



Growth of Indian library and information science literature: A study of *Annals of Library and Information Studies*

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The growth of the LIS literature of 1985-90 and 2005-2010 as reflected through *Annals of Library and Information Studies* is studied. The paper examines the year-wise growth of the library and information science literature, subjects covered during the specified periods, the most used form of literature, authorship pattern, and most cited journals. Among other things, the study finds that a few areas of research such as ICT applications in LIS are more during the period 2005-2010.

Keywords: Citation analysis; *Annals of Library and Information Studies*; LIS literature; LIS journals; Information technology

Introduction

As in other sectors, the LIS journal literature mirrors the development of the LIS profession and LIS research. The study of LIS literature has been done from time to time by various authors. The growth of library and information science literature has been a subject of investigation for many decades. Prasher and Rai (1988) studied the growth of LIS literature in Indian periodicals during 1976-1986 and showed that there is an uneven distribution of published literature¹. Subjects like public libraries, LIS education, documentation, information communication technology, information retrieval system and library automation received considerable attention. Topics like school libraries, use of books, library management etc., are inadequately covered. The findings additionally affirmed that LIS professionals joined hands with library science educators in contributing to LIS literature.¹

Mete (1996) studied *Annals of Library Science and Documentation* during the period 1984 and 1993. After analysing the 1824 references from 202 articles, it was found that the source periodical is the most cited publication. The half-life of LIS literature is 8 and 12 years for periodicals and books respectively. The study revealed that library professionals most frequently refer to the periodicals in which they write.²

Verma, Tamrakar and Sharma (2007) analysed the 131 contributions in *Annals of Library & Information*

Studies published during 1999-2005. The study examined the year-wise, institutions-wise, state-wise distribution of research output, authorship pattern, citation analysis, length of the contributions, etc. The study showed that single authors contributed most papers and state-wise distribution showed that most of the contributions are from New Delhi.³

Chaurasia (2008) conducted the bibliometric analysis of the journal *Annals of Library and Information Studies* during 2002-2006. It was reported that the majority of the library and information researchers are more inclined towards team research. Bibliometrics is the most preferred research area among LIS researchers, followed by IT and digital technologies in libraries. It also revealed that most of the citations are from journal publications (50.15%) followed by books with 273 (19.96%) citations. *Annals of Library and Information Studies* and *Scientometrics* were ranked first and second respectively as the most cited journals.⁴

Wani, Bakshi and Gul (2008) had mapped the development of library and information science literature by analysing Library, Information Science and Technology Abstracts (LISTA).⁵ Deshmukh (2011) studied 326 articles in *Annals of Library and Information Studies* published from 1997 to 2010. The author examined year-wise growth of LIS literature, most prevalent subject areas, most prolific authors, authorship pattern, most productive journals,

profession and institution-wise contributions, etc. The study showed that single authorship is common, and the most-cited journal is *Annals of Library and Information Studies*⁶.

Singh, Sharma, and Kaur (2011) analysed all the 487 journal articles published in the *Journal of Documentation* for 1996-2010. In the year 2005, the *Journal of Documentation* published the highest number of 44 articles. Citation analysis shows that the journal contained 15587 references from 1996-2010. The average number of reference per article is more in the year 2009. Single authorship pattern is more prevalent. This study additionally uncovers that the *Journal of Documentation* is the most favoured journal among the authors, and ten core periodicals covered more than 2951 (16 %) references.⁷

Jena, Swain, and Sahoo (2012) attempted to measure the *Annals of Library and Information Studies' publication traits* from 2002 to 2010. In this study, the authors analysed nine volumes (Vol. 49 to 57) containing 36 issues. They reported articles in *Annals of Library and Information Studies* is continually increasing from year to year. It was found that the journal citations are predominant as 57.4% of the total citations is from journals followed by books (16.5 %) and web resources (11.6 %). Most of the citations are from jointly authored papers followed by single and three-authored publications. The degree of collaboration is 0.676. Among states, New Delhi stood first. The half-life period of document citations is 11 years.⁸

Qadri (2013) studied Indian library and information science researchers' productivity by analysing the papers published in *IASLIC Bulletin* and *Program: Electronic Library and Information System* to assess the Indian LIS productivity measuring the year-wise growth and distribution of Indian LIS Literature. This study too reported that library and information science literature is on the rise.⁹ Qadri and Khan (2013) also analysed Indian LIS literature's growth from pre-1990s to post-1990s era based on data gathered from the online version of *Library and Information Science Abstract (LISA)* database. This study also found that there are considerable developments in Indian LIS literature.¹⁰

Qadri and Shukla (2014) analysed the development of LIS profession as seen through *Library Hi-Tech*. The authors found that there is relatively less Indian LIS literature in this international source journal, marked differences in subject areas covered, a small

number of self-citations, and there is the most number of single-authored contributions¹¹.

The literature review shows that a study that compares literature output two different periods has not been carried out thus far. The present study of two periods, 1985-90 and 2005-10 show changing research patterns.

Objective of the study

- To assess the growth and distribution of LIS literature as reflected through *Annals of Library and Information Studies*.

Method

Citation analysis method has been used for conducting this research. Data was collected from the website of the journal *Annals of Library and Information Studies*. The articles published in the issues during the study period was downloaded and saved for analysis. Data concerning the total number of articles, total number of references, most common LIS topics, authorship pattern, sources referred by articles, most cited journals, institution-wise, and profession-wise contribution of Indian LIS researchers were collected and tabulated.

Analysis

The collected data were analysed using MS Excel and SPSS software. We applied Subramanyam's formula for calculating the degree of collaboration among the authors. Bradford's law was applied to identify the most productive journals.

Table 1 shows the year-wise growth of library and information science literature. It is seen that there

Table 1 — Year-wise distribution of articles and references

Year	Vol. no.	No. of articles	Total no. of references	Indian references	Percentage (%)
1985	32	24	158	44	27.84
1986	33	19	360	221	60.83
1987	34	19	152	49	32.89
1988	35	23	199	49	24.62
1989	36	17	136	52	38.23
1990	37	18	139	57	41
(1985-1990)		120	1144	472	41.26
2005	52	23	331	167	50.45
2006	53	26	386	236	61.13
2007	54	28	384	175	45.57
2008	55	35	591	266	45
2009	56	34	675	302	44.74
2010	57	44	1038	225	21.67
(2005-2010)		190	3405	1371	40.26

were more articles published during 2005-10 and there are also more references during this period. However, the percentage of Indian articles remained more or less the same at around 40%.

Table 2 shows the most common LIS topics on which papers were written during the two periods. During 1985-90, the popular topics were periodical literature, bibliometrics, literature study, library/information system, research and development, library services, library management, information needs and user studies. During 2005-10, the topics are bibliometrics, research and development, electronic information sources, information communication technology and scientometrics, etc. There are more IT-based topics in the latter period, although bibliometrics remain a popular topic during both the periods

Table 3 reveals the most cited journals according to their frequency of citations. Out of 30 journals listed

in the table, 17 are Indian journals, and 13 are foreign journals. During 1985-90, the top 3 ranked Indian journals are: *Annals of Library and Information Studies*, *IASLIC Bulletin* and *SRELS Journal of Information Management*. During 2005-10, the top 3 journals are: *Annal of Library and Information Studies*, *SRELS Journal of Information Management* and *Scientometrics*.

Table 4 indicates that during the period 1985 to 90, out of 456 Indian citations, 310(67.98%) are of single authorship, 101 (22.14%) are of joint authorship, 27 (5.92%) are three authorship and 18 (3.94%) are of more than three authorship. During 2005-10, out of 1208 Indian citations, 600 (49.66%) are of single authorship, 425 (35.18%) of joint authorship, 125 (10.34%) of three authorship and 58 (4.80%) are of more than three authorship. This table clearly shows the dominance of single authorship pattern.

Table 2 — LIS topics

Subjects	1985	1986	1987	1988	1989	1990	1985	1990	2005	2006	2007	2008	2009	2010	2005	2010	Total	Rank
Bibliometrics	2	2	2	3	1	-	10	5	3	8	5	5	10	36	46	1		
Research and Development	1	3	1	-	-	2	7	3	2	-	2	6	1	14	21	2		
Electronic Sources	-	-	-	-	-	-	0	1	1	3	5	3	4	17	17	3		
Periodical Literature	7	1	2	-	1	1	12	1	-	2	-	-	2	5	17	3		
Information Communication Technology	-	-	1	1	-	-	2	2	5	1	2	1	2	13	15	4		
Literature Study	1	1	2	2	2	1	9	-	-	3	-	1	1	5	14	5		
Library Services	-	2	-	2	-	2	6	2	-	-	-	-	3	5	11	6		
Library/Information System	-	1	3	2	2	-	8	-	-	1	-	2	-	3	11	6		
Library Management	1	1	1	1	1	-	5	-	-	-	-	4	1	5	10	7		
Scientometrics	-	-	-	-	-	-	0	-	3	-	3	1	3	10	10	7		
Database Management System	-	1	2	2	1	1	7	-	-	-	2	-	-	2	9	8		
Information Sources	-	-	-	1	1	-	2	-	-	1	1	4	1	7	9	8		
Information Needs	-	1	1	1	1	1	5	-	2	-	-	1	-	3	8	9		
Library Classification	-	1	-	-	2	-	3	1	-	2	2	-	-	5	8	9		
Information Retrieval System	3	-	1	-	-	-	4	1	-	-	-	1	1	3	7	10		
User Studies	1	-	-	-	-	4	5	1	-	-	1	-	-	2	7	10		
Library Automation	1	-	1	-	-	1	3	1	-	1	-	-	1	3	6	11		
Science and Technology	-	-	-	3	-	1	4	-	-	-	-	-	2	2	6	11		
Library and Information Science	-	-	-	-	-	-	0	-	3	-	2	-	1	6	6	11		
Indexing	-	-	-	2	2	-	4	-	-	-	-	-	1	1	5	12		
Collection Development	-	1	1	-	-	1	3	-	-	1	-	-	-	1	4	13		
Informetrics	-	2	-	-	-	-	2	-	-	1	-	-	1	2	4	13		
Knowledge Management	1	-	-	-	-	-	1	2	-	-	-	1	-	3	4	13		
Open Access System	-	-	-	-	-	-	0	-	-	-	3	-	1	4	4	13		
Others	6	2	1	3	3	3	18	3	7	4	7	4	8	33	51			
Total	24	19	19	23	17	18	120	23	26	28	35	34	44	190	310			

Table 3 — Most cited journals

Journals	1985	1986	1987	1988	1989	1990	1985	1990	2005	2006	2007	2008	2009	2010	2005	2010	Total	Rank
<i>Annals of Library and Information Studies</i>	12	67	1	6	11	10	107	15	21	27	37	33	33	166	273	1		
<i>SRELS Journal of Information Management</i>	3	13	-	2	5	1	24	7	11	9	13	20	17	77	101	2		
<i>IASLIC Bulletin</i>	1	21	2	3	2	5	34	3	9	19	4	15	2	52	86	3		
<i>Scientometrics</i>	-	1	1	1	2	-	5	12	14	7	9	8	19	69	74	4		
<i>Journal of Library and Information Studies</i>	1	2	8	2	1	2	16	2	4	4	4	12	3	29	45	5		
<i>ILA Bulletin</i>	-	2	-	1	1	-	4	1	8	8	4	15	2	38	42	6		
<i>Malaysian Journal of Library and Information Science</i>	-	-	-	-	-	-	-	4	14	2	8	5	5	38	38	7		
<i>Current Science</i>	1	2	1	-	-	-	4	5	13	2	2	4	6	32	36	8		
<i>DESIDOC Journal of Library and Information Technology</i>	-	-	-	-	-	-	-	3	1	2	2	20	1	29	29	9		
<i>Library Herald</i>	-	5	-	-	-	1	6	2	2	2	1	8	3	18	24	10		
<i>Indian Journal of Information Library and Society</i>	-	-	-	-	-	-	-	-	5	1	3	10	3	22	22	11		
<i>International Information and Library Review</i>	-	10	-	2	-	2	14	-	-	1	2	1	2	6	20	12		
<i>Herald of Library Science</i>	-	7	4	-	1	2	14	1	-	1	-	3	-	5	19	13		
<i>Journal of Information Science</i>	-	6	1	-	1	-	8	1	2	1	-	1	1	6	14	14		
<i>KELPRO Bulletin</i>	-	-	-	-	-	-	-	-	5	1	3	1	4	14	14	14		
<i>Journal of Documentation</i>	-	4	-	-	-	-	4	-	2	-	-	3	3	8	12	15		
<i>DLIBCOM</i>	-	-	-	-	-	-	-	-	-	-	-	11	-	11	11	16		
<i>Journal of Scientific and Industrial Research</i>	-	4	-	-	-	-	4	-	-	-	-	3	2	5	9	17		
<i>Libri</i>	-	1	-	1	1	-	3	-	1	1	-	2	2	6	9	17		
<i>University News</i>	-	-	-	-	-	-	-	-	1	1	1	5	1	9	9	17		
<i>Indian Journal of Open Learning</i>	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	18		
<i>International Forum on Information and Documentation</i>	-	-	1	2	-	-	3	-	2	-	1	-	1	4	7	18		
<i>Library Review</i>	-	-	-	-	-	-	-	-	-	2	2	3	-	7	7	18		
<i>Journal of American Society for Information Science and Technology</i>	1	2	1	-	-	-	4	1	-	-	-	-	1	2	6	19		
<i>CLIS Observer</i>	-	-	-	-	-	-	-	-	-	1	-	3	1	5	5	20		
<i>Granthagar</i>	-	1	-	-	-	-	1	-	-	-	4	-	-	4	5	20		
<i>Indian Journal of Science Communication</i>	-	-	-	-	-	-	-	-	-	-	5	-	-	5	5	20		
<i>Information Processing and Management</i>	-	1	-	1	-	-	2	2	-	-	-	-	1	3	5	20		
<i>International Journal of Scientometrics and Informetrics</i>	-	-	-	-	-	-	-	-	4	-	-	-	1	5	5	20		
<i>Library and Information Science Research</i>	-	-	-	-	-	-	-	-	-	1	1	2	1	5	5	20		
Others	5	25	5	1	3	6	45	13	15	13	17	44	29	131	176			
Total	24	174	25	22	28	29	302	72	134	106	134	221	151	818	1120			

Table 4 — Authorship pattern

Authorship Pattern	1985	1986	1987	1988	1989	1990	1985	1990	2005	2006	2007	2008	2009	2010	2005	2010	Total
Single Author	28	134	40	35	38	35	310	79	88	89	136	136	72	600	910		
Joint Authors	13	55	3	10	8	12	101	26	84	58	55	107	95	425	526		
Three Authors	3	20	-	-	2	2	27	10	26	9	25	16	39	125	152		
More Than Three Authors	-	10	1	-	2	5	18	6	17	4	14	6	11	58	76		
Total	44	219	44	45	50	54	456	121	215	160	230	265	217	1208	1664		

Table 5 — Category-wise professional contribution

Category	1985	1986	1987	1988	1989	1990	1985	1990	2005	2006	2007	2008	2009	2010	2005	2010	Total
LIS Professionals	18	6	5	9	13	15	66	22	32	22	36	34	39	185	251		
LIS Teachers	4	11	7	13	6	7	48	13	19	24	25	29	35	145	193		
Scientists	15	4	9	8	-	2	38	5	3	1	4	4	4	21	59		
Researcher/Student/Trainee	4	-	-	-	-	-	4	2	-	3	2	3	3	13	17		
Total	41	21	21	30	19	24	156	42	54	50	67	70	81	364	520		

Table 6—Category-wise institutional contribution

Affiliation	1985	1986	1987	1988	1989	1990	1985	1990	2005	2006	2007	2008	2009	2010	2005	2010	Total
University	7	10	8	16	11	9	61	13	22	30	34	46	43	188	249		
R & D Institutes	19	9	10	10	4	8	60	14	14	12	22	14	14	90	150		
Academic Institutes (IITs, NITs, IIMs)	5	1	2	3	2	4	17	11	16	3	8	3	18	59	76		
School/College	4	1	-	-	-	2	7	3	1	5	2	7	5	23	30		
Others	6	-	1	1	2	1	11	-	1	-	-	-	1	2	13		
Government Departments	-	-	-	-	-	-	-	1	-	-	1	-	-	2	2		
Total	41	21	21	30	19	24	156	42	54	50	67	70	81	364	520		

Table 5 shows that during the period 1985-90, out of 156 authors, 66 (42.30%) belongs to LIS Professionals, 48 (30.76%) LIS Teachers, 38 (24.35%) belongs to scientist and only 4 (2.56%) belongs to Researcher / Student category. During the period 2005-10, out of 364 authors, 185 (50.82%) belongs to LIS Professionals, LIS Teachers 145(39.83%), Scientists 21(5.76%) and 13(3.57%) belongs to Researcher / Student category.

Table 6 reveals that during the period 1985-90, out of 156 authors, 61 (39.10%) affiliated to University, 60(38.46%) R & D Institutes, 17(10.89%) Academic Institutes, 7 (4.48%) School/College, and 11 (7.05%) affiliated to other institutions. During 2005-10, out of 364 authors, 188 (51.64%) are affiliated to University, 90 (24.72%) to R & D Institutes, 59 (16.20%) to Academic Institutes, 23 (6.31%) to School/College, only 2 (0.54%) Government departments and rest 2 (0.54%) are affiliated to other Institutions.

Conclusion

The tremendous growth in library and information science literature has been witnessed during the study period. Initially, the growth was slow, but ICT applications in the library and information science impacted LIS research's growth. It has also been observed that during the 21st century, LIS research is more inclined towards the latest trends in the profession. Information about the highly cited journals is helpful to the authors while submitting their work to determine where their research might

have the most visibility. In this way, the present study is useful for both the academicians and librarians. It is revealed from the study that the most cited Indian journal is *Annals of Library and Information Studies*. Efforts should be made to improve the quality of Indian library and information science literature and increase Indian LIS literature and researchers' visibility in the global scenario.

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