Winter 11-25-2019

Malaysian Journal of Library and Information Science: A bibliometric study

kailash garg Dr
CSIR-National Institute of Science, Technology and Development Studies (CSIR-NISTADS), Dr. K.S. Krishnan Marg, New Delhi 110 012, India, gargkc022@gmail.com

Niraj Kumar Mr
Atma Ram Sanatan Dharama College, University of Delhi, Delhi-110 021, India, nirajsingh@arsd.du.ac.in

Geeta geeta Ms
Mata Sundri College, University of Delhi, New Delhi 110 002, India, geetsinghgeet8@gmail.com

Malaysian Journal of Library and Information Science: A bibliometric study

K.C. Garg

CSIR-National Institute of Science, Technology and Development Studies (CSIR-NISTADS), Dr. K.S. Krishnan Marg, New Delhi 110 012, India

Email: gargkc022@gmail.com

ORCID ID http://orcid.org/0000-0003-4299-2469

Niraj Kumar

Atma Ram Sanatan Dharama College, University of Delhi, Delhi-110 021, India

Email: nirajsingh@arsd.du.ac.in

Ms. Geeta

Mata Sundri College, University of Delhi, New Delhi 110 002, India

Email: geetsinghgeet8@gmail.com

Abstract

An analysis of 241 papers published in Malaysian Journal of Library and Information Science during 2007-2018 indicates that the number of papers published as well as the reference per paper has increased in later years as compared to the initial years. The share of single authored papers decreased and multi-authored papers increased during the second block of 2013-2018. Malaysia, the country of origin of the journal published highest number of papers. However, the value of Citation per Paper (CPP) was highest for UK. Among the institutes, University of Malaya (Malaysia) contributed the highest number of papers and University of Dhaka (Bangladesh) had the highest value of CPP. Most of the prolific authors as well as highly cited authors were affiliated to University of Malaya. Among the prolific authors Kiran Kaur of the University of Malaya had the highest value of CPP. University of Malaya also had the highest number of papers in domestic as well as in international collaboration.

Key words: MJLIS, Malaysian Journal of Library and Information Science, Bibliometrics, Scientometrics, Citation Analysis

INTRODUCTION

Research activity plays an important role in the development of any discipline and expansion of new knowledge. Primary journals play an important role in the dissemination of new knowledge. These are the most valuable source of information for researchers, scientists and academicians. These days it has become mandatory to publish articles in journals which have national or international repute and are indexed by Scopus or Web of Science or some abstracting and indexing service of the concerned discipline. Publishing in good journals give authors more visibility to their research work. Several reasons for choosing a journal by an author are the impact factor of the journal, SCImago Journal Rank (SJR), and h-index etc. Other two important factors in choosing a journal by an author is the frequency of the journal, timely publication and the gap in the receipt of the manuscript and its publication. The present study makes a bibliometric analysis of the papers published in Malaysian Journal of Library and Information Science during the 12 years period of 2007-2018.

MALAYSIAN JOURNAL OF LIBRARY AND INFORMATION SCIENCE

The journal was launched in the year 1996 by the Department of Library and Information Science, Faculty of Computer Science and Information Technology, University of Malaya, Malaysia. The journal publishes original research articles in the field of Library and Information Science (LIS) as well related domains that encapsulate information and knowledge. It also encourages contributions about professional policies, practices, principles and progress in the LIS fields. The journal aims to provide a forum for communication amongst LIS professionals

especially within the Asia Pacific region. During the period of 1996-2008 (13 years) the frequency of publication of the journal was half yearly (two issues per year). Since 2009 the journal is being published as triennial (three issues per year). Between 1996 and 2008 the journal was published both in print as well as in electronic format. From 2009 onwards the journal has stopped publication of printed version and is now available in electronic version only. The electronic version is available at http://ejum.fsktm.um.edu.my. The journal is being indexed and abstracted by Social Science Citation Index (SSCI), Scopus, LISA (Library and Information Science Abstracts), Library Literature and Information Science Index, and Library Information Science and Technology Abstracts (LISTA). Based on JCR 2015 the Impact Factor of the journal was 0.476, Ranked 62 out of 86 journals in the category of Library and Information Science. Based on SJR 2015 the value of SJR is 0.361 and has been ranked 88 out 193 journals in the category of Library and Information Sciences. Based on these facts it can be stated that the journal has an international repute in the field of LIS.

REVIEW OF LITERATURE

Individual journals have been the focus of several bibliometric studies in the last decade. Malaysian Journal of Library and Information Science (MJLIS) had also been the subject of study by different authors in the past. These studies are by Tiew, Abdullah and Kaur, 2002, Bakri and Willett, 2008, Velmurugan and Radhakrishnan, 2016 and Brahma and Verma, 2018. Tiew, Abdullah and Kaur examined 76 articles published in MJLIS during 1996-2000 (5 years). Authors found that the range of articles published per volume was between 14 and 17, average

number of references per article was 22.5, the average length per article was 41.2 pages, and the percentage of multi-authored papers was slightly higher than single authored papers. A.N. Zainab was the most prolific author contributing 12 articles closely followed by B. K. Sen with 10 articles. A little less than half (45%) of the authors were geographically affiliated to Malaysia; the most productive institution was University of Malaya. In another study Bakri and Willet examined 85 publications and their citations in MJLIS from 2001-2006 (6 years), and compared the results with those obtained in the earlier study by Tiew *et al*. The study found statistically significant difference in the number of references per article and in the lengths of the articles. The complete set of articles attracted a total of 87 citations, 52 of which were self-citations, with 14% of the MJLIS articles having been cited at least once. In the third study Velmurugan and Radhakrishnan examined distribution of 142 publications published in the journal between 2008 and 2014 (7 years). The study revealed that the highest number of papers was published in the year 2011 and the lowest in the year 2014. Majority of contributions came from Malaysia followed by Iran and India. The scientometric indicators like degree of collaboration, collaborative index, annual growth rate, and relative growth rate etc were also used to analyze the data. In the fourth study Brahma and Verma examined the distribution of 202 articles published during the period of 2007-2016 (10 years) by volume, authorship pattern of articles, reference pattern, and distribution of research output in terms of countries, authors and institutes. Authors also calculated the degree of collaboration of authors. The findings of the study were similar to the study of Velmurugan and Radhakrishnan. University of Malaya, Malaysia, was found to be the most productive institute and A.N. Zainab, the most productive author with 19 contributions. The reference per article was found to be 31. Several other studies related to bibliometric studies of other journals have also been reported in literature. For this see a review

on bibliometric studies on single journal by Kevin, Zainab and Anuar, 2009, and also Garg and Tripathi, 2017, 2018 who did a bibliometric study of the papers authored by Indian scholars on scientometrics and bibliometrics published during 1995-2014 (20 years). The study found that the bibliometric studies related to single journal has increased considerably during 1995-2014. The present study makes a bibliometric analysis of 241 articles published in the Malaysian Journal of Library and Information Science during 2007-2016 (12 years). The present study had used several different bibliometric indicators and is an improvement over the above quoted studies related to the journal in terms of the quantum of papers and period of study. The study has also examined other parameters like domestic and international collaboration not studied in the above quoted references on the journal.

OBJECTIVES

The objectives of the study are:

- to examine the chronological distribution of contributions and references cited there in during 2007-2018;

- to examine pattern of authorship and how it has changed during two blocks of six years each *i.e.* 2007-2012 and 2013-2018;

- to examine the geographical distribution of articles in terms of countries, prolific institutions & prolific authors and to examine the impact of their output as reflected by Citation per Paper (CPP);

- to identify the subjects of papers published in the journal during the study period;

- to examine the citations earned by the articles published from 2007 onwards till May 31, 2019 and to identify highly cited authors which received more than 50 citations; and

- to examine the pattern of domestic and international collaboration of papers.

METHODOLOGY

The data for the present study was downloaded from the journal website available at http://ejum.fsktm.um.edu.my/VolumeListing.aspx?JournalID=3. The study is based on the primary data collected from all the issues of the journal published during 2007 (volume 12) to 2018 (volume 23). The details with regard to each published article consisted name of authors with their affiliations and the geographical location, number of authors involved in each paper, number of references appended with the paper etc. The data was downloaded on MS Excel sheet. Citations of the papers published were obtained by using title of the paper from Google Scholar. The study has taken into account only the articles, short communications and review articles published in the journal. Complete count method has been followed for the analysis of data. Under this method, each country or institution or authors in multi-authored papers are given unit credit for their contributions resulting in inflation of the number of contributions. In the present case also 241 articles has increased to 583. Data was analyzed to meet the objectives mentioned above.

RESULTS AND DISCUSSION

In the following paragraphs, authors describe in details the results of various parameters mentioned under the objectives.

Chronological distribution of articles and references

Since its launch in the year 1996, the journal is appearing on schedule. The journal has an international standing in the field of library and information science by virtue of its inclusion in Scopus and Social Science Citation Index. Table 1 presents the chronological distribution of articles and the references cited by these articles during the period of 2007 to 2018.

Distribution of articles

During the period of study of 2007-2018 (12 years), the journal published 241 articles in 34 issues. Thus, the average number of articles per year was 20 and number of articles published per issue was 7. Data presented in Table 1 indicates that in the years 2007 to 2009, the number of articles per volume was less than average, but increased after 2009. The number of articles published during 2007 and 2008 are less because the journal published only two issues in a year. From 2009, the journal started publishing three issues per year, resulting in an increase of articles per year. The number of articles published by the journal has stabilized during the later period of 2015-2018 and is exactly equal to the average number of articles published by the journal per year. Further analysis of data indicates that highest number (28) articles were published in the year 2011 (volume 16).

Distribution of references

References are an important part of any publication. These provide the reader with the background information about the topic being discussed in the paper. At the same time these assure the reader that the author(s) are familiar with the history of the topic being investigated and reported. Table 1 also provides data on the number of references cited in each volume. It reveals that the number of references per paper is increasing over the period of time. However, the pattern of references has varied during the period of study. The average number of references per paper was about 32.3. Analysis of data indicates that during the study period of 12 years, the average number of references is less in the years 2007, 2008, 2009, 2011, 2012, 2013 and 2014 and in rest of the years the number of references per paper is more than the average. Among all the years number of references per paper is highest for volume 22/23 (2017/2018) and the lowest

number of references per paper is in volume 12 (2007). Brahma and Verma (2018) in their study of the journal found that the reference per article was 31, which now have increased marginally to 32.3. Possible reason for this may be an increase in number of references during the years 2017 and 2018.

Table 1: Distribution of articles and references

Year (Volume)	Number of articles	Number of references	Reference per paper
2007 (12)	14	289	20.6
2008 (13)	16	395	24.7
2009 (14)	18	555	30.8
2010 (15)	24	807	33.6
2011 (16)	28	816	29.1
2012 (17)	20	620	31.0
2013 (18)	22	586	26.6
2014 (19)	19	598	31.5
2015 (20)	20	791	39.6
2016 (21)	20	662	33.1
2017 (22)	20	829	41.5
2018 (23)	20	828	41.4
Total	241	7776	32.3

Pattern of authorship

In the past authors used to publish research papers independently, but the trend has changed now. These days most of the research work is being carried out in collaboration and more number of authors together publishes a paper. Statistical data indicate that percentage of papers produced in collaboration is increasing steadily for more than half a century. Study of authorship pattern examines collaborative trends of authors. The extent of collaboration depends on the number of participants involved in the work. Collaboration is high in the field of science, technology and medicine than that of social sciences and humanities. Collaboration observed in the field of humanities is least. Table 2 provides the details about the authorship pattern among the articles in the source journal for the period 2007-2018 in two blocks. Data presented in Table 2 indicates

highest number (40%) of articles is multi-authored closely followed by two-authored articles (37.9%) and the share of single authored articles is lowest. Further analysis of data indicates that the share of single and two authored articles have declined in second block (2013-2018) as compared with the first block (2007-2012). However, the share of multi-authored papers has increased in second block as compared to first block.

Table 2: Authorship pattern of output

Years	Single authored papers	Two authored papers	Multi-authored papers	Total
2007-2008	11	15	4	30
2009-2010	13	17	12	42
2011-2012	9	17	22	48
2007-2012 (Block 1)	33 (13.8%)	49 (20.4%)	38 (15.8%)	120
2013-2014	7	17	17	41
2015-2016	7	13	20	40
2017-2018	6	12	22	40
2013-2018 (Block 2)	20 (8.4%)	42 (17.5%)	59 (24.6%)	121
Total	53 (22.1%)	91 (37.9%)	96 (40%)	241

(% values are based on the total output i.e. 240)

Prolific countries and impact of their output

Data on the distribution of output and its impact in terms of citations per paper by countries is depicted in Table 3. It indicates that the total output came from 38 countries scattered all over the globe. Among these, 12 countries contributing 10 or more papers produced about 88% of the total output and rest 26 countries produced only about 12% of the total output, indicating a highly skewed distribution of research output. These 26 countries published papers in the range of one to eight papers only. Further analysis of data indicates that among the prolific countries listed in Table 3, Malaysia produced the highest number of publications contributing about one-third (~ 32%) of the total output. This was followed by the output from China, Iran and India with marginal differences in their output. China, Iran and India produced about 11%, 10.4% and

9.2% of the papers respectively. Thus these four countries together produced more than half (61%) of the total output. The remaining eight countries listed in Table 3 contributed 27% papers in the range of 10 to 37. It also indicates a skewed distribution of output. The number of contributions of Malaysia is more because the journal under review is published from Malaysia. Most of the prolific countries were situated in Asia except the UK and Belgium.

The publication output of these countries was subjected to an impact analysis using Citation per Paper (CPP). CPP is a relative indicator computed as the average number of citations per paper i.e. (Total number of citations/Total number of papers). It has been widely used in bibliometric studies to normalize a disparity in volumes of published output among disciplines, countries and institutions for making a meaning full comparison of research impact. For instance Dwivedi, Garg and Kumar, 2015 and Dwivedi, Garg and Prasad, 2017 have used this indicator in their study of organic chemistry research in India and global output in male breast cancer research respectively. The value of CPP for the global output is 10.7. Among all the countries listed in Table 3, the value of CPP is higher than global average for Malaysia, India, Thailand, Nigeria and UK. For rest of the countries, the value of CPP is less than the average value of CPP indicating that the papers published by these countries were cited less than the world average. Among all the countries listed in Table 3, highest value of CPP is for the UK (34.3) followed by Nigeria (15.0), closely followed by Thailand. Lowest value of CPP among the prolific countries was observed for Belgium.

Table 3: Most prolific countries and impact of their output

#	Country	Number of papers	Number of citations	Citation per paper
1	Malaysia	186	2470	13.3
2	China	64	258	4.0
3	Iran	61	587	9.6
4	India	54	677	12.5

5	Taiwan	37	272	7.4
6	Pakistan	23	183	7.9
7	Singapore	23	166	7.2
8	Thailand	18	265	14.7
9	Nigeria	15	225	15.0
10	Kuwait	11	78	7.1
11	UK	11	377	34.3
12	Belgium	10	24	2.4
	Sub total	513	5582	10.9
	*Other 26 countries	70	670	9.6
	Total	583	6252	10.7
*USA and South Korea (8 each), Bangladesh (7), Croatia (6), Turkey (5), Botswana, Germany, Indonesia, Jordan, Romania (3 each), Australia, Czech Republic, Poland, Saudi Arabia, South Africa (2 each), Chile, Kenya, Montenegro, Republic of Benin, Slovakia, Spain, Sri Lanka, Sudan, Tanzania, United Arab Emirates and Yemen (1 each)				

Most prolific institutions and the impact of their output

Total output came from 187 individual institutions and 583 institutions if counted using the methodology of complete counting. These institutions were located in Malaysia and other parts of the globe. Table 4 lists 21 institutions which produced five or more papers during 2007-2018. These 21 most prolific institutions contributed 319 papers constituting more than half (54.7%) of the total output published in the journal during 2007-2018. These papers received 3723 (59.5%) of all the citations. Remaining 166 institutions published 45.3% of the total output and obtained about 40.5% of all citations. The most productive 21 institutions listed in Table 4 were scattered in 12 countries. Highest number of institutions was from China (4) closely followed by Malaysia (3). The number of institutions was 2 each from Taiwan, Iran, Thailand and India. One institution each was from Singapore, Kuwait, Pakistan, Nigeria, Bangladesh and Belgium. Among all the listed institutions highest number of papers was published by University of Malaya (Malaysia) contributing 133 papers followed by Islamic Azad University (Iran), a

distance second contributing 26 papers. The publication output of these institutions was subjected to an impact analysis using Citation per Paper (CPP) described above. An analysis of data presented in Table 4 indicates that the average CPP for the entire output was 10.7. Among the 21 institutions listed in Table 4 the value of CPP was less than average value of CPP for 13 institutions and for rest eight it was either more than the average or close to average. These 13 institutions which had less value of CPP than the average was from China (4), followed by India (2) and one each from Malaysia, Iran, Kuwait, Pakistan, Thailand, Singapore and Belgium. It was lowest for ISTIC (China), Xinxiang Medical University (China) and Harbin Engineering University (China). The value of CPP was highest (24.4) for University of Dhaka (Bangladesh) closely followed by University of Ibadan (Nigeria). Institutes having low value of CPP indicate that the research papers published by these institutes got fewer citations.

Table 4: Most prolific institutions and their citation impact

#	Institutions	Number of papers	Number of citations	Citation per paper
1	University of Malaya (Malaysia)	133	2017	15.2
2	Islamic Azad University (Iran)	26	289	11.1
3	Bhabha Atomic Research Centre (India)	22	172	7.8
4	#University of Technology MARA (Malaysia)	17	217	12.7
5	Nanyang Technological University (Singapore)	13	126	9.7
6	University of the Punjab (Pakistan)	11	56	5.1
7	Kuwait University (Kuwait)	10	78	7.8
8	Harbin Engineering University (China)	8	17	2.1
9	*ISTIC (China)	7	7	1.0
10	**KMUTT(Thailand)	7	63	9.0
11	University of Ibadan (Nigeria)	7	151	21.6
12	University of Technology Thonburi (Thailand)	7	112	16.0
13	Asia University (Taiwan)	6	82	13.7
14	Universiti Sains Malaysia (Malaysia)	6	31	5.2
15	University of Antwerp (Belgium)	6	15	2.5

16	University of Kashmir (India)	6	27	4.5
17	Xinxiang Medical University (China)	6	12	2.0
18	Zhejiang University (China)	6	21	3.5
19	National Chengchi University (Taiwan)	5	69	13.8
20	***RiCeST (Iran)	5	39	7.8
21	University of Dhaka (Bangladesh)	5	122	24.4
	Sub Total	319	3723	11.6
	Other 166 institutions	264	2529	9.6
	Total	583	6252	10.7

*ISTIC: Institute of Scientific and Technical Information of China, **KMUTT: King Mongkut's University of Technology Thonburi, ***RiCeST: Regional Information Centre for Science and Technology, # University Technologi MARA papers 10 and citations 155 and University of Technology MARA papers 7 and citations 62

Most prolific authors and impact of their output

Based on individual counting of papers, total output was contributed by 430 authors. However, based on the methodology of complete counting, authors identified 13 authors who published four or more papers (Table 5). These 13 prolific authors published 105 (18%) papers. Rest 82% were contributed by 417 authors contributing papers in the range of one to three. It indicates a highly scattered output among the authors. Of the 13 most prolific authors, all were from Malaysia except five. These five authors were from India (3) and one each from Belgium and Kuwait. Impact of authors in terms of CPP indicates that among the listed 13 authors, three authors namely Aspura M. K. Yanti Idaya (Malaysia), Rousseau, Ronald (Belgium), Han Lim Peng (affiliation not available), Kumar Vijay (India) and Rehman Sajjad Ur (Kuwait) had a lower value of CPP than the average CPP. It indicates that the impact of research of these authors is not commensurate with their publication output. The value of CPP for Sagar Anil and Kademani, B.S. of BARC from India was 10.3, almost equal to the average value of CPP. In the earlier studies Zainab, A.N. topped the list of prolific authors, but now the top place has been taken by Abrizah, A., though the difference in output is of one paper only. Among the authors listed in Table 5, Kaur, Kiran had the highest value of CPP.

Table 5: Most prolific authors and the impact of their output

#	Author	Institute	TNP	TNC	CPP
1	Abrizah, A.	University of Malaya, Malaysia	21	386	18.4
2	Zainab, A.N.	University of Malaya, Malaysia	20	353	17.6
3	Noorhidawati, A.	University of Malaya, Malaysia	10	202	20.2
4	Karim Noor Harun Abdul	University of Malaya, Malaysia	10	136	13.6
5	Kaur, Kiran	University of Malaya, Malaysia	7	175	25.0
6	Rousseau, Ronald	University of Antwerp, Belgium	7	17	2.4
7	Sanni, S. A.	University of Malaya, Malaysia	6	69	11.5
8	Aspura M. K. Yanti Idaya	University of Malaya, Malaysia	4	4	1.0
9	Han Lim Peng	NA	4	15	3.7
10	Kademani, B. S.	*BARC, India	4	41	10.3
11	Sagar Anil	*BARC, India	4	41	10.3
12	Kumar Vijay	*BARC, India	4	34	8.5
13	Rehman Sajjad Ur	Kuwait University, Kuwait	4	29	7.3
	Sub total		105	1502	14.3
Other 426 author contributing papers in the range of 1-3			478	4750	9.9
	Total		583	6252	10.7
*BARC: Bhabha Atomic Research Centre					

Distribution of output by sub-disciplines of research

By scanning the title of each record author identified the sub-disciplines of papers published in the journal during 2007-2018. Analysis of data indicates that the sub-discipline of scientometrics and bibliometrics received the highest attention with 108 (45%) of the articles. These papers dealt with different aspects of scientometrics and bibliometrics like Altmetrics for measuring impact on Twitter, different aspects of citation and co-citation analysis, co-authorship and collaboration pattern, bibliometric assessment of individual countries in different fields of science, h-index, impact factor of journals, cross national assessment of research output in different disciplines, comparison of institutional output in individual countries, bibliometrics of individual journals, bibliometric laws, scientometric portrait of scientists, measurement of patent output and Webometrics. Some papers were related to theoretical aspects of scientometrics.

Other sub-disciplines examined in the remaining 132 papers dealt with different aspects of user studies like use of E-books, user satisfaction of library services (31), library management and management of information resources (13), information and computer literacy (11), academic, medical and media librarianship (6), library and information science education, IT application in libraries, and library anxiety scale measurement each five, digital repositories (4), open access repositories, structure of thesaurus, information retrieval, cataloguing and knowledge management each two and intellectual property rights (1). These constituted 91 (38%) of the papers. Remaining 41 papers could not be classified in the above categories and thus clubbed under the category of 'others'.

Citation distribution of papers

Citation rates reflect the impact of published work on international community. Citations of the 241 papers published in MJLIS during 2007-2018 were examined during the period of May 20, 2019 to May 31, 2019 using Google Scholar. Distribution of citations received by the papers published in the journal during 2007-2018 is depicted in Table 6. The articles published in MJLIS got 6252 citations during 2007-2018 (till May 31, 2019). Of these 82 (~14 %) papers did not get any citation and the rest were cited for one or more times. 231 (39.6 %) articles were cited between one to five times and only 90 (15.4%) were cited between 6-10 times. Thus 69% of the articles were cited between 0 to 10 times. Rest ~ 31% was cited more than 10 times.

Table 6: Distribution of citations of papers published during 2007-2018

Number of citations	Number of papers	Total citations	Percentage
0	82	0	14.1
1	58	58	9.9
2	65	130	11.2
3	39	117	6.7
4	39	156	6.7
5	30	150	5.1
6-10	90	772	15.4

11-15	55	736	9.4
16-20	50	863	8.6
21-30	28	714	4.8
31-40	17	597	2.9
41-50	8	349	1.4
> 50	22	1610	3.8
Total	583	6252	100

Highly cited papers

Table 7 lists 12 papers which received 50 or more citations since their publication. Of the 12 highly cited papers seven papers were by authors from Malaysia. Of these six authors were from University of Malaya and one from Universiti Teknologi MARA. Of these two papers in collaboration with authors from UK. Remaining five papers were authored by authors from Nigeria, UK, Botswana, India and Iran.

Table 7: Highly cited papers

#	Authors and bibliographic details	Affiliation	Citations
1	Kevin, Wan Utap Anyi; Zainab, A.N., *Anuar,N.B. MJLIS 14(1) 2009, 17-55	University of Malaya (Malaysia) *University of Plymouth (UK)	92
2	Abrizah; A. MJLIS 14(2) 2009, 17-37	University of Malaya (Malaysia)	86
3	Noorhidawati; A. *Gibb Forbes MJLIS 13 (2) 2008, 1-14	University of Malaya (Malaysia), and *University of Strathclyde (UK)	84
4	Popoola; S.O. MJLIS 13 (1) 2008, 91-102	University of Ibadan, Nigeria	80
5	Bakri Aryati., Willett Peter MJLIS 13 (1) 2008, 103-116	University of Sheffield (UK)	74
6	Abrizah; A., Noorhidawati; A., Kaur Kiran, MJLIS 15(3) 2010, 53-73	University of Malaya (Malaysia)	74
7	Tella Adeyinka; Mutula; S. M. MJLIS 13 (1) 2008, 59-76	University of Botswana (Botswana)	72
8	Halder Santoshi; Roy Anjali; Chakraborty P. K. MJLIS 15(1) 2010, 41-53	University of Calcutta (India)	68
9	Kassim Norliya Ahmad MJLIS 14 (2) 2009, 101-115	Universiti Teknologi MARA (Malaysia)	66
10	Kaur, Kiran; Diljit; S	University of Malaya (Malaysia)	55

	MJLIS 16(2) 2011, 95-113		
11	Babalhavaeji Fahimeh; Kermani Zahra Jafarzadeh MJLIS 16(1) 2011, 1-14	Islamic Azad University (Iran)	55
12	Yazit Norhazwani; Zainab, A.N. MJLIS 12 (2) 2007, 35-55	University of Malaya (Malaysia)	50

*indicates collaboration

Domestic and International collaboration

Authors examined the pattern of domestic and international collaboration in papers published in the journal. In a domestic collaboration two institutions within a country publish a paper together, while in international collaboration two countries come together to publish a paper. Data on the distribution of papers in domestic and international collaboration is depicted in Table 8. Data presented in Table 8 indicates that of the total 241 papers 44 (18.3%) papers were produced in domestic collaboration and 47 (19.5%) were produced in international collaboration. Thus, in all 91 (37.8%) papers were produced in collaboration and rest 150 papers had no collaboration.

Domestic collaboration: Analysis of data indicates that among all the countries listed in Table 8, Malaysia had the highest number of papers in domestic collaboration followed by Iran. These two countries together produced half (22) of the papers in collaboration and rest half were produced by remaining 11 countries. A raw analysis of data indicates that the highest number of papers from Malaysia in domestic collaboration originated from University of Malaya. University of Malaya had highest number of collaborative papers with University of Technology MARA, Malaysia. In case of Iran, Islamic Azad University (Iran) had the highest collaborative links with five different institutions.

International Collaboration: Among the prolific collaborative countries Malaysia and China had equal number of papers in international collaboration. These two were followed by Pakistan. Malaysia had international collaboration with six countries namely UK (4), Jordan (2), Iran (2) one paper each with China, Iran and United Arab Emirates. Unlike Malaysia, China had international collaboration with four countries namely Belgium (4), Taiwan (3), USA (2) and with Montenegro (1). Six papers published by Pakistan in international collaboration were with six different countries. These countries were Australia, China, Kuwait, Malaysia, Saudi Arabia and USA. Like domestic collaboration, highest number of papers (10) was produced by University of Malaya in international collaboration.

Table 8: Pattern of domestic and in international collaboration

#	Country	Papers in domestic collaboration	Papers in international collaboration
1	Malaysia	12	11
2	China	2	11
3	Iran	10	4
4	India	3	1
5	Taiwan	4	2
6	Pakistan	4	6
7	Singapore	2	0
8	Thailand	1	0
9	Nigeria	2	2
10	Kuwait	1	0
11	UK	0	1
12	Belgium	1	0
13	Indonesia	1	0
14	Germany	1	0
	Total	44	47

Conclusion

- Based on the above analysis it is observed that highest number (28) articles were published in the year 2011 (volume 16) and the number of articles published by the

journal stabilized during the later period of 2015-2018. Reference per paper was found to be 32.3, slightly more than 31 reported in earlier study by Brahma and Verma (2018). It was highest for volume 22/23 (2017/2018) and the lowest for volume 12 (2007).

- The share of multi-authored papers has increased in second block of 2013-2018 as compared to first block of 2007-2012. On the contrary, the share of single authored papers has decreased in the second block as compared to first block.

- Among all the countries, Malaysia produced the highest number of publications contributing about one-third of the total output. However, the value of CPP was highest for UK.

- Among the Institutions, University of Malaya had published highest number of papers, but the value of CPP was highest for University of Ibadan (Nigeria). Also most of the prolific authors as well as highly cited authors were from University of Malaya. University of Malaya had the highest number of papers in domestic as well as in international collaboration also.

- The journal published highest number of papers in the sub-discipline of scientometrics and bibliometrics followed by user studies.

References

Bakri, A., & Willett, P. 2008. The Malaysian Journal of Library and Information Science 2001-2006: A bibliometric study. *Malaysian Journal of Library & Information Science*, 13 (1), 103-116.

Brahma, K., & Verma, M. K. 2018. Bibliometric Studies of Malaysian Journal of Library and Information Science during 2007-2016, *Journal of Indian Library Association*, 54 (1), 55-65.

Dwivedi, S., Kumar, S., & Garg, K.C. 2015. Scientometric profile of organic chemistry research in India during 2004-2013, *Current Science,* 109 (5), 869-877.

Dwivedi, S., Garg, K.C., & Prasad, H.N. 2017. Scientometric profile of global male breast cancer research, Current Science, 112 (9), 1814-1821.

Garg, K.C., & Tripathi, H.K. 2017. Bibliometrics and Scientometrics in India during 1995-2014: An overview of studies during 1995-2014 Part I: Indian publication output and its impact, *Annals of Library and Information Studies*, 64 (1), 28-36.

Garg, K.C., & Tripathi, H.K., 2018. Bibliometrics and Scientometrics in India during 1995-2014: An overview of studies during 1995-2014 Part II: Contents of the articles in terms of disciplines and their bibliometric aspects, *Annals of Library and Information Studies*, 65 (1), 7-42.

Kevin, Wan Utap Anyi., Zainab, A.N., & Anuar, N.B. 2009. Bibliometric studies on single journals: a review, Malaysian Journal of Library and Information Science, 14 (1), 17-55

Tiew, W. S., Abdullah, A., & Kaur, K. 2002. Malaysian Journal of Library & Information Science 1996-2000: A Bibliometric Study. *Malaysian Journal of Library & Information Science*, 6 (2), 43-56.

Velmurugan, C., & Radhakrishnan, N. 2016. Malaysian Journal of Library and Information Science: A Scientometric Profile, *Journal of Scientometric Research,* 5 (1), 62-70.