Open Access Journals of Library and Information Science (LIS) regarding DOAJ: an analytical study

Dr. Abhijit Chatterjee

Librarian, Seth Anandram Jaipuria College, Kolkata

Abstract

The objective of the paper is to find out the available journals of Library and Information Science (LIS) which can be accessed freely and to judge their quality in terms of the citations. This is an online survey-based paper that shows how Open Access (OA) has influenced scholarly publication in the area of LIS. The trend and pattern have been drawn based on the data available in DOAJ with the use of Publish or Perish (PoP) software tools. It was found that scholarly open access publications of LIS have maintained the quality and started their growth in the last 10 years. It has also been revealed that the Bulletin of the Medical Library Association is the most important journal in terms of citations received but according to the JCR report (2017) Journal of Information Science Theory and Practice is considered as most productive journal. Based on the result the author has tried to raise the important issues that are embedded with the scholarly communication of OA journals.

Keywords: Directory of open access journal, Library and Information Science journals, Open access, Scholarly communications

1. Introduction

The research impact is the measurement of the advancement of the society which can be traced through the research productivity in journal of any country. Quality journals are the prime indicators of quality research across the globe. Now the scholarly content of the journal is in the prime focus. Journal acts as a permanent and transparent gateway for the presentation, scrutiny and discourse of research. The quality of the journal reflects the work of the institute and it is also associated with the prestige of the institute in scholarly world. The judgement of the quality is therefore essential in such a process. Journal Impact Factor is one of the key indicators of quality based on the number of citations received in the recent publications of that particular journal (Wikipedia, 2018). The trends of publication patterns of STM journals indicated that these publications are like monopolistic organisations (Das, Satija, & Mishra, 2015). Now there is a great change in the dissemination of scholarly information with the introduction of channels of various social media and the number of articles read, book marked, downloaded, or liked is also an important indicator for judging the requirements. Their performances are now measured through their citations and therefore they now publish their articles in reputed journals as well as upload them to the institutional repository (Ghosh & Das, 2017) to get more citations which ultimately increases their academic profile.

2. Review of literature

Biswas, Brar and Bhabal (2022) in their study have given the basics of open access considering the different areas of open access. Literature of LIS scholarly publications showed that there are few open journals within the periphery of electronic journals of the Arabic language (Abdel Hady, 2012). Falk (2004) in his studies indicated there are more open access journals available now than 90s. This indicated the boom of open access publications. In support of the work of Flok (2004), Rufal, Gul and Shah (2011) indicated the exponential growth of open access LIS journal titles. Bibliometric study of Thavamani (2012) showed the representation of LIS journals as reflected in DOAJ. Nixon (2014) was able to create a list according to the requirements of the library following some methodologies of Purdue University.

3. Significance of the study

Open access journals in LIS contributed significantly to the knowledge world. The contributions are usually measured through citations and different indexes. The previous studies have shown the contribution of LIS journals as it is appended in the online directory. However, the pattern of the LIS journal about the citation pattern has hardly been found in the existing literature. Thus, the work has tried to identify the quality of open access journals in terms of citation; this will enable to detection of the quality criteria of the LIS open access journal.

4. Objectives

The objectives of the study are as follows:

i. To understand the basic concept of OA journal and allied areas

ii. To identify the trend or pattern of the OA journal publishing pattern in Directory of Open Access Journal (DOAJ) in LIS

iii. To trace the growth of OA journal publishing

iv. To judge the quality criteria of the OA journals through the analysis of the citation pattern

v. To suggest suitable measures to eradicate the existing problems of OA journal.

5. Methodology

This online survey of the open access journals in library and information science was conducted from 2020 to 2021. In this study, DOAJ is used as the basic single database for getting relevant information from open journals of LIS as the subject. DOAJ (DOAJ 2023) is a kind of database that helps in indexing methodologies of subjects across borders. This helps us to get access to high quality articles freely. Here 110 Journals have been identified under the study. The searches have been made under different terms like Bibliography, Library Science, Information Science, Library and Information Science, etc. After retrieval, a details validation check was conducted to identify its subject originality and existence. 3 journals were excluded from the coverage due to their subject coverage and availability. After this, a separate checklist was prepared based on the previous studies (Mukherjee & Vishwakarma, 2014; Sahoo, Biritia, & Mohanty, 2017). Individual webpages have been visited to fetch the information and a details content analysis has been done to get the information on the checklist. A content analysis method was adopted to get the required information. The collected data have been put into MS Excel to reach conclusions. Different viewpoints have been drawn based on the collected data. After getting the required

information related to the journals the citation study was conducted using Publish or Perish software.

6. Analysis of the data

Table 1: Year-wise growth of the open access journals in LIS

Year	Number of Journal
2003	6 (5.61%)
2004	3(2.80%)
2005	5(4.67%)
2006	7(6.54%)
2007	7(6.54%)
2008	5(5.61%)
2009	2(1.87%)
2010	6(5.61%)
2011	7(6.54%)
2012	11(10.28%)
2013	19(17.76%)
2014	1(0.93%)
2015	13(12.15%)
2016	13(12.15%)
2017	2(1.87%)

The year-wise growth of LIS journals indicates a smooth growth since 2010 but somehow the growth has been interrupted during 2014. But afterward, it took a steady growth till 2016.

Table 2: Distribution of review procedure in LIS journal

Pattern of Review	Number of Journal(%)
Double blind peer review	61(57%)
Blind peer review	14(13.08%)
Peer review	14 (13.08%)
Editorial review	10(9.35%)
Single blind peer review	5 (5.61%)
Open peer review	2(1.87%)
Not reviewed	1(0.93%)

The above table indicated the quality of the OA journal as 57% of journals followed double blind peer review process which is an indication of maintaining the quality of the content. 13.08% of journals have not mentioned their pattern of exact review only mentioning peer review, which may create doubt among the academicians. 9.35% of journals followed editorial review which is not a healthy trend.

Table 3: Country wise distribution of OA LIS journal

Country	Number of Journals (%)	Country	Number of Journals (%)
Brazil	11(10.28%)	Venezuela	1(0.93%)
United States	26(24.30%)	Germany	3(2.80%)
Cuba	2(1.87%)	Argentina	2(1.87%)
Poland	6(5.61%)	Romania	2(1.87%)
Italy	3(2.80%)	Uruguay	1(0.93%)
United Kingdom	6(5.61%)	India	2(1.87%)
Spain	9(8.41%)	Iran	4(3.74%)
Colombia	2(1.87%)	Korea, Republic of	2(1.87%)
Cuba	2(1.87%)	Turkey	2(1.87%)
Egypt	1(0.93%)	Mexico	1(0.93%)
Costa Rica	1(0.93%)	Switzerland	2(1.87%)
Australia	1(0.93%)	Taiwan	3(2.80%)
Chile	1(0.93%)	Croatia.	1(0.93%)
France	2(1.87%)	Lithuania	1(0.93%)
Netherlands	2(1.87%)	Portugal	1(0.93%)
Slovenia	1(0.93%)	South Africa	2(1.87%)
Canada	3(2.80%)	Total	107(100%)

Table 3 shows that the maximum OA publication (24.30%) was from United States.10.28% was from Brazil which is again in the same continent. India had only contributed 1.87% of OA LIS publications

Table 4: Distribution of article processing charges (APC) taken in LIS journals

Type of Journal	Number of Journal
APC Taken	5 (4.67%)
APC Not Taken	102 (95.33%)

Table 4 shows the distribution of APC taken in open access LIS journals. It is found that a negligible portion that is 4.67% asked author publication fees for publishing their articles.

Table 5: Distribution of publication time taken of LIS journals

Publication Time Span	Number of Journal
1- 10 weeks	35(32.71%)
11 - 20 weeks	35(32.71%)
21 - 30 weeks	15(14.02%)
31 - 40 weeks	1(0.93%)
More than 40 weeks	4(3.74%)
N/A	17(15.89%)

Table 5 indicates the time lag in publishing articles in OA channels. It was found that 45% of the journals required time to publish articles from 3 to 6 months which

not a healthy trend where as 32.71% of journals need the time of 2.5 months to publish a particular article. This time lag may be correlated with the review process of the journal. Usually, the journals that use double blind peer review require more time to publish a specific issue.

Table 6: Distribution of licensing pattern of OA LIS journals

Licensing Pattern	Number of Journal
CC BY	38(35.51%)
CC BY-NC-ND	24(22.43%)
CC BY-NC	21(19.63%)
CC BY-NC-SA	13(12.15%)
CC BY-SA	5(4.67%)
NA	6(5.61%)

Table 6 shows the distribution of licensing patterns of LIS open access journals. It was revealed that 58 journals can be used for non-commercial terms but only 4.67% of journals allow for their use in commercial terms. It can be concluded that most of the open access journals have provided opportunities for sharing and use for academic purposes.

Table 7: Distribution of types of platforms used in LIS journals

Platform Used	Number of Journal
OJS	70(65.42%)
Own	21(19.63%)
Others	16(14.95%)

It is revealed from the above table that most of the institutions preferred OJS as their journal platform for providing services whereas 19.63% of journals have their method for providing services. This needed to be correlated with the time lag in journal publication.

Table 8: Distribution of types of funding/ publication agency of LIS journals

Publication Organisation	Number of Journal
Association	29(27.1%)
Association & Library	1(0.93%)
Commercial Publisher	2(1.87%)
Government Organisation	2(1.87%)
Independent Organisation	2(1.87%)
Library	3(2.80%)
National Library	1(0.93%)
Research Council	1(0.93%)
Research Group	1(0.93%)
Research Institute	3(2.80%)
Union	1(0.93%)
University	60(56.07%)

Table 8 shows the funding agencies of the open access journals. It was revealed that 56.07% of the journal was funded by the universities which helped to distribute the research impact of the universities. 27.1% professional association was the publication agency. Thus, association contributed a great role in disseminating scholarly information.

Table 9: Distribution of language coverage of LIS journals

Language Coverage	Number of Journal
Bilingual	22(20.56%)
Monolingual	65(60.75%)
Multilingual	20(18.69%)

The language coverage of the above table indicated that most of the journals had single language coverage where the most prominent is English language. Apart from that 18.69% of journals had multilingual coverage and 20.56% of journals had bilingual coverage which is an indication of greater coverage among scholarly communities.

Table 10: Distribution of available formats of LIS journals

Text Formats	Number of Journal
PDF only	78(72.9%)
HTML only	5(4.67%)
PDF, HTML	12(11.21%)
PDF, ePUB	2(1.87%)
PDF, XML	2(1.87%)
PDF, HTML, XML	3(2.8%)
PDF, HTML, Mobi	1(0.93%)
PDF, HTML, ePUB, Mobi	1(0.93%)
Web	1(0.93%)

The above table shows the available format of LIS journals. It was revealed that almost all the journals provided PDF format whereas 72.79% of journals provided PDF only format and nearly about 27% of journals had provided other formats like HTML, XML, ePUB, and Mobi format.

Table 11: Distribution of OA journals having Impact Factor

Type	Number (%)
Journal with Impact Factor	7(6.54%)
Journal without Impact Factor	100(93.46%)

Table 11 shows the inclusion of journals in JCR 2017. It was revealed that only 6.54% of Journals are included in the Journal Impact factor which indicates the degrading quality.

Table 12: Details of the journal having Impact Factor

Journal Name	Total Cites	Journal Impact	Eigen factor Score
Information Research: An International Electronic Journal	905	0.762	0.00072
Information Technology and Libraries	245	0.968	0.00019
Investigación Bibliotecológica	108	0.212	0.00004
Journal of Information Science Theory and Practice	1,792	1.939	0.0017
Journal of the Medical Library Association	932	1.541	0.00089
Revista Española de Documentación Científica	319	0.632	0.00048
Transinformação	73	0.255	0.00005

Table 12 shows the details of the journal having Impact Factor. It revealed that only 6 journals were included and among them maximum citation and impact factor received by the Journal of Information Science Theory and Practice.

Table 13: Distribution of citation in the OA LIS journals

Journal Name	Publication Year	Citation Years	Papers	Citations	Citation/ Year	Citation/ Papers
Anales de Documentación	1974-2018	44	693	5016	114.00	7.24
Archeion Online	2013-2018	5	72	27	5.40	0.38
Biblios	2019-2018	19	658	1023	53.84	1.55
Bibliotecas: Anales de Investigación	2000-2018	18	340	160	8.89	0.47
Biblioteka	2008-2018	10	125	31	3.10	0.25
BibliotekaiEdukacja	2012-2018	6	209	32	5.33	0.15
Bibliothecae it	2012-2018	6	313	18	3.00	0.06
BIBLOS :Revista do Instituto de Ciências Humanas e da Informação	1985-2018	33	391	440	13.33	1.13
BiD :Textos Universitaris de Biblioteconomiai Documentació	1998-2018	20	517	555	27.75	1.07
Boletín Cultural y Bibliográfico	1958-2018	60	370	230	3.83	0.62
Bulletin of the Medical Library Association	1912-2018	122	1001	25510	209.10	25.48
Chinese Librarianship: An International Electronic Journal	1934-2018	84	60	176	2.10	2.93
Ciência da Informaçãoem Revista	2013-2018	5	117	37	7.40	0.32
Ciencias de la Información	1973-2018	45	1000	3046	67.69	3.05
Code4Lib Journal	2007-2018	11	274	1002	91.09	3.66
College and Research Libraries	1942-2018	76	1000	3915	51.51	3.92
Communications in Information Literacy	2007-2018	11	234	1714	155.82	7.32
Cybrarians Journal	2004-2017	14	238	2	0.14	0.01
Data Curation Profiles Directory	2009-2013	9	33	10	1.11	0.30
Documentación de las Ciencias de la Información	1976-2018	42	599	2102	50.05	3.51
EBIB Bulletin	1985-2018	33	783	610	18.48	0.78
e-Ciencias de la Información	2011-2018	7	278	251	35.86	0.90
Electronic Journal of Health Informatics	2003-2018	15	167	854	56.93	5.11

Journal Name	Publication Year	Citation Years	Papers	Citations	Citation/ Year	Citation/ Papers
Electronic Journal of Knowledge Management	2004-2018	14	349	6656	475.43	19.07
Enl@ceRevistaVenezolana de Información, Tecnología y Conocimiento	2015-2015	13	11	42	3.23	3.82
Evidence Based Library and Information Practice	2006-2018	12	845	2783	231.92	3.29
Hipertext.net	1991-2018	27	297	981	36.33	3.30
In the Library with the Lead Pipe	2008-2018	10	126	280	28.00	2.22
Informação & Informação	1996-2018	22	757	1887	85.77	2.49
Información, Cultura y Sociedad	1946-2018	72	494	1367	18.99	2.77
Informatică economic	1999-2010	19	40	112	5.89	2.80
Informatio	1997-2018	21	170	203	9.67	1.19
Information Research: An International Electronic Journal	1997-2018	21	1000	8837	420.81	8.84
Information Technology and Libraries	1968-2018	50	1000	16210	324.20	16.21
Informationspraxis	1991-2018	27	38	76	2.81	2.00
iNFOTEZY	1987-2018	31	48	3	0.10	0.06
Insights: The UKSG Journal	1996-2018	22	368	968	44.00	2.63
Interdisciplinary Journal of e-Learning and Learning Objects	2007-2018	11	4	2	0.18	0.50
Interdisciplinary Journal of Information, Knowledge, and Management	2006-2018	12	103	1764	147.00	17.13
International Journal of Digital Curation	1998-2018	20	399	5332	266.60	13.36
International Journal of Digital Library Services	2011-2017	7	116	503	71.86	4.34
International Journal of Information Dissemination and Technology	2011-2018	7	254	608	86.86	2.39
International Journal of Information Science and Management	2006-2018	12	300	998	83.17	3.33
International Journal of Knowledge Content Development and Technology	2011-2015	7	19	81	11.57	4.26
International Journal of Medical Reviews	2014-2018	4	104	98	24.50	0.94
Investigación Bibliotecológica	1955-2018	63	999	3607	57.25	3.61
Iranian journal of Information Processing & Management	2006-2017	12	385	384	32.00	1.00
Issues in Informing Science and Information Technology	2004-2018	14	218	2283	163.07	10.47
Issues in Science and Technology Librarianship	1968-2018	50	219	2857	57.14	13.05
JLIS.it	2004-2018	14	407	647	46.21	1.59
Journal of Balkan Libraries Union	2013-2017	5	120	59	11.80	0.49
Journal of Copyright in Education and Librarianship	2016-2018	2	44	10	5.00	0.23
Journal of Data Mining and Digital Humanities	2010-2018	8	51	55	6.88	1.08
Journal of Educational Media & Library Sciences	1975-2018	75	1000	2363	31.51	2.36
Journal of eScience Librarianship	2012-2018	6	121	620	103.33	5.12
Journal of Information Literacy	2007-2018	11	286	1890	171.82	6.61
Journal of Information Science Theory and Practice	2002-2018	16	114	402	25.13	3.53
Journal of Librarianship and Scholarly Communication	2012-2018	6	184	891	148.50	4.84
Tushuguanxueyu Zixun Kexue	1975-2018	43	559	1031	23.98	1.84

Journal Name	Publication Year	Citation Years	Papers	Citations	Citation/ Year	Citation/ Papers
Journal of Library and Information Studies	1999-2018	19	302	945	49.74	3.13
Journal of the Canadian Health Libraries Association	2004-2018	14	411	1052	75.14	2.56
Journal of the European Association for Health Information and Libraries	1996-2018	22	60	38	1.73	0.63
Journal of the Library and Information Association of South Africa	1987-2018	31	421	2949	95.13	7.00
Journal of the Medical Library Association	2001-2018	17	1000	21574	1269.06	21.57
Knjižnica	1849-2018	169	1000	1706	10.09	1.71
Knygotyra	1961-2017	57	584	693	12.16	1.19
Libellarium : Journal for the History of Writing, Books and Memory Institutions/Zadar : Sveučilište u Zadru, Odjel za Knjižničarstvo	2008-2017	10	94	48	4.80	0.51
Liber Quarterly: The Journal of European Research Libraries	1995-2018	23	23	61	2.65	2.65
Library and Information Research : Research into Practice for Information & Library Services	1935-2018	83	440	1619	19.51	3.68
Métodos de Información	1994-2018	24	576	646	26.92	1.12
North Carolina Libraries	1900-2018	118	540	719	6.09	1.33
o-bib. Das offene Bibliotheksjournal	2014-2018	4	349	101	25.25	0.29
Páginasa & b	1999-2018	19	196	349	18.37	1.78
Palabra Clave [La Plata]	2011-2018	7	40	25	3.57	0.63
Partnership: The Canadian Journal of Library and Information Practice and Research	2006-2018	12	436	1087	90.58	2.49
Pecia Complutense	2004-2018	14	166	93	6.64	0.56
Pennsylvania Libraries: Research & Practice	2013-2018	5	87	91	18.20	1.05
Perspectivasem Gestão & Conhecimento	2011-2016	7	358	917	131.00	2.56
Perspektive Bibliothek	2012-2015	6	67	53	8.83	0.79
Podkarpackie Studia Biblioteczne	2012-2016	6	36	25	4.17	0.69
Practical Academic Librarianship	2011-2017	7	31	60	8.57	1.94
Publications	2013-2018	5	179	481	96.20	2.69
Revista Acesso Livre or Acesso Livre	2014-2018	4	147	1	0.25	0.01
Revista Analisandoem Ciência da Informação	2012-2018	6	15	1	0.17	0.07
Revista Brasileira de Educaçãoem Ciência da Informação	1981-2018	37	79	109	2.95	1.38
Revista Digital de Biblioteconomia e Ciência da Informação	1969-2018	49	788	1940	39.59	2.46
Revista Española de Documentación Científica	1977-2018	41	999	4146	101.12	4.15
Revista General de Información y Documentación	1927-2018	91	1000	2230	24.51	2.23
Revista Ibero-Americana de Ciência da Informação	1983-2018	35	412	569	16.26	1.38
Revista Interamericana de Bibliotecología	1939-2018	79	1000	2528	32.00	2.53
Revue Française des Sciences de l'Information et de la Communication	1981-2018	37	402	1150	31.08	2.86
RUIDERAe :Revista de Unidades de Información. Descripción de Experiencias y Resultados Aplicados	1964-2018	54	183	39	0.72	0.21

Journal Name	Publication Year	Citation Years	Papers	Citations	Citation/ Year	Citation/ Papers
SCIRES-IT :SCIentificRESearch and Information Technology	2011-2018	7	198	358	51.14	1.81
Serie Bibliotecología y Gestión de Información	2005-2018	13	114	277	21.31	2.43
SLIS Connecting	2012-2017	6	87	21	3.50	0.24
South African Journal of Libraries and Information Science	1987-2018	31	421	2996	96.65	7.12
Studii de Biblioteconomieşi Ştiinţa Informării	2002-2017	15	90	31	2.07	0.34
Tennessee Libraries	1819-2017	128	330	197	1.54	0.60
The journal of the Rutgers University Library	1967-2017	42	536	718	17.10	1.34
Theological Librarianship: An Online Journal of the American Theological Library Association	2008-2018	10	348	191	19.10	0.55
Toruńskie Studia Bibliologiczne	1966-2018	52	211	90	1.73	0.43
Transinformação	1989-2018	29	996	4093	141.14	4.11
Türk Kütüphaneciliği	1894-2018	124	991	649	5.23	0.65
Virginia Libraries	1984-2018	34	389	264	7.76	0.68
Weave: Journal of Library User Experience	2005-2018	13	35	414	31.85	11.83
Webology	2005-2018	13	135	1124	86.46	8.33
Zeitschrift für Bibliothekskultur	2013-2018	5	73	43	8.60	0.59

The above table indicates the citation pattern of the DOAJ-listed OA journal. It was found that the minimum and maximum citation years were 2 and 169 respectively. The maximum number of citations which is 25510 citations was received by the Bulletin of the Medical Library Association in its 122 citation years. This journal has also received year wise maximum citation and the average citation/paper which indicates the quality of the journal. The minimum average citation of two journals namely Cybrarians Journal and Revista Acesso Livre clearly indicate their fall in quality. It is also found that only 17 journals are getting more than 100 citations in a year which is not a good indication for the open access channels. It is also revealed that only 9 journals are getting more than 10 citations in each paper.

Table 14: Top ten citations in OA LIS journal

Journal Name	Highest Citation	Author	Year
The journal of the Rutgers University Library	320	MS Boyce	1979
Weave: Journal of Library User Experience	339	R Lemus, R Lal	2005
Revista Española de DocumentaciónCientífica	371	A Cornella, A M Vega	1995
Information Research: An International Electronic Journal	397	G Burnett	2000
Anales de Documentación	398	D Bawden	2002
Revue Française des Sciences de l'Information et de la Communication	408	A Hewitt, G Burbidge	1993
Information Technology and Libraries	437	CR McClure	1994
Journal of the Medical Library Association	507	S Saha	2003
Bulletin of the Medical Library Association	571	H Cushing	1925
Issues in Science and Technology Librarianship	1343	D Sally	1995

The above table shows the top 10 cited papers during the entire publication sphere of OA LIS journals listed in DOAJ. It is found that the paper by D Sally published in 1995 got the maximum number of citations whereas the article from The journal of the Rutgers University Library took the last position by getting 320 citations.

7. Discussion

Most of the LIS open access journals have tried to keep the standard by maintaining strict guidelines for blind review procedures. There are merely a few journals that follow editorial review or no review. However, the lesser number of journals has an impact factor.

LIS OA journals are going for indexing procedures after 2010 which indicates the continuous efforts to increase visibility. Most of the journals under study are added to DOAJ after 2010 or later.

American countries contributed significantly in terms of publishing OA journals and most of the journals were not considered APC for publishing.

University and Association emerged as the major publishers for LIS OA journals and PDF appeared as the best format in the OJS platform.

Access to the journal is limited due to the language barriers as most of the LIS journals are published in monolingual.

The quality of the journals depends on the citation. It was found that many of the journals received higher citations which indicated the higher quality.

8. Conclusion

The evaluation criteria of LIS open access journals are quite high. But the focus must be regularly maintained. The OA journal will be expected to bring more citations as it is available for access and academic use. The funding agencies should try to spend more money to maintain the quality and index it for more use. The quality of LIS journals will be the prime indicator of the scope of the subject. Indian organisations should spend more money and index it properly for the greater use of the resources.

References

Abdel Hady, M. F. (2012). Arabic electronic journals in library and information science: a content analysis study. *King Fahd National Library Journal,* 18(2), 261- 292.

Arunachalam, S. & Muthu, M. (2011). *Open access to scholarly literature in India: a status report (with emphasis on scientific literature).* Centre for Internet and Society, Bangalore, India, 9 April 2011 (Draft).

Biswas, Brar & Bhabal (2022). Open access: ushering in new dimension to information services. In A. Biswas & M. Das Biswas (Eds.), *Panorama of open access: progress, practices and prospects* (pp 4-23). New Delhi: Ess Ess Publications.

Directory of Open Access Journal. March 2018. Retrieved from https://doaj.org/

Frandsen, T. F. (2009). Scholarly communication changing: the implications of open access. PhD thesis from the Research Programme of Knowledge Culture and Knowledge Media, Royal School of Library and Information Science, Denmark. Retrieved from http://www.forskerforbundet.no/upload/diverse/FBF/Scholarly%20Communication%20Changing.pdf

Das, A. K., Satija, M. P., & Mishra, S. (2015). *Scholarly communication.* UNESCO. Retrieved from https://unesdoc.unesco.org/ark:/48223/pf0000231938

Falk, H. (2004). Open access gains momentum. *The Electronic Library,* 22(6), 527-530. doi:10.1108/02640470410570848

Ghosh, S. B. & Das, A. K. (2007). Open access and institutional repositories -- a developing country perspective: a case study of India. *IFLA Journal,* 33(229).doi:10.1177/0340035207083304

Hall, G. (2008). *Digitize this Book! the politics of new media or why we need open access now.* Minneapolis: University of Minnesota Press.

Falk, H. (2004). Open access gains momentum. *The Electronic Library,* 22(6), 527-530. doi:10.1108/02640470410570848.

Impact factor. (2018). Retrieved from https://en.wikipedia.org/wiki/Impact_factor.

Mukherjee, B., & Viswakarma, P. (2014). LIS journals in India: Current status and some improvement measures. *Annals of Library and Information Studies,* 61. 243-252.

Nixon, J. M. (2014).Core journals in library and information science: developing a methodology for ranking LIS journals. *Libraries Faculty and Staff Scholarship and Research.* Retrieved from http://docs.lib.purdue.edu/ lib_fsdocs/61

Rufai, R., Gul, S., & Shah, T. A. (2011). Open access journals in library and information science: the story so far, *TRIM* 7 (2), 218-228.

Sahoo, J, Biritia, T., & Mohanty, B. (2017). Open access journals in library and information science: DOAJ study. *International Journal of Information Dissemination and Technology,* 7(2), 45-53.

Swan, A. (2006). Open access: why should we have it? key perspectives. Retrieved from http://www.keyperspectives.co.uk/openaccessarchive/journalpublications.html

Thavamani, K. (2013). Directory of Open Access Journals: a bibliometric study of library and information science, *Collaborative Librarianship,* 5(4), Retrieved from https://digitalcommons.du.edu/collaborativelibrarianship/vol5/iss4/5.