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Research Productivity of Journal of Librarianship and Information Science from 1999-2019: A Bibliometric Study

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Abstract

Journal of Librarianship and Information Science (JoLIS) is a peer-reviewed journal that deals with the fields of Library and Information Science and serving since 1969. The journal publishes various forms of data including articles, book reviews, letters, reviews and editorial material, etc. The study aims at highlighting the research productivity of JoLIS. Bibliometric data of JoLIS have been collected through Core Collection and Web of Science. VOSviewer, Biblishiny, and MS Excel spreadsheet were used to analyze the data. This bibliometric study explores the exact figures of publications, types of documents, year-wise distribution of published documents, frequency distribution of specific productivity, top 10 highly cited articles, bibliographic coupling of organizations, document productions from different countries, and the most used author's keywords. This study presents a comprehensive overview of the content of JoLIS, and a systematic analysis of its research productivity from 1999 to 2019. Moreover, this study provides a methodological framework for the research productivity of this journal in future.

Keywords: Librarianship; Information Science; Bibliometric; Research Productivity; Citations

Introduction

With the passage of time, many changes have been occurred in various fields of life and that became possible through research. Now advanced countries are spending a handsome amount on research activities for the betterment and development of their countries. Research activities have noteworthy importance for society and it has achieved a significant role in all knowledge-based fields (Naseer & Mahmood, 2009). Research publications of a particular field with the target to communicate inventive thought or data of that field means the further advancement of that subject (Warriach & Ahmad, 2016). The library assumes a significant role in our social and educational activities, and the libraries support the researchers to conduct research in a systematic way. Librarians' capabilities, particularly in providing counseling and services, are significant assistants in the formation of a better learning atmosphere (Hapke, 2005). The library is an incredible source of getting data, especially the computerized library additionally facilitates in providing up-to-date and fresh data to researchers (Shoaib et al., 2020). University libraries acquire proficiency and adequacy in research, and improve research's profitability (Ali & Naveed, 2020.)

Journal of Librarianship and Information Science is a peer-reviewed journal that covers the fields of Library Science and Information Science. It is a platform for conferring or sharing information to researchers related to library and information science from all around the globe. It has various types of publications e.g. articles, book reviews, letters, reviews, and editorial material that handles research in the field of Library and Information Science. It is an academic journal, publishes quarterly, and covers unique exploration viewpoints and approaches in the qualitative, quantitative, and mixed-method way. It started publications in 1969 and now SAGE publications is the publisher of this journal. It is indexed in several databases including Science Citation Index -Expanded, Social Science Citation Index (SSCI), Arts & Humanities Citation Index (A&HCI),

Conference Proceedings Citation Index – Science CPCI-S, Conference Proceedings Citation Index- Social Sciences and Humanities (CPCI-SSH), Emerging Sources Citation Index (ESCI). It has a committed editorial team for publishing valuable research papers of LIS researchers and experts around the globe that hold importance in the domain of librarianship. Through such exploration, the all-encompassing objective of JoLIS is to draw interest in researchers, students, and library professionals.

Bibliometric analysis produces valuable and productive information in a scientific way (Baladi et al., 2018). Bibliometrics consider a quantitative assessment of publication pattern which look like just an investigation of macro communication (Alhaider et al., 2015). Bibliometric is the utilization of factual and numerical techniques to bibliographical investigations and all types of composed communications (Hazarika et al., 2003). Quantitative assessment of distribution is presently utilized in all countries of the world. Bibliometric is utilized in exploration execution assessment, particularly in institutions (Reuters, 2020). Bibliometric is called the best instrument in the field of research especially in social science for methodical investigation of publications yield of any subject (Smita & Vaishali, 2013). Therefore, a bibliometric analysis is a good way to evaluate the statistics of any publications and their impact on the concerned community (Siddique et al., 2020).

Many studies on bibliometric analysis of various journals have been published in the national and international literature to evaluate the journals' productivity statistically (such as, Åström & Hansson, 2012; Edewor, 2013; Hussain et al., 2011; Ivanovic & Y-S, 2016; Naseer & Mahmood, 2009; Naseer et al., 2019; Pandita, 2013; Rajev & Joseph, 2016; Rattan & Gupta, 2012; Saberi et al., 2019; Sam, 2008; Siddique et al., 2020; Singh et al., 2007; Singh & Bebi, 2014;

Thanuskodi, 2010; Tsay, 2008, 2011; Verma et al., 2017) The least research on bibliometric analysis of JoLIS is the cause of this exploration.

The major aim of the study is to evaluate the research output of JoLIS from 1999 to 2019. The main contribution of the study is to make available a comprehensive overview of the content of JoLIS and a systematic analysis of its research productivity during this period. Also, this study provides a methodological framework for the research productivity of this journal in the future.

Research Objectives

- To find out the writing trends in JoLIS from 1999-2019.

- To discover the year-wise data of published documents.

- To highlight the bibliographic coupling of organizations.

- To examine the top 10 highly cited articles.

Methodology

The data has been extracted from the Science Citation Index database and Web of Science Core Collection for bibliometric analysis. During the years 1999-2019, a total of 943 records were retrieved. All the bibliographic information with publication name through the query "Journal of Librarianship and Information Science" were downloaded. A spreadsheet of Microsoft Excel has been used to organize and manage the data.

Data Analysis

The authors have endeavored to provide proper information after investigating the data and portrayed the results of analyzed data from 1999 to 2019.

Table 1

The Information about Document Types Published during 1999-2019

Document types	Numbers of documents	% of 943
Article	514	54.51
Book Review	368	39.02
Editorial Material	39	04.14
Review	20	02.12
Letter	02	00.21
Total	943	100.0

Table 1 shows the types of publications with a specific timeframe 1999 to 2019. The total number of publications is 943. The table categorizes the documents in five various forms that are published during 21 years and the highest frequency of publication type is research articles 514 (54.51%). Similarly, 368 (39.02%) book reviews have been published and the lowest category of published documents are letters 2 (0.21%). It is most obvious that people have the trend to publish research articles in the JoLIS.

Table 2

The Year Wise Distribution of Published Documents during 1999-2019

Years	TP*	% of 943	Years	TP*	% of 943
1999	55	5.832	2010	37	3.924
2000	48	5.09	2011	42	4.454
2001	46	4.878	2012	41	4.348
2002	45	4.772	2013	48	5.09
2003	41	4.348	2014	45	4.772
2004	29	3.075	2015	36	3.818
2005	43	4.56	2016	32	3.393
2006	51	5.408	2017	39	4.136
2007	32	3.393	2018	37	3.924
2008	38	4.03	2019	112	11.877
2009	46	4.878		*TP* = Total Publications*	

The distributions of published documents from 1999 to 2019 are highlighted in Table 2. The data of 943 published articles have been arranged year wise. The results specify the highest ratio of publication in 2019 with 112 (11.87%) number of research papers. The second-highest rate of the published papers is 55 (5.83%) in 1999. The lowest publications with the number of articles 29 (3.07%) are in 2004. It is also apparent in Figure 1 that the larger number of published documents is in 2019 as compared to other years.
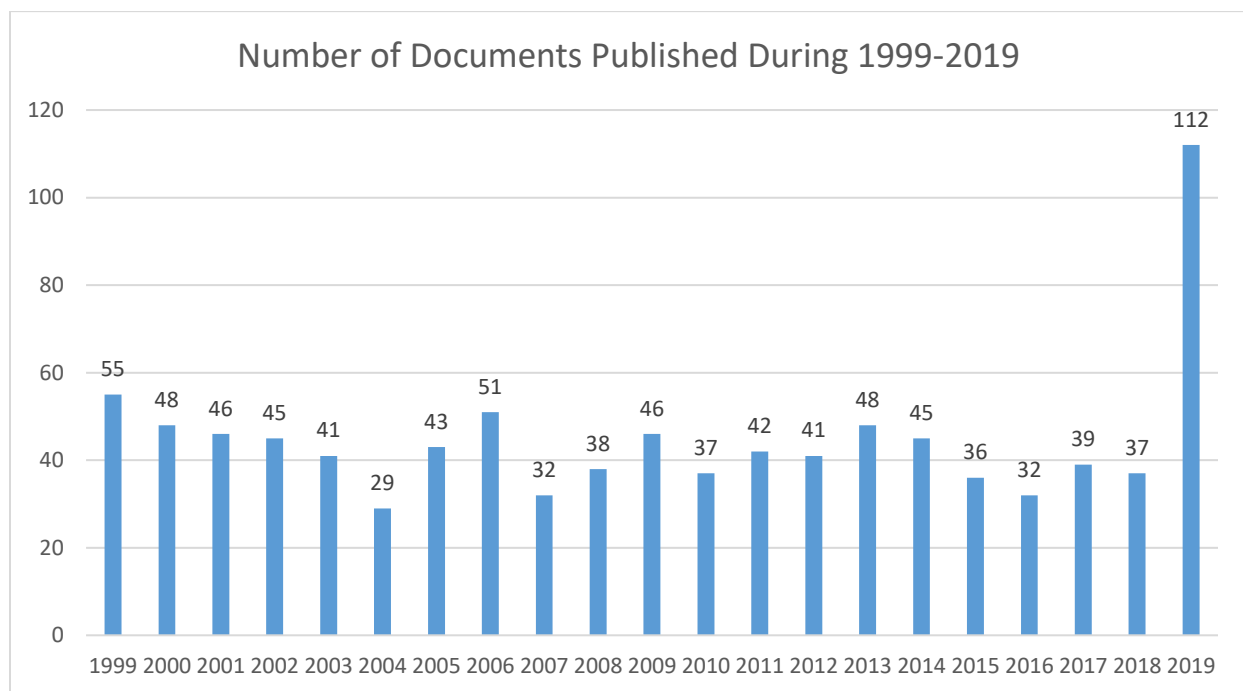
Figure 1. The number of publications during 1999-2019

The data (Table 3) shows that the frequency distribution of specific productivity published during 21 years (1999-2019). The authors who have worked as sole author were 800 (0.8%) followed by 94 (0.094%) authors who published their work with two authors. Only one document has 20 authors and they worked as a group. The results identifies that people have an interest to publish their work as a single author instead of combined work.

Table 3

The Frequency Distribution of Specific Productivity

Documents Written	No. of Authors	Proportion of Authors	Documents Written	No. of Authors	Proportion of Authors
1	800	0.8	9	2	0.002
2	94	0.094	10	4	0.004
3	37	0.037	11	2	0.002
4	25	0.025	14	1	0.001
5	10	0.01	15	1	0.001
6	7	0.007	16	1	0.001
7	9	0.009	17	3	0.003
8	3	0.003	20	1	0.001

Table 4 presents the 10 highly cited articles published from 1999 to 2019 in JoLIS. Total Citations Web of Science (TCWOS) provides the exact figure of frequently cited document that is an article "Information literacy: Different contexts, different concepts, different truths" by Lloyd and Williamson (2005) with 89 cited references. Another highly cited article is "Understanding information inequality: Making sense of the literature of the information and digital divides" by Yu, LZ (2006) with 83 citations count on Web of Science. The least value in the top 10 highly cited articles is "The changing role of subject librarians in academic libraries" by Pinfield (2001) with 43 cited reference count.

Table 4

Top 10 Highly Cited Articles Published during 1999-2019

DT*	DOI	Authors	PY*	Vol.	Issue	TC*
Article	10.1177/0961000605055355	Lloyd, A	2005	37	2	89
Review	10.1177/0961000606070600	Yu, LZ	2006	38	4	83
Article	10.1177/0961000608099896	Walsh, A	2009	41	1	80
Article	10.1177/0961000608099895	Bryant, J; Matthews, G; Walton, G	2009	41	1	68
Article	10.1177/0961000611434361	Chu, SKW; Du, HS	2013	45	1	60
Article	10.1177/0961000613492542	Cox, AM; Pinfield, S	2014	46	4	60
Article	10.1177/0961000607086616	Lloyd, A; Williamson, K	2008	40	1	57
Article	10.1177/0961000603352003	Lloyd, A	2003	35	2	47
Article	10.1177/0961000605057855	Aabo, V	2005	37	4	46
Article	10.1177/09610060103300104	Pinfield, S	2001	33	1	43

DT= Document Type, PY*= Publication Year, TC* = Total Citations*

Table 5 highlights the information about the impact of authors on published documents from 1999-2019. The findings highlight the highest number of publications (20) by Goulding with 152 total citation (TC) and 8 h index. The second highest publications by Oppenheim are 17 with 92 TC and 6 h index. The third uppermost publications by Usherwood are 17 with 52 TC and 4 h index.

Table 5

The Impact of Authors on Published Documents

Author	PY*-Start	TP*	TC*	h_index	g_index	m_index
Goulding A	1999	20	152	8	12	0.348
Oppenheim C	2000	17	92	6	9	0.273
Usherwood B	2000	17	52	4	7	0.182
Hannabuss S	1999	17	17	1	4	0.043
Underwood PG	2009	16	17	3	4	0.231
Rowley J	1999	15	27	3	5	0.130
Pors NO	2007	14	0	0	0	0.000
Aharony N	2009	11	110	6	10	0.462
Cornish GP	2003	11	0	0	0	0.000
Creaser C	2001	10	43	4	6	0.190
Isfandyari-Moghaddam A	2012	10	0	0	0	0.000
Mcmenemy D	2004	10	18	2	4	0.111
Shenton AK	2003	10	107	5	10	0.263
Mcknight C	2000	9	86	7	9	0.318
Pinto M	2008	9	70	4	8	0.286
Lo P	2017	8	38	3	5	0.600
Muir A	2002	8	29	3	5	0.150
Walton G	2001	8	102	4	8	0.190
Bowman JH	2001	7	0	0	0	0.000
Chu SKW	2006	7	93	3	7	0.188

PY= Publication Year, TP*= Total Publications, TC* = Total Citations*

The results (Table 6) and figure 2 describe the data about 459 organizations involved in the bibliographic coupling of 943 published documents. Figure 2 highlights the data with nine clusters, 913 links, and 7,646 total link strength of these organizations having bibliographic

coupling. The University of Tsukuba is on top with the highest total link strength (1034) followed by the University of Hong Kong with total link strength (981). The least amount of total link strength as the bibliographic coupling is six in City University London. The findings (Figure 2) additionally investigates the semantic relationship of JoLIS authors, their associated organizations and nations utilizing bibliographic coupling.

Table 6

Bibliographic Coupling of Organizations.

Organization	TP*	TC*	TLS*	Organization	TP*	TC*	TLS*
Univ. Tsukuba	9	39	1034	Edinburgh Napier Univ.	6	20	156
Univ. Hong Kong	13	128	981	Univ. Western Ontario	5	41	156
Univ. Sheffield	39	290	970	Liverpool John Moores Univ.	7	23	152
Univ. Guam	5	29	833	Glasgow Caledonian Univ.	6	79	152
Univ. South Africa	13	20	672	Royal Sch. Lib & Informat Sci.	16	13	132
Univ. Granada	9	70	597	Leeds Metropolitan Univ.	12	37	117
Northumbria Univ.	27	122	582	UCL	18	19	96
Univ. Nigeria	5	4	538	Loughborough Univ.	5	24	94
Univ. Malaya	9	38	474	Islamic Azad Univ.	15	18	88
Manchester Metropolitan Univ.	19	79	473	Univ. Strathclyde	16	39	86
Univ. Kwazulu Natal	6	35	432	Aberystwyth Univ.	9	18	78
Univ. Loughborough	47	400	426	Victoria Univ Wellington	5	21	65
Univ. Boras	6	34	385	Konkuk Univ.	5	18	63
Charles Sturt Univ.	8	230	374	George Mason Univ.	7	1	21
Univ. Cape Town	15	6	308	Univ. Cent England	7	48	14
Bar Ilan Univ.	16	152	238	Univ. Wales	18	16	13
Loughborough Univ. Technology	33	217	221	Univ. Ljubljana	7	6	10
Robert Gordon Univ.	21	94	214	Auslib Lib Consulting	6	0	10
Univ. Tech. Sydney	5	9	175	Univ. Extremadura	5	25	9
Nanyang Tech. Univ.	6	48	170	City Univ. London	10	4	6

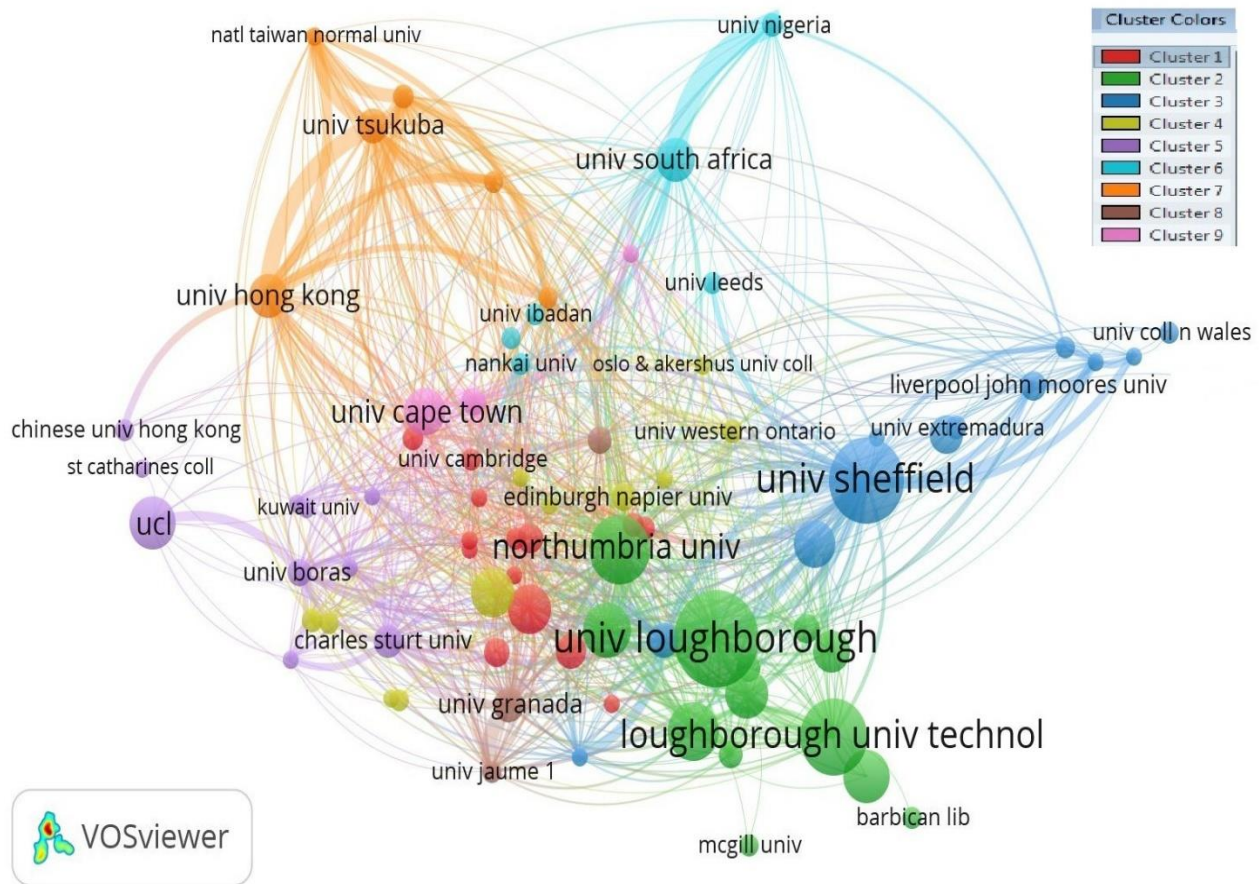*TP*= Total Publications, TC*= Total Citations, TLS*= Total Link Strength*

Figure 2. Bibliographic coupling of organizations affiliated with JoLIS authors

The data (Table 7) show the authors' affiliation with JoLIS from 68 countries in written publications from all over the world. The highest production of total publications (318), total citations (1525), and total link strength (23) is from England followed by the USA with TP (91), TC (373), and TLS (32). Eighteen (18) countries have a contribution in total publications and total citations but don't have total link strength. Figure 3 highlights the cooperative network of the top producing countries.

Table 7

The Document Productions by Countries

Country	TP*	TC*	TLS*	Country	TP*	TC*	TLS*	Country	TP*	TC*	TLS*
England	318	1525	23	New Zealand	6	25	3	Serbia	2	18	1
USA	91	373	32	Singapore	6	48	3	Uganda	2	10	0
Scotland	57	229	5	Turkey	6	10	2	Zimbabwe	2	0	2
Wales	43	87	2	Greece	5	20	0	Botswana	1	1	0
South Africa	38	68	14	Kuwait	5	24	2	Czech Republic	1	10	0
Australia	32	284	17	Pakistan	5	20	2	India	1	1	1
Peoples R China	32	272	31	Portugal	5	25	1	Jamaica	1	3	0
Spain	23	130	7	Tanzania	5	24	4	Jordan	1	2	0
Denmark	20	22	4	Belgium	4	22	1	Lithuania	1	5	1
Iran	20	23	3	France	4	16	1	Luxembourg	1	6	1
Canada	19	103	12	Ireland	4	20	2	Malawi	1	2	0
South Korea	17	77	1	Italy	4	10	4	Mexico	1	2	1
Israel	16	152	2	Saudi Arabia	4	23	4	Namibia	1	2	1
Sweden	16	117	5	Bangladesh	3	50	4	Netherlands	1	6	0
Malaysia	14	72	9	Brazil	3	15	1	New Caledonia	1	0	0
Nigeria	13	33	5	Ghana	3	2	1	Niger	1	6	0
Japan	11	42	25	Cuba	2	4	2	North Ireland	1	0	0
Taiwan	11	49	16	Germany	2	12	2	Oman	1	4	0
Norway	9	120	2	Hungary	2	23	0	Qatar	1	1	1
Egypt	8	15	3	Iceland	2	1	0	Sierra Leone	1	4	0
Finland	8	54	1	Kenya	2	5	1	Sudan	1	3	0
Slovenia	7	6	0	Philippines	2	6	0				
Croatia	6	11	3	Poland	2	5	2	Zambia	1	1	1

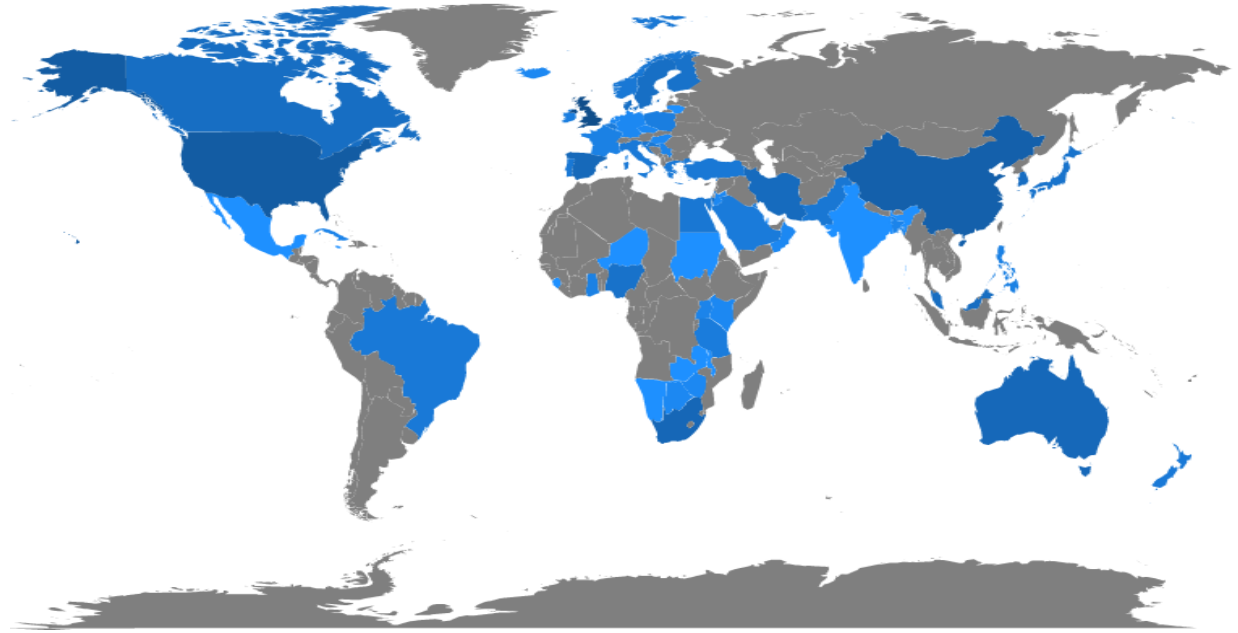*TP*= Total Publications, TC*= Total Citations, TLS*= Total Link Strength*

Figure 3. The cooperation network of the top productive countries

Table 8

The Most Used Author Keywords

Keywords	*f*	Keywords	*f*	Keywords	*f*
Information literacy	57	Library and information science	12	Copyright	7
Public libraries	46	Public library	12	Library services	7
Academic libraries	37	Learning	11	Management	7
Libraries	33	Librarians	11	Nigeria	7
Information	21	Information needs	10	Preservation	7
Library	20	Librarianship	10	Reading	7
Public	14	Higher education	9	Social media	7
Research	13	Information behaviour	9	Survey	7
Education	12	University libraries	9	User	7
Evaluation	12	School libraries	8	Bibliometrics	6

Table 8 highlights 33 most used or common authors' keywords used in the 943 published documents during 21 years. The results show that the most persistent keyword is information literacy (57). The second most discussed keyword is public libraries (46) and the minimum frequency of keyword is bibliometrics (6). Mostly the authors used the keyword "information literacy" in their publications in the time frame of 1999 to 2019. Biblioshiny tool has been used for the word cloud in Figure 4 and it highlights the data of keywords.

Figure 4. Word cloud of authors' keywords

Discussion

The outcome of the study encounters the research objectives and evaluate the research productivity of JoLIS. This bibliometric study reports 943 documents published during the time span 1999-2019. Five types of material have been published in JoLIS such as articles, book reviews, editorial material, reviews and letters. The most preferred form of publication is research articles which is a good sign for research productivity. Being the strong contributor to knowledge, the research papers have more worth as compared to other forms of documents. The research finds out year-wise distribution of published documents. Throughout this writing journey every year is productive but the writing trends of authors in JoLIS are especially higher in 2019 due to higher frequency of publications as compared to than others years.

Frequency distribution of specific productivity of authors has equally been analyzed in this study. The outcome shows that mostly authors worked as sole author. People have interest to write as a single author as compared to co-authorship. This study has reported top 10 highly cited articles. The research paper by Lloyd (2005) is the highly cited research. Moreover, the impact of authors on published documents shows that Goulding (year) is the highest number of publications with highest total citation (TC). Another highlighted information about the bibliographic coupling of organizations highlights that 459 organizations involved in the bibliographic coupling and "The University of Tsukuba" is on top with the highest total link strength (TLS). Moreover, bibliographic coupling shows the role of organizations in spreading knowledge and the document productions of countries.

Finally, the "information literacy" is found the most utilized author's keywords in JoLIS publications. Researchers can get idea from the keywords to know the latest trends of research in library and information science. Furthermore, this research has explored that England is the top

productive country of the world with highest number of publications in JoLIS. Articles from variety of countries shows the significant value and popularity of JoLIS. This research provides researchers to get all relevant information of JoLIS on one platform. In addition, tThis paper helps the researchers to see the trends of article writing in JoLIS and motivates to contribute in writing research articles.

Major Finding and Conclusion

Bibliometric studies measure the exact statistical analysis of research. This bibliometric study was conducted to gain exact outcome of JoLIS. A total of 943 documents were published in JoLIS during the timespan 1999-2019.

Publication types were journals, reviews, books, letters and editorial material and total 1680 keywords were used from authors in their publications. Total 1000 authors appeared in this timespan of whom 800 worked as single author and 200 as multiple -authors. Total 4660 organizations were the part of these publications. The key findings of this bibliometric study in light of the objectives are as under:

- Five types of publications were found and the highest trend of publications in JoLIS were the research articles and the second-highest trend was book reviews.

- Year wise publications' data shows that total published documents were 943 and the highest ratio of publication was in 2019 followed by the second-highest rate of the published document in 1999.

- Total 85 organizations were involved in bibliographic coupling and the University Tsukuba was on top with the highest total link strength. The University of Hong Kong was the second highest TLS.

- Ten (10) most cited documents were analyzed and the frequently cited document was a review by Lloyd (2005) with 192 cited reference count, and another highly cited article was by Lloyd and Williamson, K (2008) having 56 cited reference count.

This distinctive bibliometric study helps to identify the information in a statistical way, and the bibliometric analysis of JoLIS is helpful to identify the publications during the time span from 1999 to 2019. The study concludes that the JoLIS has published variety of publications like articles, book reviews, editorial material, review and letters during the timeframe of 1999-2019. The authors' contribution from 68 countries shows that JoLIS is recognized at international level. The study will facilitate the researchers for getting exact data about the research productivity of the JoLIS. In addition, the study helps in getting information about bibliometric studies conducted at national and international level. In addition, this study highlights the organizations' involvement in bibliographic coupling and it gives confidence to authors for further research work.

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