
**CITATION USE PATTERN OF DOCTORAL THESES OF LIBRARY
AND INFORMATION SCIENCE OF SANT GADGE BABA
AMRAVATI UNIVERSITY AMRAVATI**

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Abstract

The study covers 1450 citation appended to the 12 doctoral theses in the field of library and information science submitted to the Sant Gadge Baba Amravati University, Amravati during 1983 to 2010. It has been carried out to determine the use pattern of literature by the researcher in Library and Information Science. Findings shows that journals are the most utilized reference materials in the theses as current literature and majority of citations found were 72.68% by single authored. Researchers largely use literature published in recent period and mainly from India and USA country. Application of Bradfords' Law in the present study reveals 5 journals covered 269 citations, next 16 journals covered 257 citations and the next 117 journals covered 228 citations.

KEYWORDS:

Citation Analysis, Bibliometrics, Bradford's law, Doctoral Theses, Sant Gadgebaba Amravati University .

INTRODUCTION

Citation analysis is mathematical analysis of references or citations appended at the end of each scientific communication as an essential part of it. The author(s) of a paper customarily presents a bibliography or references as authentic sources of information having research value or to substantiate the point of view of ideas expressed in the cited papers. Analysis of cited papers is used as a measure of impact of individual articles, periodicals, authors, etc. and has become an accepted practice in almost all scientific communications and a well established part of information research. A quantitative approach to the description of documents is gaining ground both in research and practice. Bibliometrics can be used for identifying the core periodicals and the characteristic features of a discipline such as authorship pattern and scattering of literature in different bibliographical forms, etc.

Citation analysis as a tool is used to identify the core references in a subject by counting the citations appended at the end of each scientific article. It is basically a technique, which involves the process of collections given in research writing and thereby helping in identification of significant sources of information. Citation analysis plays a promontory role for easy identification of earlier research. It is one of the important area of research in the field of library and information science (White 1985).

Sengupta has defined bibliometrics as organization, classification and quantitative evaluation of publication pattern of macro and micro-communication along with their authorship by mathematical and statistical calculations. Such studies can help in selection of documents saving millions of rupees of the organizations. It helps in planning and organization of resources sharing, networking and consortia. The institution may eliminate rarely cited titles from their subscription lists and also weed out unused material to save costly stocking space and reduce maintenance cost.

PREVIOUS STUDIES:

A large number of citation analysis and use pattern studies have been conducted on Doctoral theses citations in various subject fields in India and abroad. The present study focuses on the citation pattern use by the researchers in Library & Information Science Doctoral theses of Sant Gadge Baba Amravati University.

Kushkowski & Wiese (2003) reports the results of a longitudinal study of over 9100 citations from 629 master's and doctoral theses written between 1973 and 1992 at a large Midwestern land-grant university. The results of this study suggest that graduate students writing theses favor current research regardless of disciplinary affiliation. The length of theses increased over time and the number of citations in thesis bibliographies varied by discipline. Implications of the results for collection development and scholarship as well as areas for future research are discussed. Fasaie (2011) employs descriptive research design study. Theses submitted for the award of M.Tech degree between 2005 and 2009 at the department of AEE, FUTA were examined. This was checked against the record of AEE (M.Tech) graduates obtained from the School of Postgraduate Studies. The population of the study was all the theses submitted during the periods under study. Data were extracted from title pages and reference lists. Extracted data were analysed using descriptive statistics. It was found that journals were more consulted compared to other sources of information materials. AEE M.Tech students do not take much advantage of resources available on the web and internet. It was also revealed that highest citation was recorded in 2006, while 30.52 per cent of materials cited were 20 years old and above. In addition, more than half of the cited materials were contributed by single authors and foreign journals were more cited with 72 per cent than local journals with 28 per cent. Moreover, Journal of Agriculture Economics was found to be the most cited journal followed by Journal of Econometrics. The paper highlights the information materials available and used by Master students of the Agricultural Economics and Extension Department for their research work and those which need to be added for a healthy collection. Edwards(1999). Explores the value of citation analysis of theses and dissertations in developing and assessing a science library's journal collection. Specifically, investigates the pattern of citations in master's theses and doctoral dissertations in the field of polymer science and polymer engineering at Akron University, Ohio. Nasir & Kumar (2011) discusses about 4,875 citations in the doctoral dissertations submitted between 1990-2010 in the Department of Economics, Aligarh Muslim University, Aligarh, India were analyzed to ascertain the authorship patterns, distribution of literature by format, language, country and decade, and ranking of journals by citation frequency,. It is found that books are the most dominant form in which information is communicated in economics. The dominant language of the literature cited is English. And the single authorship prevails in the citations.

SANT GADGEBABAAMRAVATI UNIVERSITY AT A GLANCE:

The Amravati University was established on 1st May 1983. Since then it is working autonomously. At present there are 21 departments functioning Graduate and Post-Graduate Courses. In all there are 214 Colleges affiliated to this University. Every year there is considerable contribution of research added to the university from all the faculties. The name of Amravati University, Amravati had been changed to Sant Gadge Baba Amravati University (SGBAU) on 26th May 2005. Total 12 doctoral theses have been awarded in Library & Information Science discipline in the faculty of Social Science in the university.

OBJECTIVES OF THE STUDY

The allied objectives were :

- i. Form wise distribution of the citations
- ii. Authorship pattern of citations
- iii. Ranking of Authors
- iv. Chronological distribution of citations
- v. Geographical distribution of citations
- vi. Ranking of Journals
- vii. Ranking of Publishers

SCOPE AND LIMITATIONS

The analytical study was limited to the Doctoral Theses of Library and Information Science submitted to the Sant Gadge Baba Amravati University, Amravati (Maharashtra, India) during the year 1983-2010. Twelve Doctoral theses were taken into consideration for the present analysis.

METHODOLOGY

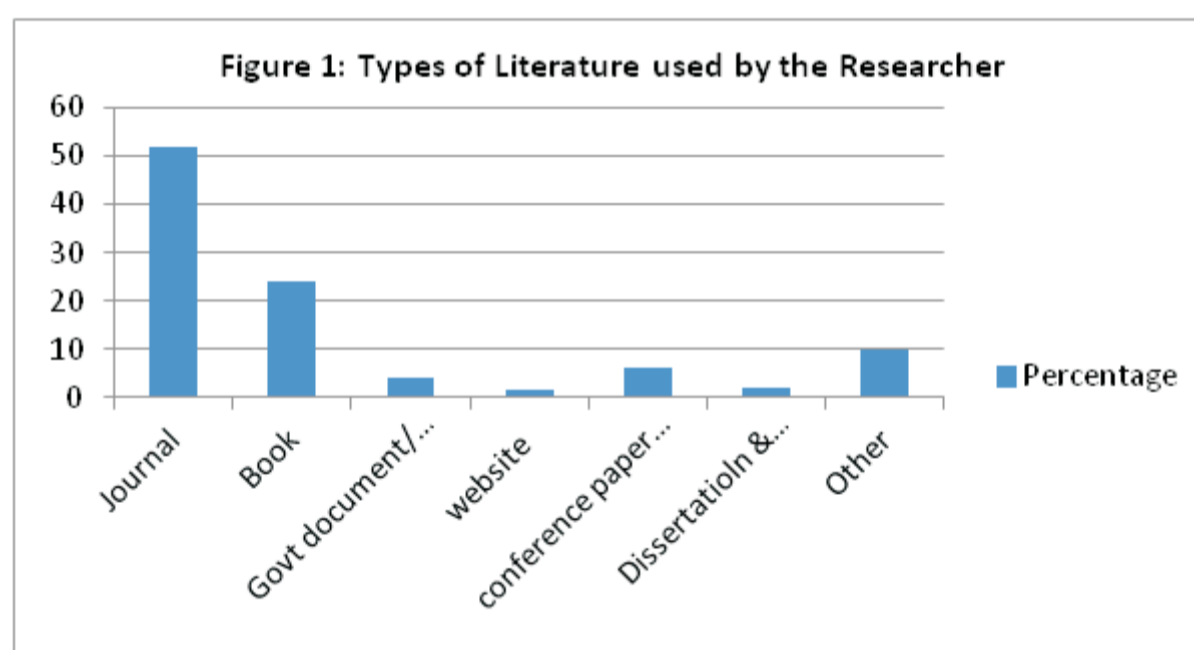
The present study contains citation analysis of 1450 citations of 12 Doctoral theses of Library and Information Science in S.G.B.A.U. during 1983 to 2010. The references have been entered using fields in MS-Excel programme, auto-filtered the data, sorted, tabulated and presented in the form of tables and figures. The theses submitted to Sant Gadge Baba Amravati University in Library & Information science from 1998 to till date were considered for the analysis. The parameters used for analysis were i) Form wise distribution of the citations ii) Authorship pattern of citations iii) Ranking of Authors iv) Chronological distribution of citations v) Geographical distribution of citations vi) Ranking of Journals and vii) Ranking of Publishers.

RESULTS AND DISCUSSION:**Form of Sources:**

Table no 1 and figure no. 1 shows majority of citations pertains to the journal articles i.e. 754 (52%). Only 348 (24%) of citations pertain to books. 89 (6.13%), 60 (4.13%), 27(1.86%) and 26 (1.79%) citations respectively found from conference/seminar papers, Govt. document/report, dissertation and theses and websites. 146 (10.06%) citations pertain to other sources of information.

Table 1: Form of Sources

Sr. No	Form of source	No. of citation	Cumulative	Percentage	Cumulative percentage
1	Journal	754	754	52	52
2	Book	348	1102	24	76
3	Conference paper & Seminar	89	1191	6.13	82.13
4	Govt document/ Report	60	1251	4.13	86.26
5	Dissertation & Theses	27	1278	1.86	88.12
6	Website	26	1304	1.79	89.91
7	Other	146	1450	10.06	99.97
	Total	1450		99.97	



AUTHORSHIP PATTERNS

The authorship pattern has been studied with 1450 citations which is shown in table & and figure no.1 It indicates that, out of 1450 citations 1054 (72.68%) citations by single author, 285 (19.65%) citations by two author, 25 (1.72%) citations by three author whereas 86 (5.93%) citations by more than three author. The highest percentage goes to single authored citations and lowest is more than three authored citations. From this analysis it is cleared that single authorship pattern is more popular than other pattern.

Table 2: Authorship Patterns

Sr No	No of Author	No of citations	Cumulative	Percentage	Cumulative percentage
1	1 Author	1054	1054	72.68	72.68
2	2 Author	285	1339	19.65	92.33
3	3 Author	25	1364	1.72	94.05
4	More than 3	86	1450	5.93	99.98
	Total	1450		99.98	

RANKING OF AUTHORS

The data from the table no 3 reveals that, Ranganathan, S.R secure 1st rank with 16 citations. Followed by Mangala, P.B. 2nd rank with 14 citations. There are many authors who secure 8th 9th and 10th rank with 5, 4 and 3 citations respectively.

Table 3: Ranking of Authors

Rank	Name of author	No of citations
1	Ranganathan, S.R.	16
2	Mangala, P.B.	14
3	Sengupta, I.N.	13
4	Kaula, P.N.	12
5	Brookes, B.C.	11
6	Kumar, P.S.G.	7
6	Smith, (Ian)	7
6	Venkatappaiah, V.	7
7	Devi, (Laxmi) and Others	6
7	Tejomurthy A	6
8	Bandyopadhaya, A.K.	5
8	Banik, B.D. and Bandyopadhyay, S.	5
8	Bookstein A	5
8	Bradford S C	5
8	Devarajan G	5
8	Guha B	5

8	Mishta S	5
8	Neelmeghan A	5
8	Wilson, T. D	5
9	Anand A.K	4
9	Association of Indian university	4
9	Chatterjee A	4
9	Dalton J	4
9	Fairthorne R A	4
9	Garfield E	4
9	Hierppe R	4
9	HULME E W	4
9	Nath Mahendra	4
9	Prasher R G	4
9	Price D J De Solla	4
9	Rajyalakshmi D	4
9	Satarkar S P	4
9	Seetharam S	4
10	Baba Abdul Majid	3
	Bavakutty M and Takher	
10	Mohamed	3
10	Bensman S J	3
10	bramely G	3
10	Chopra H R	3
10	Deshmukh P P	3
10	Dhyani P	3
10	Good C V	3
10	Gunil S R and Naidu G H	3
10	Gupta D K	3
10	Hawkins D T	3
10	Hjerppe R	3
	Kannapanavar B U and	
10	Vijaykumar M	3

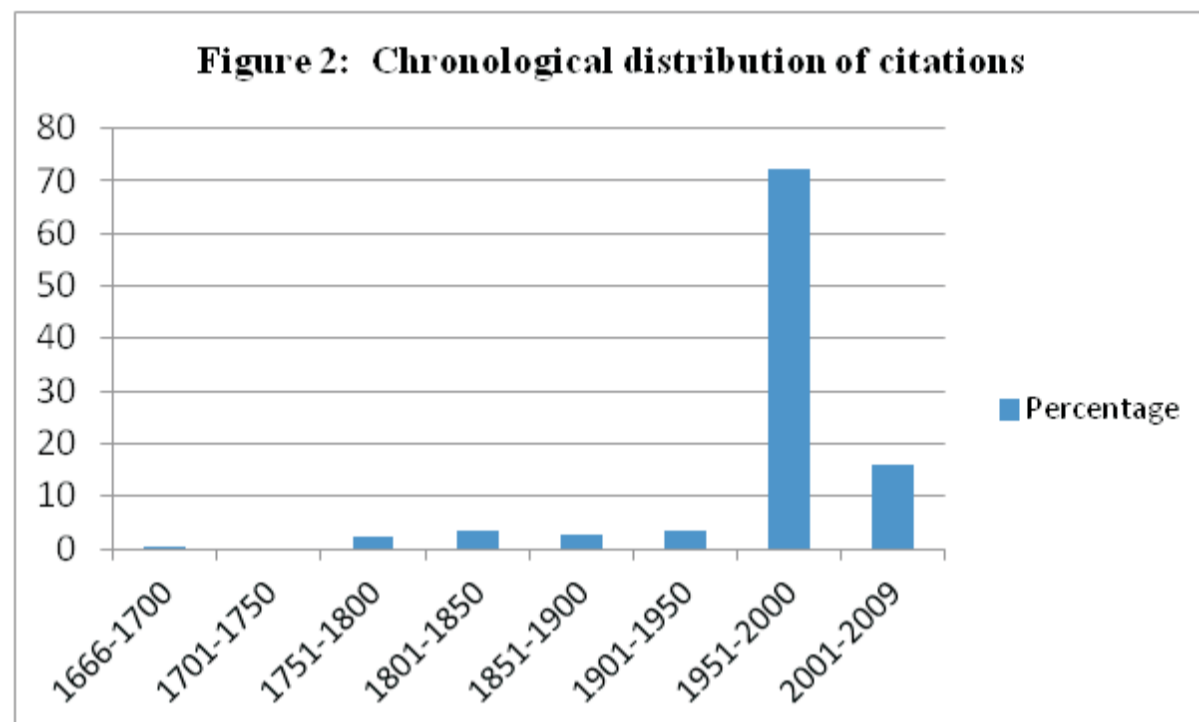
10	Kessler M M	3
10	Khanna J K	3
10	Kumar K	3
10	Lancaster F W	3
10	Lotka A J	3
10	Marcella R	3
10	Martyn J	3
10	Morales M	3
10	O'connor Matthew	3
10	Panda B D	3
10	Pritchard A	3
10	Rao Ravichandra I K	3
10	Sehagal R L	3
10	Sivasubramaniam V	3
10	Subhaiah R	3
10	Vaishanv A A	3

AGE OF CITATIONS

The table no. 4 and figure no. 2 reveals that, maximum number of citations 1046 (72.13%) found during the period 1951-2000 and 231 (15.93%) citations were during the period 2001-2009. Finding of this study further support that there is greater emphasis on citing newer materials i.e. recent publications.

Table 4: Age of Citations

Sr No	Time span	No of citation	Cumulative citation	Percentage	Cumulative percentage
1	1666-1700	1	1	0.06	0.06
2	1701-1750	-	1	-	0.06
3	1751-1800	35	36	2.41	2.47
4	1801-1850	48	84	3.31	5.78
5	1851-1900	39	123	2.68	8.46
6	1901-1950	50	173	3.44	11.9
7	1951-2000	1046	1219	72.13	84.03
8	2001-2009	231	1450	15.93	99.96
	Total	1450		99.96	

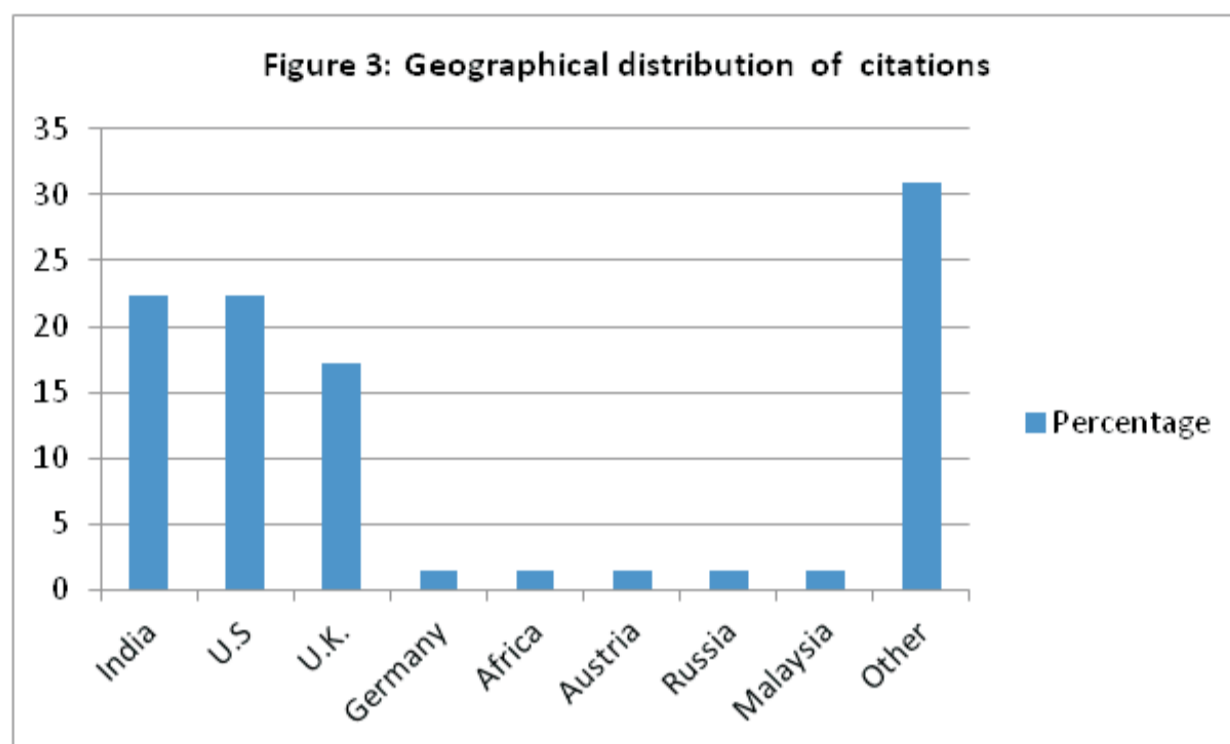


GEOGRAPHIC DISTRIBUTION:

Geographical analysis of citations provides information about the countries active in a subject field and their relative contribution. Table 5 and figure 3 clearly depicts that out of 139 journals 31(22.3%) journals were found from India and U.S each. 24(17.26%) journals were from U.K. The countries i.e. Germany, Africa, Australia, Russia, Malaysia published 2 Journals each. And rests of the 43 (30.93%) journals were found published from various countries.

Table 5: Geographical distribution of cited journals

Sr No	Name of Country	No of Journal	Cumulative	Percentage	Cumulative percentage
1	India	31	31	22.3	22.3
2	U.S	31	62	22.3	44.6
3	U.K.	24	86	17.26	61.86
4	Germany	2	88	1.43	63.29
5	Africa	2	90	1.43	64.72
6	Australia	2	92	1.43	66.15
7	Russia	2	94	1.43	67.58
8	Malaysia	2	96	1.43	69.01
9	Other	43	139	30.93	99.94



RANKING OF JOURNALS

The table no. 6 shows most heavily cited journal, and thereby securing the first rank in this rank list found ILA Bulletin (receiving 67 citations). This is followed by other journals IASLIC Bulletin (63 citations), Annals of Library and Information Studies (57 citations), Herald of Library Science (45 citations), Journal of Documentation (37 citations), SERLS Journal Information Management (29 citations), Library Trends (26 citations), Library Management (24 citations), Scientometrics (22 citations) and University News (21 citations). It can be concluded that the journals highly cited are devoted to Bibliometrics and citation studies.

Table 6: Ranking of Journals (Core)

Rank	Name of journal	No of citation
1	ILA Bulletin	67
2	IASLIC Bulletin	63
3	Annals of lib and information studies	57
4	Herald of library science	45
5	Journal of documentation	37
6	SERLS Journal Information Management	29
7	Library Trends	26
8	Library Management	24
9	Scientometrics	22
10	University News	21

BRADFORD'S LAW APPLICATION

Present study reveals 5 journals covered 269 citations, next 16 journals covered 257 citations and the next 117 journals covered 228 citations. In other words first 5 journals 1/3 of the total citations, the next 16 journals accounted for other 1/3 citations and the next 117 journals covered remaining 1/3 citations.

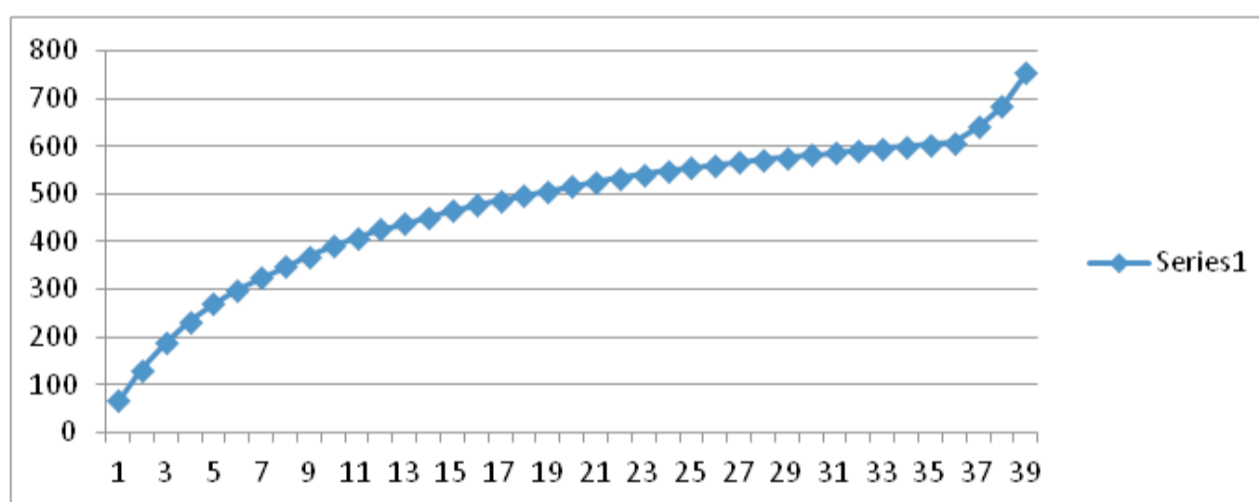
Thus the 1st zone of nucleus citations having 5 journals followed by the 2nd zone containing 16 journals and 3rd zone having 117 journals.

The zones thus identified will form an approximate series.

$$5: 16: 117$$

Here $16 = 5 \times 3$
 $117 = 5 \times 3 \times 3 \times 3$
 i.e. $5: 5 \times 3: 5 \times 3 \times 3 \times 3$
 $5: 5 \times 3: 5 \times 3^3$
 Substituting $n = 3$
 Hence $5: 5n: 5n^3$

Where 1st 5 represent number of journals in the nucleus.



RANKING OF PUBLISHERS

Table 7: Ranking of Publishers

Rank	Name of publisher	No of citation
1	Ess Ess Publications	36
2	Anmol publication Pvt. Ltd	21
3	Sterling Publishers Pvt Ltd	13
4	Vikas Publishing House	11
5	ILA	10
6	Asia Publishing House	9
6	Rawat Publication	9
7	Concept publishing company	7
7	Print well Publishers	7
8	Himalaya Publishing	6
8	Mc Graw Hill Book co	6
8	Metropolitan Book	6
8	RBSA publisher	6
8	Tata McGraw Hill Publishing Company Limited	6
9	McMillan press	5
9	Prentice Hall of India	5
9	Royal institute of Technology	5
9	World press	5
10	Allied publisher	4
10	Clive Bingley	4
10	Marcek Dekker	4
10	Pointer publisher	4
10	Segment press	4

FINDINGS & CONCLUSION:

Mostly the authors refer journals followed by books for the research purpose. The research indicates that the authors prefer to write individually and less in collaboration. From this analysis it is cleared that single authorship pattern is more popular than other pattern. Ranganathan, S.R secure 1st rank with 16 citations followed by Mangala, P.B. 2nd rank with 14 citations and many authors secured 8th 9th and 10th rank with 5, 4 and 3 citations respectively. Finding of this study further support that there is greater emphasis on citing newer materials i.e. recent publications. The researcher preferred mostly literature from India, USA and UK as it is available in local and university libraries. ILA Bulletin,

IASLIC Bulletin, Annals of Library and Information Studies found highly cited journals by the researchers as they are devoted to the Bibliometrics and citation studies. Mostly cited publishers of books were found Ess Ess publications followed by Anmol publications, Sterling publishers Pvt. Ltd and Vikas publishing house.

This citation analysis of the doctoral theses in LIS reveals that the researchers under this study mainly depend on journals for their information use. It is evident from this study that the researchers largely use the literature published in journals during recent period. This study confirms that the researchers used literature from only few countries, mainly India, USA and UK for recent information. Results of this study will be useful to the librarians and documentalists in acquiring more useful journals and books as well as in circulating their contents for use by potential readers and researchers.

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