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# Web of Science based ranking of Indian library and information science journals

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Although none of the Indian LIS journals are indexed in Web of Science, articles published in Indian journals and, cited by the SCI/SSCI source journals, are available in WoS as cited references. The study through the use of 'cited reference search' feature of WoS looks at the citations received by the Indian journals and compares it with the existing rankings of Indian LIS journals done by different authors who have used various methods. Despite the many limitations of the of the 'cited reference search' and keeping in view that the Indian LIS journals are not covered in WoS, the findings based on the 'cited reference search' still corroborates the existing ranking patterns and shows that *Annals of Library and Information Studies*, *DESIDOC Journal of Library and Information Technology*, *SRELS Journal of Information Management*, *IASLIC Bulletin* etc., are prominent Indian LIS journals.

*Keywords:* Web of Science, Ranking, Library and Information Science Journal.

## 1. Introduction

Library and information science in India has a rich legacy. The year 2011 is the centenary year of LIS education in the country. Education, training and research in library and information science are carried out in over 90

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universities in India. A majority of the practising librarians and information professionals publish their research papers in Indian LIS journals.

Coincidentally, the year 2011 also completes one hundred years of Indian LIS journals. Library Miscellany, the first Indian LIS journal was published in 1912. Although Library Miscellany ceased publication in 1919, it was the pioneering journal and thereafter a number of library and information science journals have been published in India not only in English, but also in several regional languages.

Prytherch and Satija (1987[19]) in discussing the coverage and control of Indian LIS literature gave a list of Indian journals. Prasher (1997[15]) estimated that the number of LIS periodicals in India was about 70 and mentioned that it contributed to 4.12 percent of the world's total of LIS periodicals. Further, it was also reported that India ranks fourth in the world in the publication of LIS periodicals; USA, UK and Canada being the other three countries.

Some of the Indian LIS journals have been in existence for over 50 years now. A couple of journals have been established by Dr. S. R. Ranganathan, the Father of Library Science in India. Despite the long history of Indian LIS journals, none of them have been indexed in Thomson ISI's citation databases (Web of Science) so far. Giving an overview of the LIS periodicals in South Asia, Sharma (1999[18]) stated that lack of timeliness, poor language, lack of planning in starting a journal resulting in the premature death of the journals, and so on are some of the problems afflicting the LIS journals from the region.

Chardrakar and Arora (2011[2]) reporting on the Indian research productivity in library and information science stated that "most of the Indian authors publish their research articles in the Indian journals, however, most Indian journals in library and information science are either not indexed in the SSCI database or has fewer representations at the international level. Steps need to be taken to improve the standards of Indian library and information science journals for enabling them to include in the International databases like Web of Science and Scopus. Publishers of the Indian journals should make efforts in making their journals of International repute by following international standards of electronic publishing of scholarly journals."

Nevertheless, Indian LIS journals put together publish over a thousand articles every year and there is a need to assess and rank the Indian journals and make a case for including Indian LIS journals in the prominent citation databases.

## 2. Ranking of Indian LIS journals

There are a few studies carried at different points in time that have used different methods to assess the Indian LIS research output. There are also bibliometric and citation analysis studies on the different Indian LIS journals. Patra and Chand (2006 [14]) analysed the LIS research in the country based on Library and Information Science Abstracts database and among others identified top 10 Indian journals in which Indian LIS researchers publish their findings. The same authors (Patra and Chand, 2009[13]) in another study of LIS research in SAARC and ASEAN region identified the top journals out of a total of 322

**Table 1**  
**Indian LIS journals rankings by a few studies**

Rank	Mahapatra (1994)	Kherde (2003)	Patra and Chand (2006)	Patra and Chand (2009)
1.	Annals of Library Science and Documentation	Annals of Library Science and Documentation	Herald of Library Science	Herald of Library Science
2.	Herald of Library Science	IASLIC Bulletin	Annals of Library and Information Studies	Annals of Library and Information Studies
3.	Journal of Library and Information Science	Library Science with a Slant to Documentation	Journal of Library and Information Science	Journal of Library and Information Science
4.	Library Science with a Slant to Documentation	Herald of Library Science	IASLIC Bulletin	IASLIC Bulletin
5.	IASLIC Bulletin	ILA Bulletin	SRELS Journal of Library Management	Lucknow Librarian
6.	ILA Bulletin	DESIDOC Bulletin	Lucknow Librarian	
7.	Library Herald	Journal of Library and Information Science	ILA Bulletin	
8.	Libra	Library Herald	Library Herald	
9.	Indian Journal of Agricultural Library and Information Science	Indian Journal of Information, Library and Society	Information Studies	
10.		CLIS Observer	DESIDOC Bulletin of Information Technology	

journals and found that the top five positions were occupied by Indian journals. Kherde (2003 [8]) identified core journals in library and information based on the citation counts from articles published in selected Indian journals. Mahapatra (1994 [10]) studied ranked the Indian library and information journals based on rate of citations and their characteristics. All these studies reflect a similar picture as regards to the prominent Indian LIS journals (Table 1).

### 3. Cited reference search in Web of Science

Ever since Eugene Garfield's Science Citation Index came into being, it has become an invaluable tool to assess research output and carry out metric studies to rank institutions, individuals, disciplines and also carry out other analysis on citation and authorship

patterns. Despite the many inadequacies of Science Citation Index discussed by various authors and the concern of countries like India, whose journals are sparsely covered thus portraying a rather incomplete picture of research output and impact (Nisonger, 1994 [12]; Marusic & Marusic [11], 1999; Sen & Lakshmi, 1992 [16]; Arunachalam and Manorama, 1989 [1]; Sen, Karanjai and Munshi, 1989 [17]), the citation indices, now available through the Web of Science, have gone on to become the de facto tool for scientometric studies. The recent years have seen the emergence of Scopus, a citation database of Elsevier Science, and the free Google Scholar have made it possible to carry out bibliometric studies using different tools.

As has been discussed, none of the Indian LIS journals are covered in Web of Science. Although the Indian journals are not source journals for coverage in the Web of Science, these journals have been cited by other journals indexed by Web of Science.

According to Garfield (1955 [4]), the cited reference search was designed to “eliminate the uncritical citation of fraudulent, incomplete, or obsolete data by making it possible for the conscientious scholar to be aware of criticisms of earlier papers”. Cheek, Garnham and Quan (2006[3]) add that the cited reference search “enable researchers to be aware of other researchers using their work and researchers working in similar areas to themselves. However, a more recent development has been the use of the Cited Reference Search to demonstrate the impact of a publication, based on the assumption that the number of times an article is cited is indicative of the degree of impact that that article has had on the academic community.”

Llewellyn, Pellack and Shonrock (2002 [9]) stated that the cited reference search feature is unique to Web of Science and provides the ability to search for journal names within cited references. But the use of cited reference search is not without limitations. Harzing and van der Wal, 2008 [7] pointed out that “cited reference search of WoS presents references to non-ISI listed journals with respect to the first author of a manuscript only and excludes publications where an author in question is not listed first. This in turn dramatically decreases the citation coverage.”

Cited reference search is a useful feature, but have not been used for journal rankings due to obvious reasons. The possibility that it offers for ranking non-indexed journals is explored here.

#### **4. Objectives of the study**

- To rank Indian LIS journals based on cited reference search;
- To identify the citation trend of Indian LIS journals by Web of Science indexed journals; and
- To identify prominent authors and papers.

#### **5. Methodology**

A list of Indian LIS journals was compiled from different sources and based on existing ranking studies, 10 Indian LIS journals were shortlisted.

The 'Cited Reference Search' feature of the Web of Science databases, SCI and SSCI, was used to search each of the Indian journal selected in the study. During May 2011, abbreviated titles of each of the 10 journals were used in the "cited work" field in the 'cited reference search' and the resulting data obtained was downloaded in MS-Excel for analysis.

## 6. Analysis

Table 2 shows that Annals of Library and Information Studies has received the highest number of citations and also has the maximum number of papers cited. IASLIC Bulletin which began publication two years after Annals of Library and Information Studies is positioned 5th. DESIDOC Journal of Library and Information Technology which began publication in 1980 is also among the leading journals that has received 71 citations from its 51 papers.

While Table 2 takes a look at the ranking based on the entire period of each of the journals, Table 3 takes into account only the period 2001-2010. It is seen from the table that DESIDOC Journal of Library and Information Technology has received the most number of citations followed by Annals of Library and Information Studies. Three journals have not received any citations at all and Herald of Library Science which top ranked in several studies as discussed earlier has declined during 2001-2010.

**Table 2**  
**Top ranked Indian LIS Journals based on cited reference search**

Sl. No.	Journal	Published since	No. of papers cited	No. of citations received	Citations per paper
1.	Annals of Library and Information Studies	1954	230	338	1.46
2.	Herald of Library Science	1969	199	224	1.12
3.	SRELS Journal of Information Management	1964	119	178	1.49
4.	IASLIC Bulletin	1956	94	108	1.14
5.	Library Herald	1958	68	76	1.11
6.	DESIDOC Journal of Library and Information Technology	1980	51	71	1.39
7.	ILA Bulletin	1965	31	34	1.09
8.	Lucknow Librarian	1962	22	25	1.13
9.	Information Studies	1995	24	25	1.04
10.	Journal of Library and Information Science	1976	14	16	1.14

**Table 3**  
**Ranking of Indian LIS Journals (2001-2010)**

Sl. No.	Journal	No. of papers cited	No. of citations received	Citations per paper
1.	DESIDOC Journal of Library and Information Technology	40	60	1.5
2.	Annals of Library and Information Studies	34	46	1.35
3.	SRELS Journal of Information Management	29	39	1.34
4.	IASLIC Bulletin	13	15	1.15
5.	Library Herald	14	15	1.07
6.	Information Studies	15	15	1
7.	Herald of Library Science	9	9	1
8.	Journal of Library and Information Science	-	-	-
9.	ILA Bulletin	-	-	-
10.	Lucknow Librarian	-	-	-

### 7. Prominent authors

Table 4 shows the list of authors who have received 10 or more citations for their papers that have been published in Indian LIS journals and that have been cited by WoS source journals. It is seen that Dr. S R Ranganathan’s papers have received the highest number of citations followed by Neelameghan, Kaula and other well known Indian LIS professionals. Nevertheless, this list cannot be taken as conclusive because it is known that Ranganathan authored 1500 papers and 62 books (Gopinath [6]). Others also have authored more number of papers than what is shown in Table 4.

As discussed by Harzing and van der Wal, 2008 “cited reference search of WoS presents references to non-ISI listed journals with respect to the first author of a manuscript only and excludes publications where an author in question is not listed first. This in turn dramatically decreases the citation coverage.” Although, in the early years most of the research papers had single-authors, including that of Ranganatha Kaula and many others, the contributions of second, third and other authors are not reflected owing to the limitation of the cited reference search feature.

However, despite the limitations, the authors reflected through the ‘cited reference search’ as identified in Table 4 are well known authors in Indian LIS and although not an accurate listing, it still is indicative.

**Table 4**  
**List of prominent authors in Indian LIS journals**

Sl. No.	Authors	No. of papers with citations	No. of citations received
1.	Ranganathan S R	51	70
2.	Neelameghan A	44	51
3.	Kaula P N	33	37
4.	Gupta B M	14	31
5.	Kademani B S	9	21
6.	Sen S K	5	18
7.	Gupta D K	11	17
8.	Rao I K R	5	15
9.	Kalyane V L	8	14
10.	Mitra A C	2	13
11.	Rajagopalan T S	7	13
12.	Sengupta I N	9	12
13.	Sridhar M S	9	12
14.	Guha B	7	11

## 8. Highly cited papers

The papers that have received five or more citations are given in Table 5. It is seen that seven papers have received five or more citations with the paper by Sen and Gan (1983) on a mathematical extension of the idea of bibliographic coupling and its implications that has received the highest number of 12 citations. Five out of nine papers are in the area of bibliometrics. All the papers listed in Table 5 are from earlier decades except the 2004 paper in DESIDOC Journal. The 2004 paper by Gupta & Bhattacharya has received 9 citations so far. For the period 2001-2010, only one paper, published in the DESIDOC journal has received five or more citations. It is also interesting to note that one foreign author, Rousseau, who has published in an Indian journal has received five citations.

## 9. Discussion

Marx and Cardona (2009[20]) state that the number of citations is often taken as a measure of the resonance or impact an article, a researcher or a research institute has generated up to a given date. Although citations alone cannot be used to assess the importance and quality of articles, citation data do give evidence for strengths and shortcomings and therefore are frequently used for research evaluation involving individuals, institutions or even countries. Being cited means that a given publication (mostly a journal article, but sometimes also a publication from another document type such as a book or conference

**Table 5**  
**Papers that have received 5 or more citations**

Sl. No.	Papers	No. of citations
1.	Sen S K and Gan S K, A mathematical extension off the idea of bibliographic coupling and its implications, <i>Annals of Library Science and Documentation</i> , 30 (2) (1983) 78-82.	12
2.	Mitra A C, The bibliographical reference: a view of its role, <i>Annals of Library Science and Documentation</i> , 17 (3-4) (1970) 117-123.	10
3.	Gupta B M and Bhattacharya S, A bibliometric approach towards mapping the dynamics of science and technology, <i>DESIDOC Bulletin of Information Technology</i> , 24 (1) (2004) 3-8.	9
4.	Ranganathan S R, Colon Classification Edition 7 (1971): A preview, <i>Library Science with a Slant to Documentation and Information Studies</i> , 6(3) (1969) 193-242.	8
5.	Rao I K R, Document and user distribution, <i>Annals of Library Science and Documentation</i> , 9 (2) (1982) 69-96.	8
6.	Verma R K, Sharma Y K and Khatri H S D, Trends in nuclear research and its publications – an analysis based on five years coverage in the Indian Science Abstracts, <i>Annals of Library Science and Documentation</i> , 29(2) (1982) 64-69.	7
7.	Gupta D K, Chandrasekhar: Winner of the 1983 Nobel Prize for Physics: A citation analysis study of his works, <i>Annals of Library Science and Documentation</i> , 30 (3-4) (1983) 177-184	5
8.	Rana R P, A trend in citation patterns in anthropology, <i>Annals of Library Science and Documentation</i> , 29 (4) (1982) 170-175	5
9.	Rousseau R, Suggestions for research topics in citation and publication analysis, <i>Library Science with a Slant to Documentation and Information Studies</i> , 32 (1) (1995) 3-12.	5

proceedings) appears as footnote or reference in the publication of another author, who refers to it for additional reading. The number of citations is seen to be a rough measure of the importance of the specific publication within the scientific community.

Cited reference search may not be an appropriate tool to rank journals but the present study shows that the results are in line with earlier studies as regards to the journal ranking. Although India publishes a number of LIS journals, that only a handful of them are being cited.

In the recent years, a number of LIS journals including open access journals have come into being. Even as the number of journals grow, it is necessary to focus on the qualitative aspects for visibility and citedness.



## 10. Conclusion

Web of Science is a widely accepted tool for metric studies but has not been usually used for ranking non-indexed journals. The study has explored the possibility of using the 'cited reference search' feature of the WoS databases to rank the India LIS journals and found that the results corroborate with that of earlier studies. Carrying out further such studies on non-SCI covered journals in other disciplines can ascertain the possible usefulness of adopting the WoS cited reference search feature for journal assessment. Further, the results should be compared with results obtained from national citation databases such as the Indian Citation Index (Giri and Das, 2011[5]), as and when the database is sufficiently populated to undertake such studies.

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