with H-index of 8 which indicated that the journal has a high impact factor and is widely used among Library and Information Science researchers. The Journal is also indexed in other highly ranked indexing services such as Scopus and Library, Information Science and Technology Abstracts (LISTA).

1.1. Statement of the Problem

As LIS researches abound, it is, therefore, necessary to measure the publication pattern of such studies to identify the trends as well as developing the field of study. Likewise, due to the incursion of ICT into various activities, it has been observed by previous studies (Edewor, 2013; Anyaoku & Okonkwo, 2018; Udo-Anyanwu, 2018; Usman & Ewulum, 2019) that many LIS researchers focus

more on the use of ICT, thereby leaving out other subject areas. This usually creates literature and research gaps, which is damaging to the future of the profession. Similarly, observations have shown that many of the available informetrics often times analyze articles domiciled in electronic databases (Wen & Hsieh, 2014; Eniayejuni, 2020; Sweileh, 2020). This may be as a result of readily available (secondary) data needed to complete such studies. However, the problem associated with this is that leaving out print journals or publications is not good for the development of the profession, as a major part of collections in many libraries across Africa are still paper-based (Ogunmodede & Ebijuwa, 2013; Dare & Ikegune, 2018). Therefore, there is the need to conduct an informetrics study using paper-based publications as primary data will be collected directly by the researcher from the journal. Researchers and publishers of academic journals need to be informed and guided on what to write and publish respectively. It was on this basis that this study set out to carry out a 10-year informetrics analysis of research articles published in the African Journal of Library, Archives and Information Studies (AJLAIS) from 2009 to 2018.

1.2. Research Questions

This study provided answers to the following research questions:

- What is the distribution of articles and authors in AJLAIS by year and issue from 2009-2018?
- What is the year-wise growth of research articles published in AJLAIS from 2009-2018?
- What is the overall/year-wise authorship pattern of AJLAIS from 2009-2018?
- What is the subject distribution of published articles in AJLAIS from 2009-2018?
- What is the degree of collaboration among authors of articles in AJLAIS from 2009-2018?
- What are the geographic distributions of the authors in AJLAIS from 2009-2018?
- What are the types of research articles published in AJLAIS from 2009-2018?
- Who are the most published authors in AJLAIS from 2009-2018?

2. Literature Review

One major purpose of publishing scholarly journals is to communicate scholarly works or research outputs to the entire academics or scholars. Accordingly, The Royal Society (2011) affirms that the major purpose of academic publishing is to provide a platform for researchers to impart their knowledge on one another and also to contribute to the development of knowledge in their respective fields. It is, therefore, imperative to measure, in quantitative terms, such aspects of the publications like average number of cited sources, productivity index of authors, type of research articles published, etc. This is known as informetrics. Hood and Wilson (2001) observe that the terms: bibliometrics and scientometrics can be used interchangeably with informetrics. This translates that the three terms can be used interchangeably to mean the study of characteristics of literature outputs in a particular field or discipline. Consequently, Siluo and Qingli (2017) gave a rather more robust description by referring to them as the three metrics. They affirmed that bibliometrics, scientometrics

and informetrics use similar and entwined methods to study publication patterns. However, they differ in the discipline or type of publication been studied, such that bibliometrics is more associated with library/document science, scientometrics belong to the science, whereas informetrics belong to the information science.

Informetrics studies cover areas such as: country-wise analysis of output; discipline-wise analysis; impact factors; choice of journals for publications; citation analysis; author productivity; growth of scientific publications (Bar-Ilan, 2008). This implies that informetrics study focuses on those tangible aspects of research publications that are necessary to enhance decision making by the publishers and researchers as well as monitoring publication trends in a given field of study. Furthermore, Qiu et al. (2017) divide informetrics into two major aspects – broad and narrow senses. To them, the broad sense of informetrics is all encompassing, whereas, the narrow part deals with the use or application of mathematical, statistical and other similar quantitative techniques to study the features of information products. This portrays that informetrics study is very wide as it encompasses other metrics, due to its nature of the ability to study information products without regards to the physical nature or format of such information product. Peters and Bar-Ilan, (2015) argued that informetrics study can assists librarians in identifying and deciding on the core journals in a field of study to subscribe to for the clients use. This view was corroborated by Tu (2019) that informetrics studies are beneficial as it aids evaluation of research in a given field and also assist in identifying authors' productivity and core journals in a particular field. This view was corroborated by.

Similarly, Rowlands (2005) in his informetric study of authorship data and research productivity of Emerald Journal discovered that very few authors are consistently productive. He points out that while Lotka's law may be potent in yanking productive authors from non-productive authors in a field, it fails to give reasons why some authors are productive and others are not. Ani (2012) conducted an informetric analysis of research output in Nigeria universities from 2000-2010. They discovered that years of establishing the universities play an important role in the scholarly productivity of such institutions. The results revealed that the federal government-owned first generation universities were the top five most productive universities in Nigeria. Also, Aboyade et al. (2017) also carried out a bibliometric study of articles published in Nigerian Libraries from 2012-2015. They discovered that majority of the authors that contributed articles across the four years were from the University, distantly followed by the Polytechnic.

3. Methodology

The study adopted a descriptive informetrics research design method to analyze articles published in the African Journal of Library, Archives and Information Studies (AJLAIS) from the year 2009-2018. This consisted of 10 volumes of 20 issues with 141 articles. Data for the study were collected directly from the articles published in the journal. Also, the formula by Subramanyam (1983) was used to calculate the degree of collaboration among authors, where:

C= Degree of collaboration (based on total number of multiple and single authored papers);

Nm= Number of multiple authored papers; Ns= Number of single authored papers

The efficacy of the formula has been proved by Pradhan, Panda, and Chandrakar (2011), Dharanikuma et al. (2014) and Thavamani (2015) in their studies.

Annual growth of the research articles was calculated using the formula $r = \frac{P1 - P0}{P0}x$ 100 where:

- r = Publication growth in percentage
- P0 = Number of publication in the base year
- P1 = Number of publication in present year.

The formula has been tested by previous studies such as that of Verma et. al. (2018) and it proved effective. The data were presented using frequency tables and graphs for easy clarification. Similarly, Anyi, Zainab, and Anuar (2009) recommend the criteria for picking journals for informetric s analysis. These include the quality of the journal, the degree of the impact of the journal, its national as well as international coverage, its popularity and coverage of certain areas of research in the field. AJLAIS was selected for this study because of its popularity and consistency in publication since its inception in 1991. Also, it is a widely cited journal as established by Onyancha (2019) that AJLAIS was the most cited journal in Library and Information Science research across the African continent. Also, Scimago Lab (2019) ranked AJLAIS with H-index of 8 which indicated that the journal has a high impact factor. There are also previous similar informetrics studies which analyzed articles in a single Journal (Usman & Ewulum, 2019; Verma & Shukla, 2018; Verma, Yadav, & Singh, 2018; Singh & Chander, 2014). It is on this basis that this study selected the journal, AJLAIS, for analysis.

From the previous studies indicated above, many informetrics studies usually cover a period of a decade (10 years), and in some cases, half a decade (5 years) or more. AJLAIS started in 1991 and as at December 2018, there were already 28 volumes that have been published. From these 28 volumes, this study focused on 2009-2018 (10 volumes), representing 35.71%, a slight above one-third of the total number of publications from 1991-2018. The selection of a period of 10 years is in tandem with similar previous studies.

4. Findings and Discussion

4.1. Distribution of articles in AJLAIS by year and authors from 2009-2018

The articles were distributed based on the number of articles published and the numbers of authors recorded for such articles. The results are presented in **Table 1** showing evidence of a total of 141 articles published from 2009 to 2018. The highest number of articles published in AJLAIS was recorded in year 2016 as 17 (12.06%), while the least was recorded in 2011 and 2012 (12; 8.51%) in each year. Similarly, the highest number of contributing authors for AJLAIS was recorded

in 2016 (35; 13.16%) while the least, 18 (6.77%) was recorded in 2012.

Year	No. of Publications & Percentage (%)	No. of authors & Percentage (%)
2009	15 (10.64)	26 (9.77)
2010	14 (9.93)	27 (10.15)
2011	12 (8.51)	22 (8.27)
2012	12 (8.51)	18 (6.77)
2013	13 (9.22)	23 (8.64)
2014	16 (11.34)	32 (12.03)
2015	13 (9.22)	24 (9.02)
2016	17 (12.06)	35 (13.16)
2017	14 (9.93)	29 (10.90)
2018	15 (10.64)	30 (11.29)
Total	141 (100%)	266 (100%)

Table 1. Distribution of articles in AJLAIS by year and authors from 2009-2018

4.2. Year wise growth of research articles published in AJLAIS

Table 2 and **Fig. 1** show that there was an annual decline in the number of publications in AJLAIS from 2009 to 2012, with an annual average decline rate of -14.29% recorded in 2011. There was positive growth from 8.33% in 2013 to 23.08% recorded in the year 2014. However, the growth reverted to negative (-18.75%) in 2015 which was the overall highest decline rate within the 10- year period, closely followed by that of 2017 which is -17.65%. In 2016 and 2018, a positive growth of 30.77% and 7.14% respectively were recorded. This zig-zag growth pattern is similar to the publication growth pattern discovered by Gaud, Verma, and Shukla (2018) in a similar study of publication outputs of Faculty members in BBA Univesity, Luknow, India, from 1991 -2017 and also Ramiah-Santha (2016) on study of publications trends in Nuclear Physics from 2004 – 2013. This points out that this pattern is not only experienced in the field of LIS only but other fields of study as well. From the total 141 articles that were published during the 10-year period, there is the annual average growth rate of just 1.20% which is relatively small.

Year	No. of Publications	Growth Rate	Average Growth Rate in percentage
2009	15	0	0
2010	14	-1	-6.67
011	12	-2	-14.29
2012	12	0	0

Table 2. Year-wise growth of research articles published in AJLAIS from 2009-2018

2013	13	1	8.33
2014	16	3	23.08
2015	13	-3	-18.75
2016	17	4	30.77
2017	14	-3	-17.65
2018	15	1	7.14
Total	141	0	Average = 1.20

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Fig. 1. Year- wise growth of research articles published in AJLAIS

4.3. Year wise authorship pattern of articles published in AJLAIS 2009 to 2018

Table 3 reveals that from the 141 articles published in AJLAIS from 2009 to 2018, the highest number of single authored article was 7 in 2009 and 2012. Also, 2014, 2016, 2017 and 2018 recorded highest 7 articles contributed by two authors. Similarly, in year 2016 and 2017, highest 4 articles were published by three authors. The authorship patterns recorded in AJLAIS were in line with Gaud (2019) and Shukla, Yadav, and Verma (2018) findings. However, these findings contradict Siwach (2013) who discovered that majority of articles published in IFLA Journal from 2008-2012 were single authorship. This shows that many authors still prefer sole researching and or collaborating with just one more; an indication that there is the need for LIS researchers across the African continent to collaborate more.

Table 3. Year wise authorship pattern of articles published in AJLAIS 2009 to 2018

SN	Year	Single author	Two authors	Three authors	Four authors	Five authors	Six authors	Total
1	2009	7	5	3	0	0	0	15

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2	2010	6	6	1	0	0	1	14
3	2011	4	6	2	0	0	0	12
4	2012	7	4	1	0	0	0	12
5	2013	5	6	2	0	0	0	13
6	2014	5	7	3	1	0	0	16
7	2015	6	4	2	1	0	0	13
8	2016	5	7	4	1	0	0	17
9	2017	3	7	4	0	0	0	14
10	2018	5	7	1	2	0	0	15
	Total (Articles)	53 (37.59%)	59 (41.48%	23 (16.31%)	5 (3.55%	0	1 (0.71%)	141 (100%)
	Total (Authors)	53 (19.92%)	118 (44.36%	69 (25.94%)	20 (7.52%	0 ó)	6 (2.26%)	266 (100%)

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4.4. Degree of collaboration among authors of articles in AJLAIS from 2009-2018

Table 4 shows the degree of collaborations among the authors that published in AJLAIS from 2009 to 2018. The Table shows that from the 141 articles published during the period under review, 53 articles were single authored while the remaining 88 were multiple authored with an overall degree of collaboration of 0.62. This implies that the authors published more collaborative works than single authored publications. Also, the highest collaborative index was recorded in the year 2017 (0.79), whereas the least was recorded in 2012 which was 0.42. The overall collaborative index of 0.62 from AJLAIS contradicts a higher collaborative index discovered by Verma and Shukla (2018) and Mondal, Kanamadi, and Das (2017) in similar studies. This shows that authors that published in AJLAIS still need to do more collaborative research.

SN	Year	Single authored publications (Ns)	Multiple authored publications (Nm)	Nm + Ns	Degree of Collaboration DC=Nm/(Nm+Ns)
1	2009	7	8	15	0.53
2	2010	6	8	14	0.57
3	2011	4	8	12	0.67
4	2012	7	5	12	0.42
5	2013	5	8	13	0.62
6	2014	5	11	16	0.69
7	2015	6	7	13	0.54
8	2016	5	12	17	0.71
9	2017	3	11	14	0.79
10	2018	5	10	15	0.67
	Total	53	88	141	0.62

Table 4. Degree of collaboration among authors of articles in AJLAIS from 2009-2018

4.5. Subject distribution of published articles in the two journals from 2009-2018

Table 5 shows the distribution of subjects published articles in AJLAIS from 2009-2018. The seemingly related subjects were grouped and tagged together. There were a total of 21 subjects through which the articles were grouped. It was evident from the Table that the subject with highest number of articles, 20 (28.2%), was on informetrics/research productivity, followed by articles on ICT/cloud computing/social media, 17 (12.10%), and library/Information management, 15 (10.64%). However, there was just 1 (0.71%) article each on subject areas such as gender issues in LIS and legal deposit, with no article on such areas as indexing, bibliography and serial collection management.

This is related to Anyaoku and Okonkwo (2018) discovery that articles on ICT dominated the Library and Information Science Digest Journal from 2007-2016, and Udo-Anyanwu (2018) who also discovered that ICT is the most researched subject (23%) from among the 1,022 articles studied from 2004-2013. Similarly, Usman and Ewulum (2019) identified that many of the articles (13.2%) published in the Journal of Applied Information Science and Technology (JAIST) from 2007-2017 focused on ICT while articles on library management constituted just 8.80%.

The dominance of articles on ICT may not be unconnected with the keen interest the LIS practitioners have in such areas, as observed by Tsafe, Chiya, and Aminu (2016) that 25% of sampled librarians across 16 Universities in Nigeria claimed ICT as their research area of interests, distantly followed by 8% that claimed library automation (which is also a subset of ICT applications in Library).

Also, this subject distribution has shown areas of research gaps in LIS in Africa. While it should be noted that AJLAIS is a general LIS journal that receives articles on different areas of librarianship, however, one would expect the subject areas to be evenly distributed. The implication of this finding was that many research gaps in LIS have been identified, which there was little or no research article published on them over the ten-year period under review. Such research gaps include: Data Management/Science and Mining; institutional repository; reading culture; legal depository; academic library development; Audio Visual management; serial publication management; cataloging and classific cation; indexing; abstracting; collection development; public/school library development; library financ e and gender issues in LIS. This corroborated de Oliveira et al. (2020) assertion that subject distribution is needed in order to identify various research gaps and follow publication trends in a particular field. Therefore, if nothing is done to fill these research gaps, it will lead to a dearth of literature and stagnate developments in such areas in the future which is not good for the LIS profession.

SN	Subjects	No. of published articles	Percentage (%)
1	Informetrics/research productivity	20	28.2
2	ICT/cloud computing/social media	17	12.10
3	Library/Information management	15	10.64
4	Record/Archives management	14	9.93

Table 5. Subject distribution of published articles in AJLAIS from 2009-2018

5	Knowledge management	11	7.80
6	Information needs and seeking behaviours	8	5.67
7	Data management/Data science/Data mining	7	4.96
8	Preservation/conservation	7	4.96
9	Library networking/resource sharing/Open access	7	4.96
10	Accreditation/Curriculum development/blended/e-learning	7	4.96
11	Information/Digital literacy and users education	5	3.55
12	Capacity Building/Job satisfaction/Job performance	4	2.84
13	Electronic information resources/Database	4	2.84
14	Public/school library development	4	2.84
15	Academic library development	4	2.84
16	Institutional repository/collection Development	2	1.42
17	Cataloguing and classification	1	0.71
18	Legal deposit	1	0.71
19	Entrepreneurship/Infopreneurship/Library Marketing	1	0.71
20	Audio visual/Arts/Multimedia Systems	1	0.71
21	Gender issues in LIS	1	0.71
	Total	141	100%

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4.6. Geographical distributions of contributors to AJLAIS from 2009-2018

From **Table 6**, it was evident that the highest numbers of contributions, 108 (40.60%), were from South Africa, followed by Nigeria, 95 (35.71%), Botswana, 14 (5.26%) and Ghana, 9 (3.38%). The three least contributions were from Uganda, 3 (1.13%), Malaysia, 2 (0.75%) and Senegal, 1 (0.38%) respectively. It was significant to note that South Africa and Nigeria have jointly contributed over three-quarters, 203 (76.31%), of all the 266 articles published in AJLAIS over the 10 years under review. Also, it was noted that there were some international collaborations among the authors. This is presented in **Fig. 2**.

This top position claimed by South Africa and Nigeria was in line with Singh and Chander (2014) and also Siwach (2013) findings. According to Siwach (2013), South Africa and Nigeria claimed 4th and 5th position respectively among the top 22 countries in the world that published articles in the International Federation of Library Association (IFLA) Journal from 2008-2012. While South Africa contributed 5.98% of the published articles during that period, Nigeria contributed 5.13%. The percentages recorded for South Africa and Nigeria were ahead of other developed nations of the world like Germany (7th position) and France (14th position). This was also similar to Verma et al. (2018) findings which recorded Nigeria (1st position), Ghana (5th position), Tanzania (9th position), Uganda (10th position) and South Africa (11th position) among the top 35 countries across the globe that contributed articles to LPP (e-journal) from 2008 to 2017. This implied that LIS researchers from Africa, especially Nigeria and South Africa were thriving and making their presence felt in the global map of LIS research by contributing immensely to the development

of the profession.

Similarly, the finding revealed that South Africa was the most collaborative country among the 13 countries that contributed research articles to the AJLAIS from 2009-2018. From the 14 international collaborations recorded, 10 were linked to South Africa. However, examining this further, it was revealed that there was no collaborative article between Nigeria and South Africa during the period, more so that the countries were the most prolific contributors to the articles.

SN	Name of Country	Total Number of Contributions	Percentage (%)
1	South Africa	108	40.60
2	Nigeria	95	35.71
3	Botswana	14	5.26
4	Ghana	9	3.38
5	Kenya	7	2.63
6	Namibia	6	2.26
7	Tanzania	6	2.26
8	Zimbabwe	6	2.26
9	Zambia	5	1.88
10	USA	4	1.50
11	Uganda	3	1.13
12	Malaysia	2	0.75
13	Senegal	1	0.38
	Total	266	100

Table 6. Geographical Distributions of contributors to AJLAIS from 2009 - 2018

4.7. International Collaborative Pattern

Fig. 2 shows the international collaborations observed from AJLAIS from 2009–2018. From the 14 international collaborations observed, 10 (71.43%) are linked to South Africa, making it the most collaborated country on the continent, while the remaining 4 (28.57%) were from other countries, excluding South Africa. However, it is significant to note that the two most contributing countries to AJLAIS (South Africa and Nigeria) have no collaborative work within the 10 years under review. What the likely cause of this could be is unknown. However, collaborative research is a global trend and it is worthy of note that LIS researchers from Africa are also abreast of such global devolvement.

International collaboration among LIS researchers in Africa is still developing. As observed by Maluleka and Onyancha (2016), collaborative research is often between colleagues from the same department or institution, more than those outside their institutions or country. Similarly, Ocholla (2008) and Ameen, Malik, and Khan (2018) observed that international collaboration among LIS researchers in developing nations like Africa is still largely weak and informal due to a lack of

commitment and leadership among the concerned stakeholders. This finding implies that LIS researchers in the two most contributed countries (Nigeria and South Africa) failed to collaborate, despite their track records (Siwach, 2013; Singh & Chander, 2014; Verma et al., 2018) in contributing meaningfully to global LIS publications. This is not good enough for the development of the LIS profession in Africa, as synergy between the two prolific countries can positively change the development of the profession.

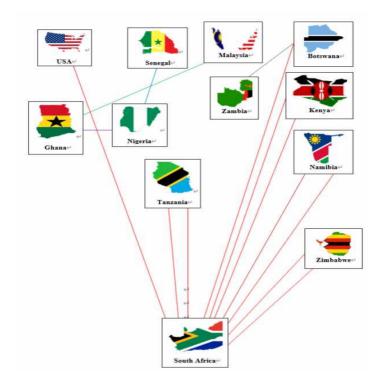


Fig. 2. Map showing the international collaborative pattern among the authors in AJLAIS from 2009-2018

4.8. Types of research articles published in AJLAIS from 2009-2018

The types of research articles commonly published in AJLAIS are presented in Fig. 3. It shows that the highest type of publication common to the journal was a survey, 92 (65.25%). This was distantly followed by opinion papers, 19 (13.47%), informetrics, 17 (12.06%) and case study, 9 (6.38%). This finding is in line with Hider and Pymm (2008) discovery that 68% of articles published in six high-profile LIS Journals in 2005 were of survey/empirical type, while the remaining 32% were non-empirical (opinion) in nature. This implies that empirical papers that were published in the Journal during the period were more than non-empirical, which is an indication that many LIS researchers engage in types of research that is apt for the development of the profession. Also, Togia and Malliari (2017) discovered that majority (78%) of 440 articles published in five prominent LIS journals from 2011 to 2016 were of the empirical type, which is in line with the present

study. This further implies that the majority of the articles published in the journal were evidence-based, empirical and factual, which can aid generalization and further develop the profession as decisions can be made on genuine information.

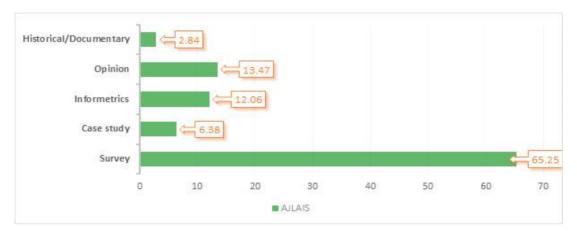


Fig. 3. Types of research articles published in AJLAIS from 2009-2018

4.9 Most productive authors in AJLAIS from 2009-2018

The 9 most productive authors in AJLAIS from 2009-2018 were studied and the results are presented in **Table 7**. It is evident from the Table that the 9 most productive authors featured from 3 to 9 articles each, while others were features once or twice. The contributions of the 9 most productive authors in AJLAIS during the period under review were very significant. From **Table 7**, the most productive authors were identified by their names. This reveals that Ngulube, P. was the most productive author whereby he was featured in 9 articles (representing 6.38% of the total 141 articles contributed), followed by Ocholla, D. N. which was featured 7 times (4.96%) and Onyancha, O. B., 6 times (4.26%).

From the Table, it is also evident that of all the most prolific authors listed, only one (Nwagwu W. E) was from Nigeria. According to a related study by Okeji, Bosah, and Eze (2018) on citation analysis of most prolific LIS researchers in Nigeria from 2000–May 2018, Nwagwu was ranked 3rd most prolific and cited author from Nigeria (in LIS) with 70 articles and 684 citations from data obtained through Google Scholar. Having just one Nigerian from a list of 9 most prolific authors in AJLAIS is not enough from a country that contributed 35.71% articles to the journal during the 10-year period which earned her the 2nd position behind South Africa with a maximum of 40.60% for the same period of time. The implication of this finding is that there is more to be done by LIS researchers in Nigerians to contribute more to the number of articles published in the journal so as to maximize their chances.

SN	Authors	Number of times observed	Ranking	
1	Ngulube, P.	9	1	
2	Ocholla, D. N.	7	2	
3	Onyancha, O. B.	6	3	
4	Hoskins R.	5	4.5	
5	Mutula S.	5	4.5	
6	Nwagwu W. E.	4	6.5	
7	Mostert J.	4	6.5	
8	Toit	3	8.5	
9	Ocholla L	3	8.5	

Table 7. Nine most productive authors in AJLAIS from 2009-2018

5. Conclusion

The study revealed that the highest number of articles (17) published in AJLAIS was recorded in the year 2016. Also, the study has shown that AJLAIS was not growing numerically as expected with an annual average growth rate of just 1.20% for a 10 year period covered by the study. Similarly, the majority of the published articles were contributed by joint authors. However, while the collaborative index of authors published in AJLAIS was fairly adequate, there is a need for improvement. Furthermore, there was an impending dearth of scholarly literature on certain aspects of librarianship as it was revealed that little or nothing was done in such areas as serial collection management, indexing, cataloging and classification, public/school library development, etc. The study has also established that authors from South Africa and Nigeria were contributing the most to the Journal with Botswana coming distantly third. Also, the journal published mostly empirical studies survey type during the 10 year period covered by the study. In terms of individual contributions, it was revealed by the study that Ngulube, P. and Ocholla D. N. were the two leading published authors in AJLAIS during the 10 year period.

6. Recommendations

Based on the findings of this study, the following are hereby recommended:

- There is a need for the publisher of AJLAIS to increase the number of articles published in each edition considerably over the coming years. This will increase the growth of the journal by allowing more authors to contribute research articles across various subject areas relating to LIS.
- More awareness should be created by the publisher and the editorial crews to enable researchers to be familiar with the publishing requirements of the journal. Keeping abreast of such information

can go a long way in enabling researchers take an informed decision on publishing in the journal, thereby increasing the number of contributed articles.

- Similarly, all LIS researchers should embrace collaborative research, especially with other researchers outside their institution and country. Likewise, Library Schools and Library Associations should organize more international conferences where participants can share ideas. Such international conferences will serve as a meeting point for LIS researchers across various countries which may, in turn, boost collaborative research activities among them.
- LIS researchers should endeavor to concentrate on areas usually left untouched by previous studies. This will create additional literature that will form the basis for further studies.

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