Citation Analysis of Pearl: A Journal of Library and Information Science

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Abstract: This study analyses the citations cited in the "Pearl" Journal during 2009-2011. This analysis has been taken through the various analysis techniques such as Authorship pattern, Domain wise distribution of citations, Age of citations, most prominent journals cited and different sources of citations etc. At the end the study is concluded with some recommendations.

Keywords: Citation Analysis, Pearl Journal, Authorship Patter, Age of Citation, LIS Domain. Etc.

Introduction

Librarian's goal is to meet the information needs of patrons in pursuant of this, they strived to acquire relevant materials that are frequently used and preferred by library patrons. Achieving this goal is possible with an understanding of the types of sources used or cited by researchers in a particular field. A citation study can help the librarian select the most useful publications. It is a general knowledge that library acquisition budget is inadequate and as such the materials to be purchased will depend on cost. Therefore, the library needs a mechanism to ascertain the priority items to be purchased out of its numerous needs. Normally a small number of relevant publications may prove more useful than a large number of general collections. Selecting the best resources will be made easier by library acquisition protocols.

The study of cited documents is known as citation analysis. It is a new technique used to measure quantitatively the value of document through arranging the citations in some kind of rank or order. It is also used to study the growth and structure of literature of any subject. This technique is helpful tool for the library management in the selection and weeding of materials in the face of ever expanding information environment.

Citation analysis provides information on the use of references or literature in journals, thesis and others materials. In analyzing the citations, the frequency of the journal title, type and age of the resources used, place of publication, language and frequency of the author are analyzed to study use trends, which suggests means to enhance the library collection. It helps to point out the way to revise the collection and the services to allow the librarians to better serve the needs of the library users from the present to the future. Furthermore, it is also a technique that gives potentially valuable information in the management of library journal collection.

Nature and scope of the study

The Journal, Pearl: A Journal of Library Information Science is selected for citation analysis, because the journal has grown in status and set its own standards in LIS professional Journalism. It is a national periodical completely dedicated to the field of Library and Information science serving the professional community by publishing papers on diverse library techniques and library systems duly encouraging the authors-young and old around the globe.

It was interesting to analyze the citations of such a leading journal in the field so as to know the ranking of authors, types of documents, geographical location of publication, Institution wise distribution, Year wise distribution etc.

Need of the study

1). Citation study can help the librarian select the most useful publications and has such effectively maximize the use their budget;

2). It helps the researchers to corroborate or contrast present findings;

3). It shows the different fields of research need different types of references;

4). It is also used to study the growth and structure of literature of any subject;

5). It helps to point out the way to revise the collection and the services to allow the librarians to better serve the needs of the library users from the present to the future.

Objectives of the study

The main objectives of this study deals with "PEARL" journal's publication during the

year 2009-2011. The objectives of the study are as follows in below

1. To make an analysis of article citations published in PEARL journal;

2. To estimate quantitative growth of articles by volume;

3. To examine the authorship pattern of citations;

4. To determine domain– wise distribution of the citations;

5. To list out the Rank of journals cited;

6. To know the age of document cited and

7. To investigate the various sources cited by authors of articles in PEARL.

Methodology

For this study the data is collected from Pearl journal, in which each and every article published during the study period was examined. Title pages and reference sections were photocopied from each of the articles published by the Journal in the period (2009-2011) covered by the study. Data concerning total number of articles, total number of citation, and total number of different sources cited, and dates of publications of such references with authorship pattern for each article are examined. The following tables represent the analyzed data through the MS Execl software and based on this the data is also interpreted.

1. **No of articles Per Volume**

Volume	Year of publication	Number of articles	Percentage
Vol-3	2009	47	37.90
Vol-4	2010	45	36.30
Vol-5	2011	32	25.80
Total		**124**	**100**

Table 1 – Number of articles per Volume

The table above reveals the number of articles published per volume of a year. In all a total of 124 articles were published during 2009 – 2011 covered by this research. Among total of 124 articles of all selected volumes, Majority 47 (37.90%) of articles have come in Vol-3 (2009); followed to this, the number declined to 45 in Vol-4 (2010) and 32 in Vol-5 (2011) respectively. It is noteworthy to mention that each year of the journal contains three (3) issues; hence the journal has published forty seven (47) articles.

2. **Domain wise articles published in Pearl journal during 2009-2012**

Sl. No	Domains	2009	2010	2011	Total	%
1	Classification and Cataloguing	3	2	3	8	6.38
2	Knowledge management	2	4	1	7	4.25
3	Information Literacy	1	3	1	5	2.12
4	Bibliometric studies	7	5	6	18	14.89
5	Library Automation	4	4	5	13	8.51
6	User and User services	6	6	4	16	12.7
7	Information and Communication Technology	11	13	7	31	23.40
8	Library Management	6	4	1	11	12.76
9	LIS Education	7	4	4	15	14.90
	Total	**47**	**45**	**32**	**124**	**100**

Table-2 Domain wise articles published in Pearl journal

The above table no-2 shows year-wise distribution of articles on various field of subject. Each main subject analyzed from the titles of 3, 4 and 5 volumes and found domain wise contribution of articles during 2009-2011.

After analyzing the data majority authors have contributed more articles on the domain of "Information and Communication Technology". It has covered 31 (23.40%) articles among them maximum 13 of which have published in 2010 followed by 11 in 2009 and 7 in 2011. Followed by the domain "Bibliometrics studies" covers 18 (14.89%) articles among them majority 7 of which have published in 2009 followed by 5 each in 2010 and 2011 respectively; the domain "User and user services" covers 16 (12.70%) articles, among them majority 6 each articles have published in 2009 and 2010 and there were only 4 articles published on this subject in 2011; the domain "Library Automation" covered 13 (08.51%) articles among them majority 5 of which have published in 2011 followed by 4 each in 2009 and 2010 respectively; the domain "LIS Education" covered 15 (14.90%) articles among them maximum 7 articles have published in 2009 followed by 4 each in 2011 and 2010 respectively; the domain "Library Management" covered 11 articles among them maximum 6 of which have published in 2009 followed by 4 in 2010 and only one in 2011; the domain "Knowledge Management" subject covered 7 articles published during 2009-2011. Among the 7 articles, Maximum 4 articles

published in 2010 followed by 2 in 2009 and only one (3.12%) in 2011 and the domain "Information Literacy" covered 5 articles in the journal, maximum 3 of them are published in 2010 followed one each in 2009 and 2011

This study shows that Information literacy is multidisciplinary discipline that makes use of different subjects and disciplines.

3. Geographical contribution of article

Sl. No	Geographical contribution	No. of articles (Year wise)						Total	%
		2009	%	2010	%	2011	%		
1.	India	46	97.87	43	95.55	31	96.87	120	96.77
2.	Foreign (Other)	1	2.13	2	4.45	1	3.23	4	3.33
	Total	**47**	**100**	**45**	**100**	**32**	**100**	**124**	**100**

Table-3 Geographical contribution of article

The table above shows the geographical contribution of articles to the Pearl journal during 2009 to 2011. Among the total of 124 articles, majority 120 (96.77%) of articles, have contributed from the Indian authors and only 4 (3.33%) articles have from the authors of other countries.

4. Distribution of forms of materials cited by volume in the journal

Sl. No	Types of Materials	Vol-3 (2009)	Vol-4 (2010)	Vol-5 (2011)	Total
1	Journals	219	150	194	563
2	Books	91	143	56	290
3	Web Resources	88	94	69	251
4	Seminars	26	40	13	79
5	News Letters	3	5	2	10
6	Reports	18	15	5	38
7	Govt. Publications	6	7	6	19
8	Thesis and Dissertations	6	4	4	14
9	Brochures	5	1	-	6
10	Others (Un Identified)	5	6	4	15
	Total	**467**	**465**	**353**	**1285**

Table-4 Distribution of forms of materials cited

A total of 124 articles published by the journal in the period under review produced 1285 citations that is an average of (10.36) per article. Cited materials were grouped in to ten (10) categories: Journals, Books, Web Resources, Seminars, News Letters, Reports, Government Publications, Thesis and Dissertations, Brochures and others (Un-identified). Journal (563) and the books (290) were the most cited sources followed by Web based resources 251; Seminars 79; Reports 38; Government publications 19; Brochures 6; and Un-identified resources 15. The highest overall citation to the journal was in volume-3 published in 2007 with 219 citations followed by 194 in vol-5 (2011); and 150 in vol-4 (2010). Brochure was the least cited sources.

This finding concurs with the other previous studies which confirm that journals were the most cited forms of materials used by researchers. Next to the journals, books were mostly cited by authors.

5. Subject wise distribution of citations

Sl. No	Domains	No of citations	Percentage
1.	Classification and Cataloguing	69	5.36
2.	Knowledge management	86	6.69
3.	Information Literacy	40	3.11
4.	Bibliometric studies	213	16.57
5.	Library Automation	82	6.38
6.	User and User services	210	16.35
7.	Information and Communication Technology (ICT)	330	25.69
8.	Library Management	148	11.52
9	LIS Education	107	8.33
	Total	**1285**	**100**

Table-5 Subject Distribution of citations

Subject wise distribution of cited works by authors in this journal is presented in the table above. The literature used by authors scattered among various subjects and disciplines. The authors consulted multidisciplinary literature in their research. The literature covered subjects like Classification/Cataloguing, Knowledge management, Information Literacy, Bibliometric Studies, Library automation, User and User services, ICT, Library Management, and LIS Education. There were 1285 citations cited during the study period, in which Information and Communication Technology, Library Management and LIS Education. Information and Communication Technology accounted for the highest with 330 (25.59%) articles followed by Bibliometric studies 213 (16.57%); user and user services 210 (16.35%); Library management 148 and other subject domains not crossed even 100 citations. This study shows that Information and Communication Technology is multidisciplinary concept that makes use of different functions in the field of Library and Information Science.

6. Ten most ranked journals cited in the Pearl journal articles

S/No	Journal Title	Citation	%
1	Annals of Library and Information Studies	67	11.90
2	SRELS Journal of Library and information science Management	62	11.01
3	Library Herald	48	8.52
4	Information Studies	33	5.86
5	DESIDOC Journal of library and Information Technology	27	4.79
6	Herald of Library Science	27	4.79
7	IASLIC Bulletin	27	4.79
8	ILA Bulletin	25	4.44
9	International Journal of information dissemination and Technology	24	4.26
10	Scientometrics	23	4.08

1. Table-7 Ten most ranked journals cited in the Pearl journal articles

The table above depicts ten (10) most cited journals of library and information science fields. The journal Annals of Library and Information science stand 1st rank in citing. It has cited 67 (11.90%) times, followed by SRELS Journal of Library and information science Management 62 (11.11%) times; Library Herald 48 (8.52%) times; Information Studies 33 (5.86%) times; DESIDOC Journal of library and Information Technology, Herald of Library Science and ILA Bulletin each have cited in 27 (4.79%) times; ILA Bulletin 25 (4.44%) times; International Journal of information dissemination and Technology 24 (4.26%) times and the journal Scientometrics stands 10th rank by citing 23 (4.08%) times.

2. Age of Citations in the journal

Sl. No	Time spam	No of Citations	Percentage	Cum Citations	Cum %
1	Before 1980	69	5.36	69	2.23
2	1981-1990	71	5.52	140	4.52
3	1991-2000	315	24.51	455	14.72
4	2001-2010	688	53.55	1143	36.97
5	No Date	142	11.06	1285	41.56
Total		**1285**	**100**	**3092**	**100**

Table-8 Age of Citations in the journal

Age is referred to as length of time material has existed, measured in years. This is done to determine the recency of materials cited in the journal. The oldest materials cited were a journal was published in 1960 and this has in vol-4 of 2010. The next in age was a book titled Introduction to cataloguing and classification of book, published by American Library Association in 1963 but cited in 2010 4th volume. The most current materials were published in 2010 that has cited in vol-3 of 2011. Maximum 688 (53.55%) of materials were published between 2001-2010. Followed by this, 315 (24.21%) sources, between 1999-2000, and 142 (11.06%) in 1981-1999 with citations.

The outcome also shows that majority of the works cited is recent; this could be due to increasing the accessibility of authors to recent works done on the field. This could also be linked to the born of publications in Library and information science fields in this part of the world.

3. Citation Authorship Pattern

Authorship	2009	2010	2011	Total	%
Single	238	211	198	647	50.35
Two authors	110	95	84	289	22.49
Three Authors	25	23	14	62	0.48
More than three authors	24	25	19	68	0.52
Web links	51	69	54	174	13.54
Author not indicated	10	16	19	45	0.35
Total	**458**	**439**	**357**	**1285**	**100**

Table-9 Citation Authorship Pattern

The table above shows the authorship pattern distribution of all the 1285 citations in the 124 articles. The finding shows that most of cited works were written by single authors as they accounted for 647 (50.35%) of the total materials cited, followed to this citations by two authors 288 (22.49%), 174 materials by three authors, materials by more than three authors' were 68 (0.52%), while where authors not indicated made up to total of 55 (0.35%) of the citations in the journal.

The finding further reveals that most of the cited materials were materials that were authored by single authors; hence it confirms the same preference of single authorship found in many reviews of articles on citation analysis.

Recommendations:

1. Journal articles were the most cited sources accounting for (43.81) of the total citations; this was followed by books, web-resources, seminars, Reports, Government publications, Thesis and dissertation, while brochure was cited six times in the journal. Individual article with highest citations contained 238 citations and was published in volume 3 of 2009, while two articles that have the lowest citations had 5 citations were published in all the 3 volumes.

2. The study also affirmed that most of the materials cited were written alone by single author without collaborating and most of the library information science authors cited was from Indian contribution. Hence, it is necessary do enhance the collection of international information sources for the authors.

3. In view of the findings, there is need for the journal to come out with an editorial policy that would encourage usage and citing of electronic resources by would be authors of articles in the journal instead of simply noticing the web links.

4. A far as citations from the forms of documents are concerned, conference proceedings, reports, thesis and dissertations, government publications, and brochures are least used because of the inadequacy of information about these documents. Further, they are not easily accessible due to man restrictions. It is suggested that concerned authorities make an attempt to overcome these restrictions by compiling proper catalogue, bibliographies, abstracting and indexing services.

5. The editorial should concentrate to making acceptability of this journal by the foreign authors, because most of articles contributions are from India.

6. Web-bibliographic information of the web resources consulted were not documented properly by authors, bibliographic information some cited materials was also incomplete; information omitted include types of materials consulted, place of publication and name of the authors.

7. It is also recommended that the journal can also make editorial policy that will encourage usage and citing for recent materials by authors of articles. This could be accomplished by making policy that before papers are accepted for publication, certain percentage of citations in such papers should not be less than 10. This will make the respective authors to be on their toes to search, use and cite most materials.

Conclusion:

Periodicals are sensitive indicators of the emerging new ideas in any discipline. They reveal the existing problems requiring solution, research pattern to solve these problems, the practices fixed to various areas etc. A careful evaluation of periodicals literature may indicate a complete picture of the discipline, the profession with which it represents and everything connected with them. The journal has been able to meet some of its expectations, despite the few observations made above, the journal has proved itself to be one of the good library and information science journal not only in India but also extend to outside of that. The journal should however look into some of recommendations so that the journal would be more reputable and stand shoulder-to-shoulder with other national and international journals. Further

studies could be on the content analysis of the journal and this type of study could be carried out on the journal in the next five years to see whether there has been changes or not.   The exponential growth of knowledge, ever escalating costs of the documents, limited allocation of budgets are some of the factors that are leading the libraries and information scientists to adopt statistical and mathematical techniques for decision making process.

No doubt these findings are much helpful for librarians and information scientists while taking decisions regarding collection development, removing out dated documents from the shelves, binding of back volumes of journals and also in maintaining need based collection in the libraries.

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