# How Open 2

*by* Wanyenda Chilimo

# How open are the LIS journals that publish research articles about open access?

### Dr. Wanyenda Chilimo[1] and Prof. Omwoyo Bosire Onyancha[2]

[1]*Technical University of Mombasa, Kenya.*
[2] *Department of Information Science, University of South Africa*

## Abstract

The study investigates Library and Information Science (LIS) journals that published research articles about open access (OA) between the years 2003 to 2013 inclusive and indexed in LIS databases. The purpose was to investigate journal OA policies, ascertain the degree to which these policies facilitate free accessibility of publications and investigate whether such publications are also available as OA.

The results shows that literature growth in the domain has been significant with a total of 1,402 articles produced within the 11 years' time period. The OA policies of the 56 journals that published the highest number of publications were analysed. Results shows that most articles 404 (41 %) were published in hybrid journals whereas 272 (29.7%) articles were published in OA journals. Some 143 (53%) of articles published in hybrid journal were available as green copies. In total 602 (66%) of all the articles published were available as OA. These results indicates shows that adoption of OA for research articles on the subject of OA is somewhat higher than in other fields. The study calls on LIS professionals to be conversant with the OA policies of journals that publish their research articles

**Keywords:** Open Access, self-archiving, LIS journals

## Introduction and back ground information

Open Access (OA) is an initiative that advocate for free, online access to scientific literature. It is a highly topical issue in Library and Information Science (LIS) and the scholarly community at large. Research on the concept of OA has been on the rise as LIS scholars and researchers from other fields of study engage on research activities on the various aspects of the concept of OA.

LIS scholars and practitioners have been in the forefront in promoting OA, but many "are not practising what they preach" concerning the adoption of OA in their own research. Previous studies show that the adoption of OA as a method of publication on LIS academic works and research in

general has not been as high as expected (Bowley and Vandegrift 2014; Mercer 2011; Way, 2010; Xia et al 2011). Most of the studies investigated the adoption of OA by LIS scholars and practitioners generally. This study narrows down the investigation to the analysis of research articles about OA and LIS journals that publish research on this topic. Further, the study sets out to analyse literature about OA and the characteristics of journals that publish this research.

Within the framework of journal-driven OA ('gold' OA) and author-driven OA ('green' OA, also known as 'self-archiving') (Laakso and Björk 2012), journals have adopted various strategies to ensure free availability of scientific literature on the internet. Some strategies adopted by journals are more open than others, hence the question: 'How open is the Journal?' (SPARC, 2013).

With regard to gold OA, some journals make the electronic versions of their articles freely available, either directly - as in the case of OA journals - or after a delay, typically of one year. The latter is a strategy commonly referred to as delayed OA (Lin 2006; Mizera 2013; Laakso and Björk 2012). The majority of the mainstream journal publishers have adopted a hybrid model of OA which allows authors or their sponsors to access their articles for free from day one, against a payment (APS 2007; Björk 2012).

Concerning green OA, some journals have conditions that prescribe the version of the publication that authors are permitted to self-achieve, when self-achieving is permitted, as well as the location at which self-archiving is permitted (Laakso 2014). The effectiveness of green OA and the likelihood of finding green copies of publications published in journals that allow self-archiving depends on how well researchers understand these policies and utilise their rights to self-archive as permitted by the publishers.

The purpose of this study, therefore, is to investigate LIS journals that publish OA research in order to ascertain the degree whether the 'green' and 'gold' OA policies adopted by journals could provide free access to research articles in the topic of OA. The study investigates whether research articles on the subject of OA are also published in OA journals or otherwise and whether these articles are also available in open access. We believe that this analysis will make it possible to predict the extent to which literature on the topic of OA will also be available as OA.

**Journal level open access policies**

Stakeholders in the scholarly publishing community have responded to the call to open up accessibility of scientific literature by instituting polices to promote its wide use and adoption. This has led to the adoption of OA policies at various levels. Some of these include institutional level OA policies which have been developed by academic intuitions around the world (Poynder, 2012, ROARMAP 2014; Xia 2012). Another level is funders level open access policies which have been adopted by donors and research funding organisations (Tonta, Doğan and Madran 2015). Journal level open access policies include policies adopted by journals to provide access to articles published in the journal. It also includes publisher-permitted self-archiving polices which allow authors to keep a copy of their publication in the institutional repository or any other location on the web. Few studies have been carried out to investigate journal level OA policies. As pointed out by Laakso (2014), the degree to which scholarly journal articles published in subscription-based journals could be provided with open access (OA) through publisher-permitted uploading to freely accessible web locations, is an underexplored area of research

A study by Bowley and Vandegrift (2014) proposed a new metric to rank journals, called the Journal Openness Index Factor (J.O.I). The index is based on measures of openness including copyrights, reuse rights, author posting rights, reader rights and automatic posting. The authors utilised the OA spectrum proposed by SPARC 2013 to analyse 111 Library and Information Science journals. A study by Laakso (2014) investigated the green OA policies of 100 of the largest publishers extracted from the Scopus bibliographic database and reported that 80.4% of the 1.1 million articles included in the analysis could be uploaded either as an accepted manuscript or as a publisher version to an institutional or subject repository one year after publication. However, Laakso (2014) reported a substantial unused potential of green OA by authors.

The current study investigates OA policies of journal that publish research articles in OA. The Sherpa/Romeo database was used to obtain information about journal policies. Information from the Sherpa/Romeo was further crossed-checked by visiting journals and/or publisher's websites. For OA journals the information was further double-checked against the Directory of Open Access Journals (DOAJ). For each journal, standard policies on OA publishing (gold OA) and OA self-archiving policies (green OA) were examined.

**Methodology**

**Dataset**

First, we identified the data set. This involved retrieving research articles on the subject of OA published in LIS journals between 2003 and 2013. The dataset used in this study included articles about open access published in journals indexed in three well know LIS databases, that is Information Science & Technology Abstracts (LISTA) provided by ProQuest and Library and Information Science Sources (LISS) and Library and Information Science Abstracts LISTA both provided by EBSCO. The three databases were chosen because they are well known indexing and abstracting databases in the field of Library and Information Science and they provide an extensive coverage of journals in the field. Same databases have also been used in previous studies as a data sources for evaluating research productivity of Library and Information Science (Fourie, Bitso and Bothma 2014; Click 2016). Vinson and Welsh (2014) argued that LISTA had the broadest range of coverage and it would be a logical choice for libraries that can only afford a subscription to one LIS database. The use of the three databases provided a comprehensive coverage of the articles as opposed to relaying on only one databases which might not give the accurate coverage and may lead to erroneous conclusions.

An advanced search was conducted in the three databases using 'Open Access' as a keyword while limiting the search to the subject terms field, peer reviewed articles and English-language publications published between 2003 and 2013. The search was repeated using other OA-related keywords such as 'gold OA', 'green OA', 'institutional repository', 'self-archiving', 'OA journals', 'OA policies' and 'OA mandates'. The retrieved data was organised, duplicates and irrelevant records were removed and a thorough check was carried out to ensure that the articles in question were relevant to the study and covered the subject of OA. Data for this study was collected in June 2015. The retrieved dataset was saved in the appropriate format using Microsoft Word and plain text, and Bibexcel and Excel computer software was used to calculate frequencies and identify the journals that published the largest number of research articles about the subject of OA.

Once the data se was identified, the second stage involved identifying OA policies of the journals that published the highest number of articles. Lastly open access availability of the retrieved articles was determined. The OA availability of the full set of articles retrieved in this study was checked using Google scholar and a computer that had no access to library subscribed materials. Similar approach was used by researcher such as Laakso (2014) and Bowley and Vandegrift (2014)

**"How Open Is It?" Framework**

LIS journals with the largest number of articles about OA were subjected to the OA spectrum to determine their level of openness. The OA spectrum also known as the 'How Open Is It?' scale was put forward by the Scholarly Publishing and Academic Resources Coalition (SPARC), the Public Library of Science (PLOS) and the Open Access Scholarly Publishers Association (OASPAR) (SPARC 2013). The current study used two out of the six components of the OA spectrum namely the reader rights component, mostly associated with gold OA and the author posting rights component mainly associated with green OA (See Table 1). The two components were chosen because they are more related to the current study and they present the basic conditions to ensure availability of research articles as open access. The other component of the spectrum i.e. copyright, re-use right, author posting rights and machine readability were outside the scope of this research. The spectrum was modified to indicate scores which were used to rank the journals based on their level of openness. The ranking was assigned to the gold and green OA provisions, and the two scores were then summed to form an OA score for each journal/publisher.

Table 1. Modified open access spectrum indicating scores

| Reader Rights (Gold Open Access) | Score | Author posting Rights (Green Open Access) | Score |
|---|---|---|---|
| Free access to all articles immediately upon publication | 4 | Author may archive any version of their work to any repository or website | 4 |
| Free access to all articles after an embargo period of no more than six months | 3 | Authors may archive post-print to any repository or websites | 3 |
| Free access to all articles after an embargo period of greater than six months | 2 | Authors may archive post-print versions of their work to certain repositories or websites | 2 |

| | | | |
|---|---|---|---|
| Free immediate access to some but not all articles, including hybrid models | 1 | Authors may deposit pre-print version of their work to certain repositories or websites | 1 |
| Subscription, membership, pay-per-view or other fees required to access the articles | 0 | Authors may not deposit any version of their work to repositories or websites | 0 |

Adopted from SPARC, 2013

## Scope and limitations of the study

The study is limited to research articles on the topic of open access published in LIS journals only. Hence the source of data was limited to the LIS abstracting and indexing databases that is LISS, LISTA and LISA, therefore the results cannot be generalised to apply to literature on OA covered by other databases such as Web of Knowledge, Google Scholar and other indexes. However, the study provides a comprehensive coverage of the LIS related sources of research articles in the subject of OA. In analysing journals that publish OA research, the focus was on their 'openness' as opposed to other measures of quality of scholarly journals such as impact factor, the H-index

The study only evaluated current gold and green policies of the leading LIS journals. The status of these policies may have been different at the time the articles were being published, Therefore, the current green and open OA policies of the journals evaluated may not have necessary guided authors' decision on where to submit. It would be virtually impossible to find the information about the status of each journal at the time of publishing the analysed article. In addition journal policies have been changing over the years and most journals started adopting these policies only around 2003. Before this time it was not that common for journals to have very explicit rules about posting in institutional repositories. Despite these limitation the findings of these study provides an indication of the current status of the OA policies adopted by LIS journals. In addition the findings provide information which may be used by the researchers when making decisions on where to publish.

## 4.3 Results and Discussion

The total number of scholarly articles on the topic of OA published in journals indexed in LISS and LISTA databases and available through EBSCOhost was 1,141. The total number of articles

published in journals indexed in the LISA database was 254, giving a total of 1,395 articles. This number represents the total number of articles on the subject of OA published in journals indexed in the three databases (LISS, LISA and LISTA) between 2003 and 2013. After removing all the duplicate, the remaining number of articles was 1,185. These were further analysed to determine their publication sources.

The 1,185 publications on the subject of OA retrieved from the three LIS databases, were published in 379 international peer-reviewed journals. Table 2 shows the 56 journals with the most publications and their publication counts. The 56 journals produced a total of 909 (77%) articles retrieved from the three databases. The remaining 323 journals had five or less articles each, with a third of these journals having published only one article each on the subject. *Learned Publishing Journal* recorded the highest number articles in the domain, that is, 66 (7.2 %), This was followed by *Serials Review*, with 51 (5.5%) of the articles, *First Monday* with 47 (5.1%) of the articles, *Serial Librarian* with 44 (4.8%) of the articles, *Information Services* and *Use* with 40 (4.4%) articles, *Serials* with 39 (4.3%) articles, *OCLC Systems and Services* with 36 (3.9%) articles, *Insights: the UKSG Journal with* 27 (2.9%) articles and *Journal of Academic Librarianship* with 26 (2.8%) articles. The remainder are as shown in Table 2.

The 56 journals identified as having the highest number of publications (See Table 2) were analysed based on their level of 'openness' using the "How Open Is It?" framework outlined earlier. Table 2 shows the gold, green and total OA scores for each journal. Based on their level of openness and their OA score, journals were categorised into 5 categories namely: Open access journals, delayed / embargoed OA journals, Hybrid journals with un-conditional post-print archiving permissions, hybrid journals with embargoed post-print archiving permissions and lastly journals with un-recognised open access policies. The description for each category is provided in the section s that follows.

**Table 2: Journals and their Open Access policies**

|  | Journal | Publisher | Count | Gold | Green | Total |
|---|---|---|---|---|---|---|
| 1. | Learned Publishing | Wiley | 66 | 2#12M | 3 | 5 |
| 2. | Serial Review | Taylor and Francis | 51 | 1 | 2 | 3 |
| 3. | First Monday | University of Illinois at Chicago University Library | 47 | 4 | 4 | 8 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4. | The Serials Librarian | Taylor and Francis | 44 | 1 | 2 | 3 |
| 5. | Information Service and Use | IOS Press | 40 | 1 | 2 | 2 |
| 6. | Serials | Insights: the UKSG journal | 39 | 4 | 4 | 8 |
| 7. | OCLC Systems and Services | Emerald | 36 | 1 | 2 | 3 |
| 8. | Insights: the UKSG journal | Insights: the UKSG journal | 27 | 4 | 4 | 8 |
| 9. | Journal of Academic Librarianship | Elsevier | 26 | 1 | 2 | 3 |
| 10. | Journal of Library Administration | Taylor and Francis | 24 | 1 | 2 | 3 |
| 11. | DESIDOC Journal of Library & Information Technology | Defence Scientific Information & Documentation Centre (DESIDOC) India | 22 | 4 | 4 | 8 |
| 12. | Libre Quarterly: The Journal of European Research Libraries | Association of European Research Libraries | 22 | 4 | 4 | 8 |
| 13. | College & Research Libraries | Association of College & Research Libraries | 21 | 4 | 4 | 8 |
| 14. | Library Philosophy & Practice | University of Idaho Library | 20 | 4 | 4 | 8 |
| 15. | Online Information Review | Emerald | 20 | 1 | 2 | 3 |
| 16. | Journal of the Medical Library Association | Medical Library Association | 19 | 4 | 4 | 8 |
| 17. | J of the American Society for Information Science & Technology | Wiley | 19 | 1 | 2 | 3 |
| 18. | Library Hi Tech | Emerald | 17 | 1 | 2 | 3 |
| 19. | Scientometrics | Springer | 16 | 1 | 2 | 3 |
| 20. | Information Research | | 16 | 4 | 4 | 8 |
| 21. | Program: Electronic Library & Information Systems | Emerald | 15 | 1 | 2 | 3 |
| 22. | IFLA Journal | IFLA | 14 | 1 | 2 | 3 |
| 23. | Science & Technology Libraries | Taylor and Francis | 13 | 1 | 2 | 3 |
| 24. | Library Review | Emerald | 13 | 1 | 2 | 3 |
| 25. | Journal of Librarianship & Scholarly Communication | Oregon State University Libraries and Press | 13 | 4 | 4 | 8 |
| 26. | Journal of Scholarly Publishing | University of Toronto press | 13 | 1 | 2#12M | 3#12M |
| 27. | Inter lending & Document Supply | Emerald | 12 | 1 | 2 | 3 |
| 28. | SRELS Journal of Information Management | Sarada Ranganathan Endowment for Library Science (SRELS) | 11 | unkn | unkn | |
| 29. | New Review of Information Networking | Taylor and Francis | 10 | 1 | 2 | 3 |
| 30. | Journal of Electronic Resources in Medical Libraries | Taylor and Francis | 10 | 1 | 2 | 3 |
| 31. | Chinese Librarianship | Internet Chinese Librarian Club | 10 | 4 | 4 | 8 |
| 32. | Grey Journal (TGJ) | Grey Literature Community | 10 | unkn | unkn | |
| 33. | Evidence Based Library & Information Practice | University of Alberta learning Services | 10 | 4 | 4 | 8 |
| 34. | Technical Services Quarterly | Taylor and Francis | 9 | 1 | 2 | 3 |
| 35. | Reference Services Review | Emerald | 9 | 1 | 2 | 3 |
| 36. | Portal: Libraries & the Academy | Project Muse - The Johns Hopkins University Press | 9 | unkn | unkn | |
| 37. | Journal of Documentation | Emerald | 9 | 1 | 2 | 3 |
| 38. | Information Development | Sage | 9 | 1 | 2 | 3 |
| 39. | Agricultural Information Worldwide | FAO | 8 | 2#12M | 4 | 6 |
| 40. | Libri: International Journal of Libraries & Information Services | De Gruyter | 7 | 1 | 3#12M | 4 |
| 41. | Law Library Journal | American Association of Law Libraries | 7 | unkn | unkn | |
| 42. | New Review of Academic Librarianship | Taylor and Francis | 7 | 1 | 2 | 3 |
| 43. | Health Information & Libraries Journal | Wiley | 7 | 1 | 2#12M | 3#12M |
| 44. | Electronic Library | Emerald | 7 | 1 | 2 | 3 |
| 45. | ALISS Quarterly | Association of Librarians and information professionals in Social Sciences | 7 | unkn | unkn | |
| 46. | American Archivist | Society of American Archivists | 7 | unkn | unkn | |
| 47. | African Journal of Library, Archives & Information Science | Archlib and Information Services Ltd | 7 | unkn | unkn | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 48. | Cataloging & Classification Quarterly | Taylor and Francis | 6 | 1 | 2 | 3 |
| 49. | Choice: Current Reviews for Academic Libraries | the Association of College and Research Libraries (ACRL) | 6 | unkn | unkn | |
| 50. | Collection Building | Emerald | 6 | 1 | 2 | 3 |
| 51. | European Science Editing | European Association of Science Editors (EASE) | 6 | unkn | unkn | |
| 52. | Information Technology and Libraries | Boston College Libraries | 6 | 4 | 4 | 8 |
| 53. | Journal of Electronic Resources Librarianship | Taylor and Francis | 6 | 1 | 1 | 3 |
| 54. | Legal Information Management | Cambridge University Press | 6 | 1 | 2 | 3 |
| 55. | Library Technology Reports | American Library Association | 6 | unkn | unkn | |
| 56. | Quarterly Bulletin of the International Association of Agricultural Information Specialists | Internal Association of Agricultural Information Specialists | 6 | unkn | unkn | |
| | **TOTAL** | | **909** | | | |

## First Category: Open Access Journals

The first category constitutes journals that attained an OA score of eight (8). All journals in this category were open access. Out of the 56 journals that had more publications, 13 (22%) attained the highest OA score of eight, that is, a gold OA score of four (4) and green OA Score of four (4). (See Table 2). These were journals that provide free access to all articles immediately upon publication and allow authors to archive any version of their work in repositories, personal website or any other location on the internet.

The OA journals published a total of 272 (29.7%) articles and they include *First Monday* (47 articles ), *Serials* (39 articles ), *Insights: the UKSG Journal* (27 articles), *DESIDOC Journal of Library & Information Technology* (22 articles), *Libre Quarterly* (22 articles), *College & Research Libraries* (21 articles), *Library Philosophy & Practice* (20 articles), *Journal of the Medical Library Association* (19 articles), *Information Research* (16 articles), *Journal of Librarianship & Scholarly Communication* (13 articles), *Chinese Librarianship* (10 articles), *Evidence Based Library & Information Practice* (10 articles) and *Agricultural Information Worldwide* (8 articles) and *Information Technology and Libraries* (6 articles ). *Serials Journal* changed its name in 2012 to *Insights: the United Kingdom Serial Group (UKSG) Journal*. All the back files of *Serials Journal*, that is, Volumes 1-24 were digitised and available online as OA (UKSG 2015).

All the eight OA journals identified in this study were published by either societies, libraries or University press and did not have Article Processing Cost (APC) charged to authors. In terms of

green OA all journals in this category allowed self-archiving without restrictions, meaning authors were allowed to deposit the final version of their publication in Institutional Repositories or any other location on the web without fee or an embargo. As expected all articles published in OA journal were also available as open access.

**Second Category: Delayed / embargoed Open Access journals**

The second category included journals that attained an OA score of between four and six. All journals in this category were delayed / embargoed OA journals. Three journals (5.3%) fell under this category. The first two journals in this category, that is, *Learned Publishing* (66 articles) and *Agricultural Information Worldwide* (8 articles) were both delayed OA journals that provide free access to all articles after an embargo period of one year. In terms of green OA, *Learned Publishing* allows authors to archive post-print versions of their articles to a wide range of locations, including the authors' own websites or their institutional website, as well as free public servers of pre-prints in relevant subject areas. *Agricultural Information Worldwide* permits authors to archive any version of their publications to personal website or repositories.

Other journals falling under this category include the *Libri Journal* (seven articles), a toll access journal that allows authors to self-archive the publisher's version of their article after an embargo period of 12 months. All journals in this category ensure OA to the final version of the published work either automatically after an embargo period, for example through delayed OA or through author self-archiving. These journals published a total of 81 (8.8%) of all articles published by the 56 journals. Some of the journals in this list such as *Learned Publishing* and *Libri*, also featured in Xia (2012) study, where they were categorised as LIS journals with conditional OA.

All articles that appeared in the three delayed / embargoed OA journals were also available as open access. 74 (91%) of the paper published in these journal were available as gold OA articles while 7(9%) of the articles were available as green copies.

**Third Category: Hybrid Journals with un-conditional post-print archiving permissions**

Third Category includes journals which had attained an OA score of (3) Three. Twenty seven (49%) journals under review fell under this category. These journals published a total of 404 articles (41 %) of all articles published by the 56 journals. In terms of gold OA, all journals in this category

were toll access journals with a hybrid model of OA. The hybrid model of OA applies where a predominantly subscription-based journal offer authors an option to make their articles freely available online upon publication in return for the payment of the Article Processing Cost (APC). The hybrid model of OA is also called the author choice model, optional OA or Open Select program (Björk 2012).

In terms of green OA, journals in this category did not allow archiving of the publisher's version, instead authors were allowed to self-archive post-print versions of their work immediately after publication without any other restriction. However, some journals in this category were very specific about the location of the green copies. For most journals, the permitted locations included personal websites and institutional repositories. In a few cases 'funders' and 'sponsors' websites or repositories were also allowed. Most of these journals excluded other locations such as subject repositories, repositories of other institutions and repositories of profit-based organisations. Some journals only allowed self-archiving if the authors' institution had an OA policy or mandate that required authors to self-archive. Other conditions given include providing a link to the published article on the website of the publisher and inserting a citation of the published article.

The conditions associated with the right to self-archive, particularly the permitted location for the green copies, will also have huge implications for authors, especially those from developing countries. In most cases the latter will not have their own personal websites and/or their institutions might not have established institutional repositories or mandated self-archiving. This will further reduce the percentage of the articles that can be made available through this model. However, even with these shortcomings it was possible to access the research articles published in these journals OA if the researchers exercise their rights to self-archive. Journals in this category include: *Serial Review* (51 articles), *Serials Librarian* (44 articles), (Information Services & Use (40 articles) *OCLC Systems and Services* (36 articles), *Journal of Academic Librarianship* (26 articles), *Journal of Library Administration* (24 articles), *Online Information Review* (20 articles), *Journal of the American Society for Information Science & Technology* (19 articles), *Library Hi Tech* (17 articles), *Scientometrics* (16 articles), *Program: Electronic Library & Information Systems* (15 articles), *IFLA Journal* (14 articles), *Science & Technology Libraries* (13 articles), *Library Review* (13 articles), *Interlending & Document Supply* (12 articles), *New Review of Information Networking* (10 articles), *Journal of Electronic Resources in Medical Libraries* (10 articles),

*Technical Services Quarterly* (9 articles), *Reference Services Review* (9 articles), *Journal of Documentation* (9 articles), *Information Development* (9 articles), *New Review of Academic Librarianship* (7 articles), *Electronic Library* (7 articles), *Cataloging & Classification Quarterly* (6 articles), *Collection Building* (6 articles) and *Legal Information Management* (6 articles) and Journal of Electronic Resources Librarianship (6 articles).

As seen in Table 2, journals in this category are owned by publishing companies namely Taylor and Francis, Emerald, Sage and Springer. As shown in Table 3, about half 240 (53%) of papers published in hybrid journals were available as open access. Out of these 71 (30%) were available as gold copies meaning that the authors paid some fees to make their articles available as OA. Articles available as green copied constituted 169 (70%) of all the articles published in these journals meaning that authors took the initiative to self-archive their articles in institutional repositories

**Fourth Category: Hybrid Journals with conditional post-print archiving permissions**

Fourth category included journals which had attained an OA score of 3 but had conditions attached to their post-print archiving permissions. *Health Information & Libraries Journal* (7 articles) and *Journal of Scholar Publishing* (13 articles) fell under this category (see Table 2). The journal had a total publication count of 20 articles

In terms of gold OA, the two journals had a hybrid model of OA. In terms of green OA, the journals only allowed self-archiving of the pre-print versions of the publications immediately after publication and only allows self-archiving of the of the post-print version of the publication after an embargo period of between 12 and 24 months. The permitted self-archiving locations for this journal include the author's personal website, the author's company/institutional repository or archive and not for profit subject-based repositories such as PubMed Central. Six (30%) of the articles published in journals categorised as hybrid journals with embargoed post-print archiving permissions were available as open access.

**Journals with un-recognised open access policies**

All journals in this category were toll access journals, however, it was not possible to access the green OA policies of the journals falling under this category, because the information was either

unclear or not provided. These journals did not explicitly set out their green OA policies on their websites. Information about their policies was also not available on the Sherpa/Romeo website.

As shown in Table 2, eleven journals (19%) fell under this category. The 11 journals had a joint publication count of 112 (12%). These included *SRELS Journal of Information Management* (11 articles), *Grey Journal* (10 articles), Portal: Libraries & the Academy (9 articles) *ALISS Quarterly* (7 articles), *La*w Library Journal (7), African Journal of Library, Archives & Information Science (7), American Archivist *(7) Library Technology Reports* (6), *Choice: Current Reviews for Academic Libraries* (6), *European Science Editing* (6) and *Quarterly Bulletin of the International Association of Agricultural Information Specialists* (6 articles). The implication for this is that it will be difficult for authors publishing in these journals to exercise their self-arching rights because information on what is permitted is not available.  However, the analysis of OA availability of articles published in these journals indicated that 35.7 % of the articles published in these journal were available as OA

**Table 3 Open accessibility of published articles**

| Journals | Journals | Total No. of Articles | Gold Copies | Green Copies | Closed articles | Total No. of OA articles | OA articles -% |
|----------|----------|----------------------|-------------|--------------|-----------------|--------------------------|----------------|
| Open Access Journals | 13 | 272 | 272 | N/A | 0 | 272 | 100% |
| Delayed OA | 3 | 81 | 74 | 7 | 0 | 81 | 100% |
| Hybrid/Un-cconditional post-print | 27 | 454 | 71 | 143 | 240 | 214 | 53% |
| Hybrid / Conditional Post –print | 2 | 20 | 0 | 6 | 14 | 6 | 30% |
| Un Recognised | 11 | 82 | 14 | 15 | 53 | 29 | 35.7% |
| **TOTAL** | **56** | **909** | **431** | **171** | **307** | **602** | **66%** |

**Open access availability of the articles**

The results of this study shows that the majority of the articles, that is 404 (44.1 %)  (See Table 2) were published in hybrid journals with green OA policies that allowed self-archiving of post-print version of the publications. These articles were published in 28 (49%) journals. The OA policies of these journals put the responsibilities of ensuring OA solely in the hands of authors, either through payment of the APC to make their articles OA i.e. the hybrid model, or through self-

archiving of post-print versions of their publications. This means that these articles will only be available as OA if authors take the initiative to self-archive or if the author pays for the article processing cost.

Studies on self-achieving levels of LIS researchers indicate that the archiving of articles is not a regular practice in the field and that articles are not being deposited in institutional or subject repositories at a high rate (Björk 2012, Bowley and Vandegrift 2014, Mercer, 2011). A study by Way 2010 reported that only 27% of the articles were found to have self-achieved green versions. The findings of these study indicate that 171 (19%) of the publication were available as OA due to self –archiving initiative by the author (See Table 3). This indicates that self-archiving is not a regular practise even for LIS researchers who dealing with the subject of OA who presumably are more aware of the self-archiving process. A study by Björk, 2012 further reported that on average only 1-2 % of eligible authors utilise the hybrid option due to high price level - typically 3,000 USD. In this study  as seen in See Table 3, 71 (15%) of articles published in hybrid journal were available as gold copies due to either payment of APCs by authors or other arrangement by journals to make the articles open access.

In summary, these findings show that of the 906 articles published by LIS scholars on the subject of OA, some 29% were published in OA journals and an additional 8% in delayed OA, making a total of 37% article available through gold open access. These results are slightly higher than the findings reported in previous studies. For instance, Laakso and Björk (2012) established that some 11% of 1,658,643 articles published in 2011 in Scopus were full OA, with an additional 5.9% in hybrid or delayed OA, making a total of 16.9%. For the Web of Knowledge, only 9% of 1,294,051 articles published in 2011 were full OA and 7.2% hybrid or delayed OA, for a total of 16.2%. This indicates that generally the adoption and growth of OA for research articles on the subject of OA is somewhat higher than in other fields.

Just as in other fields, LIS researchers face the question of where best to submit their manuscripts if they want to make a meaningful contribution to their field. The dilemma on where to publish is further complicated by the requirement that they should publish in major or core journals in their field and also that they ensure that their research articles are available as OA by either exercising their rights to self-archive or by making use of the various OA provisions and policies

provided/adopted by the journals. The requirement that authors ensure the OA availability of their research articles is much higher for LIS professionals who have been at the forefront of OA advocacy, and who are expected to lead by example.

## Conclusions and recommendations

This study that sought to investigate the degree in which OA policies adopted by the journals facilitate free accessibility of publications and investigate whether such publications are also available as OA. The results shows that literature growth in the domain has been significant in the last 11 years, with a total of 1,402 articles produced within that period. The OA policies of the 56 journals were analysed and it was found out that most articles were published in hybrid journals with green OA policies that allowed authors to archive post-print versions of their publication. Some 28 (49%) of the journals reviewed used the hybrid model. Only 272 (29.7%) of the articles were published in OA journals, which constituted 13 (22%) of the journals reviewed. Only three (5.3%) of the journals used the delayed OA model, with a total publication count of 81 (8.8%).

The findings of this study raise awareness of the available body of literature in the subject of OA and LIS journals in which most research in the topic of OA is published. Analysis of LIS journals that publish most articles in OA create core reading sources for scholars researching the subject of OA. Journals that publish articles in OA are likely to receive more attention from researchers researching on the topic of OA. The information on the OA policies of journals publishing OA research may assist authors and researchers to decide which journals are appropriate for manuscript submissions. The study calls on LIS professionals especially those doing research in the topic of OA - to be conversant with the OA policies adopted by the journals that publish their research articles. LIS professionals are often accused of not exercising their self-archiving rights (Mercer 2011), partly because they themselves are not aware of the green OA policies of the journals to which they submit their articles

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