A BIBLIOMETRIC ANALYSIS OF CURRENT SCIENCE JOURNAL 2000-2010

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ABSTRACT: - *The paper analysis 136482 citations given in the Current Science Journal published during 2000 to 2010 (V.78-99). It also analysis types of documents cited and identifies core journals. The paper also covers the analysis of authorship patterns of citations along with calculation of collaboration coefficient. Chronological distribution of cited reference has been analyzed that maximum number of citations are covered during the period of 1991-2000 i.e. 55647 (40.80%). The paper concludes that collaborative research is new trends in current science research.*

KEY WORDS – Bibliometrics, Citation Analysis, Journal, Current Science, Collaboration Coefficient, Lotkas Law of Scattering, Chronological Distribution, E-citation, P-citation

Introduction

Citation analysis is worthwhile area of research. "Citation analysis" refers to references in one text to another text, with information on where that text can be found. Citation analysis is useful for understanding subject relationship effectiveness, publication trends, and so on. The first recorded citation analysis was made by Gross and Gross, 1927 who looked at citation patterns to determine the journals to be subscribed to and back volumes to be acquired for the library of Pomona College. They studied the citation frequency in the references given in the journal of the American Chemical Society. With citation analysis one can evaluate and interpret citations received by articles, authors, institutions, and other indications of scientific activity (Gupta, 1983).The citation analysis is also a way to understand users. Studying references cited by your faculty's publications or your student's papers shows you the type of sources most

commonly used and valued locally in their disciplines. It makes use of bibliographic, references, which are an essential part of scientific communication. Citation analysis is a major area of bibliometric research, which uses various methods of citation analysis to establish relationships between authors or their work (Ane's Encyclopedic Dictionary of Library and Information Science, 2006).

Current Science Journal published every fortnight by the Association with the Indian Academy of Sciences, is the leading interdisciplinary science journal from India. It was stared 1932 by the then Stalwarts of Indian science such as C.V. Raman, Birbal Sahni, Meghanand Saha, Martin Foster and S.S. Bhatnagar. In 2011, the journal completed one hundred volumes. The journal is intended as a medium for communication and discussion of important issues that concern science and scientific activities. Besides Full length research articles and shorter research communications, the journal publishes review articles, scientific correspondence and commentaries, news and views, comments on recently published research papers, opinions on scientific activity, articles on universities, Indian Laboratories and institutions, interviews with scientists, personal information, book reviews, etc. It is also a forum to discuss issues and problems faced by scientists and an effective medium of interaction among scientists in the country and abroad. Current Science is indexed by web of science, current contents, GeoBase, Chemical Abstracts, IndMed and Scopus. The Impact factor of the journal for the year 2011 is 0.935.

Objective of the Study

Present research has been undertaken with a view,

1. To find out the Volume wise distribution of citations per article.
2. To find out content category wise distribution of article.
3. To find out form wise distribution of cited documents
4. To find out the distribution of E-citations and P-citations
5. To find out the chronological distribution of cited documents
6. To find out the obsolescence of Current Science literature
7. To find out the authorship pattern of cited documents.
8. To find out of Degree of collaboration.
9. To find out of author wise distribution of citations.

Scope and Limitation of the Study

The study is based on citations given at the end of the Article. The present study is based on 136482 citations appended at 264 issues of 22 volumes of Current Science Journal. The span of 11 years is taken into consideration that is from January 2000 to December 2010.

Methodology

The present study adopted quantitative method. The method is very old and popularly known in all human societies. Present day it is widely used.

The present study entitled "Citation analysis of Current Science Journal during January 2000 to December 2010. For the present study 264 issues of the latest 22 volumes of Current Science Journals General Articles, Correspondence, Research Communication, Research News, Research Articles, Scientific Correspondence , Research Accounts, Hypothesis, Review Articles, Opinion, News Content categories of Articles of this journal will be selected for the study from the year January 2000 to December 2010. Over all there were 136482 citations appended 264 issues of the latest 22 volumes of Current Science Journal. The data was collected from the bibliographical entries listed at the end of the article. The citations were photocopied and the data was collected. The analysis was done by using various parameters laid down in objectives of the study.

Definitional Analysis

To gain clarity and consistency the following terms are used with the meanings given below for the purpose of the study.

Citation Analysis

R. Poul and Mohan Roy (1983), defined citation analysis as "Citation is the one of the branch of bibliometrics where the unit of analysis is being cited as a bibliographic reference or as footnote in citing document".

According to Bose (1986) citation analysis is defined as, "A reference to a text identifying the document in which it may be found. The citations have more importance than that what is generally assumed. An important use of citation lies in bibliographical work. The bibliography on a recent topic can easily be compiled by noting down the citation (or references as is generally called) given at the end of the relevant article and then arranging them in manner".

Journal

A scholarly or academic periodical, often published by an organization or society, collecting the articles written about a subject by and for researchers/academics in a field. Journals specialize in specific fields of study. Some journals are described as peer-reviewed.

Current Science Journal

Current Science Journal published every fortnight by the Association with the Indian Academy of Sciences, is the leading interdisciplinary science journal from India. It was started in 1932 by the then Stalwarts of Indian science such as C.V. Raman, Birbal Sahni, Meghanand Saha, Martin Foster and S.S. Bhatnagar. In 2011, the journal completed one hundred volumes. The journal is intended as a medium for communication and discussion of important issues that concern science and scientific activities. Besides Full length research articles and shorter research communications, the journal publishes review articles, scientific

correspondence and commentaries, news and views, comments on recently published research papers, opinions on scientific activity, articles on universities, Indian Laboratories and institutions, interviews with scientists, personal information, book reviews, etc. It is also a forum to discuss issues and problems faced by scientists and an effective medium o interaction among scientists in the country and abroad.

Analysis of citation in Current Science Journal

1. Volume wise distribution of citations per Article.

The volume wise distribution of citations per article of " Current Science Journal" of 22 volumes was considered for the present study from the year 2000-2010. The span of 11 years was takan into consideration which is shown in the table No. 1.

Table No. 1 Volume Wise Distribution of Citation per Article.

Sr.No.	Volume Number	Year	Number of Article	No. of Citation	Average Citation Per Article
1	78	2000	314	6876	21.9
2	79	2000	284	5258	18.5
3	80	2001	272	4862	17.9
4	81	2001	321	6083	18.9
5	82	2002	319	5972	18.7
6	83	2002	318	6415	20.2
7	84	2003	317	5619	17.7
8	85	2003	345	6842	19.8
9	86	2004	327	5654	17.3
10	87	2004	334	6713	20.1
11	88	2005	393	7598	19.3
12	89	2005	363	9695	26.7
13	90	2006	341	6206	18.2
14	91	2006	376	5497	14.6
15	92	2007	399	4760	11.9
16	93	2007	386	5953	15.4
17	94	2008	355	5210	14.7
18	95	2008	381	5687	14.9
19	96	2009	358	5900	16.5
20	97	2009	294	7565	25.7
21	98	2010	306	6099	19.9
22	99	2010	357	6018	16.8
	Total		7460	136482	18.3

Table No. 1. indicates that the total number of articles published during 2000-2010. Were 7460 and the total number of citations were 136482. Year wise analysis of citations shows that average number of per article is maximum (26.7) in the year 2005 and it also seen minimum (11.9) in the year 2007. The present study reveals that average number of citations per article is increasing.

2. Content Category wise Distribution of Articles

The frequency distribution of articles in the Current Science Journal written by the various authors were distributed mostly in thirteen Content categories in different volumes and issues, which were considered for the study from the year 2000 to 2010. The span of 11 years were taken into the consideration which is shown in Table No. 3.

Table No. 2. Content Category wise Distribution of Articles

Sr.No.	Categories	No. of Articles	Average No. of Article per issue
1	Commentary	229	3.07
2	Correspondence	1870	25.07
3	General Article	430	5.76
4	Historical Notes	78	1.05
5	Hypothesis	5	0.07
6	News	681	9.13
7	Opinion	149	2.00
8	Research Account	38	0.51
9	Research Article	594	7.96
10	Research Communication	1961	26.29
11	Research News	254	3.40
12	Scientific Correspondence	890	11.93
13	Review Article	281	3.77
	Total Article	**7460**	**100.00**

Figure No. 1. Content Category wise Distribution of Articles

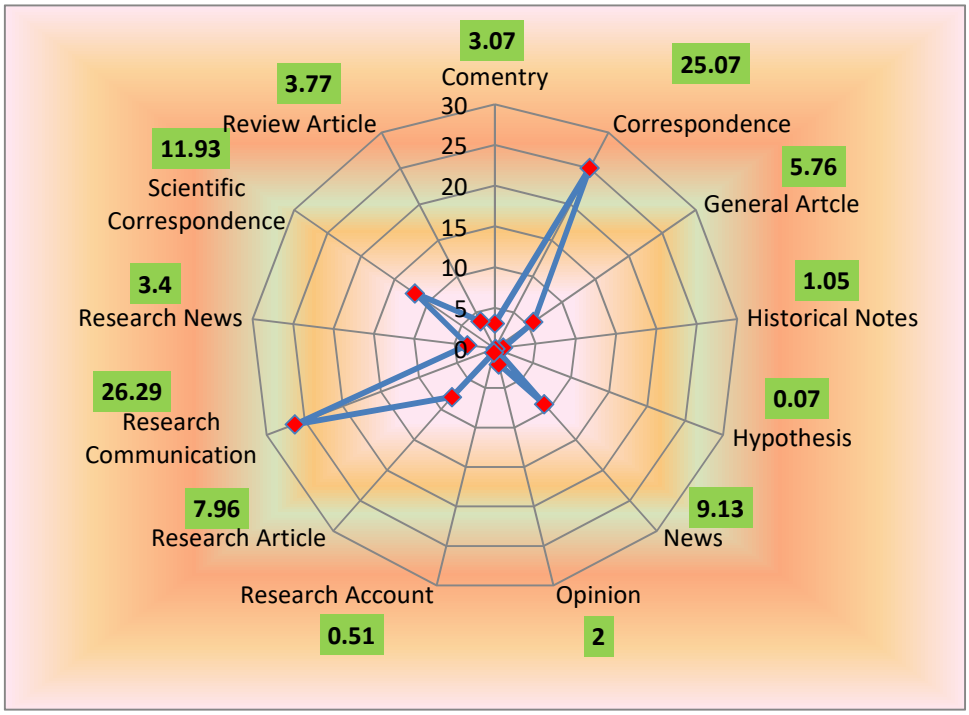


Table No. 2. and Figure No. 1

shows the Content Categories of research articles in Current Science and the source of journal. The table indicates that out of the total of 7460 articles, volume and issue wise analysis content categories article shows that average no. of per category is 'Research Communication' scores the top position with 1961 (26.29%) articles, second position goes to 'Correspondence' with 1870 (25.07%) articles, followed by 'Scientific Correspondence' with 890 (11.93%) articles respectively.

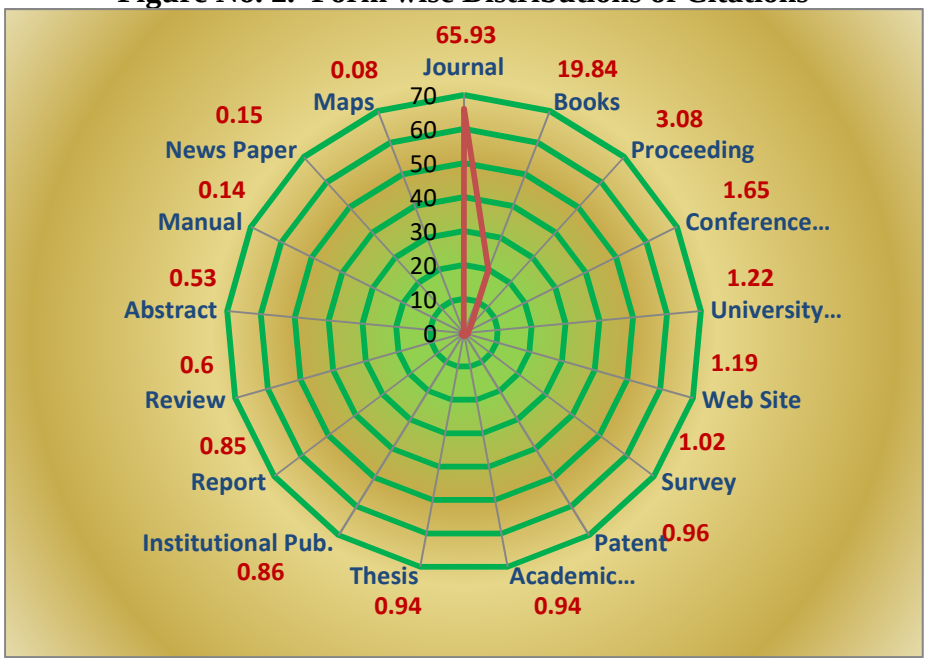
3. Form wise Distribution of Citations

The form wise distribution of different forms of literature is used by researcher in Current Science Journal. A total number of 136482 citations of 264 issues in 22 volumes are distributed in different sources as per shown in table No. 3. and Figure No. 2.

Table No. 3. Form wise Distributions of Citations

Sr. No	Documents	Citations	Rank	Percentage
1	Journal	89985	1	65.93
2	Books	27082	2	19.84
3	Proceeding	4203	3	3.08
4	Conference /Seminar	2249	4	1.65
5	University Document	1667	5	1.22
6	Web Site	1629	6	1.19
7	Survey	1391	7	1.02
8	Patent	1307	8	0.96
9	Academic Publication	1288	9	0.94
10	Thesis	1288	9	0.94
11	Institutional Pub.	1179	10	0.86
12	Report	1166	11	0.85
13	Review	821	12	0.60
14	Abstract	721	13	0.53
15	Manual	206	14	0.15
16	News Paper	197	15	0.14
17	Maps	103	16	0.08
	Total	**136482**		100.00

Figure No. 2. Form wise Distributions of Citations



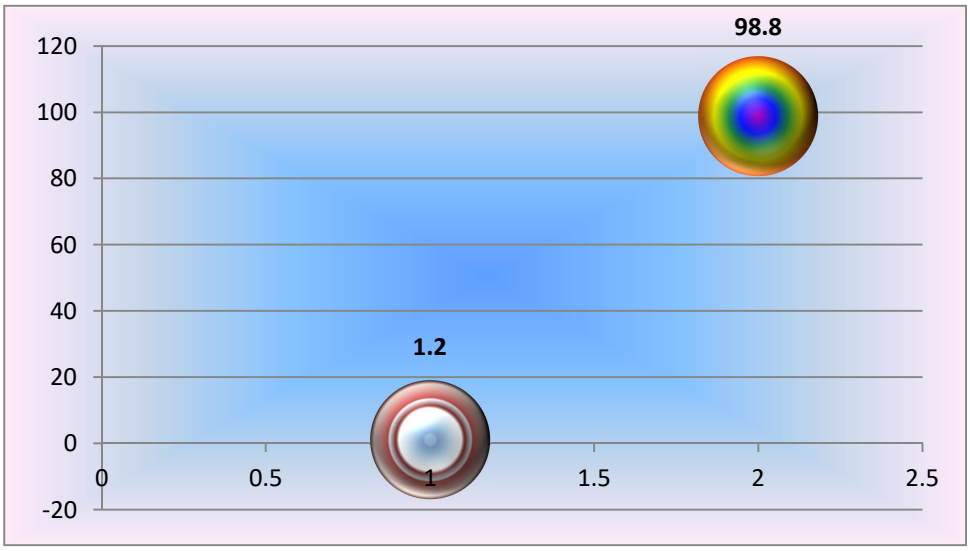
It was seen that different forms of literature was used by researcher in Current Science Journal which heavily depend on periodicals sources for their studies. It was found that the journals are the major form of media used with citation count, of 89985(65.93%) of total literature used, where as non-periodical sources account for 46497(34.07%) therefore periodicals are the first hand original and latest information in the subject and are most preferred channel of information use. Amongst citations of non-periodical sources book occupy 27082 (19.84%) of citations, while the proceeding occupy 4203 (3.08%) and remaining 15212 (11.14%) of literature contributes conference /seminar, University document, websites, survey, patent, academic publication, thesis, institutional publication, report, review, abstract, manual, news paper etc.

4. Distributions of E-Citations and P-Citations

Table No. 4. Distributions of E-Citations and P-Citations

Sr. No.	Types of Citations	Citations	Percentage
1	E Citations	1629	1.20
2	P Citation	134853	98.80
	Total	**136482**	**100**

Figure No. 3. Distribution of E-Citations and P-Citations



The table No. 4. and Figure No. 3. shows that of the total number of 136482 citations, 134853 (98.80%) are printed citations whereas 1629 (1.20%) are electronic citations, which indicates that the researchers depend mostly on printed literature than the electronic form of literature.

5. Chronological Distribution of Citations

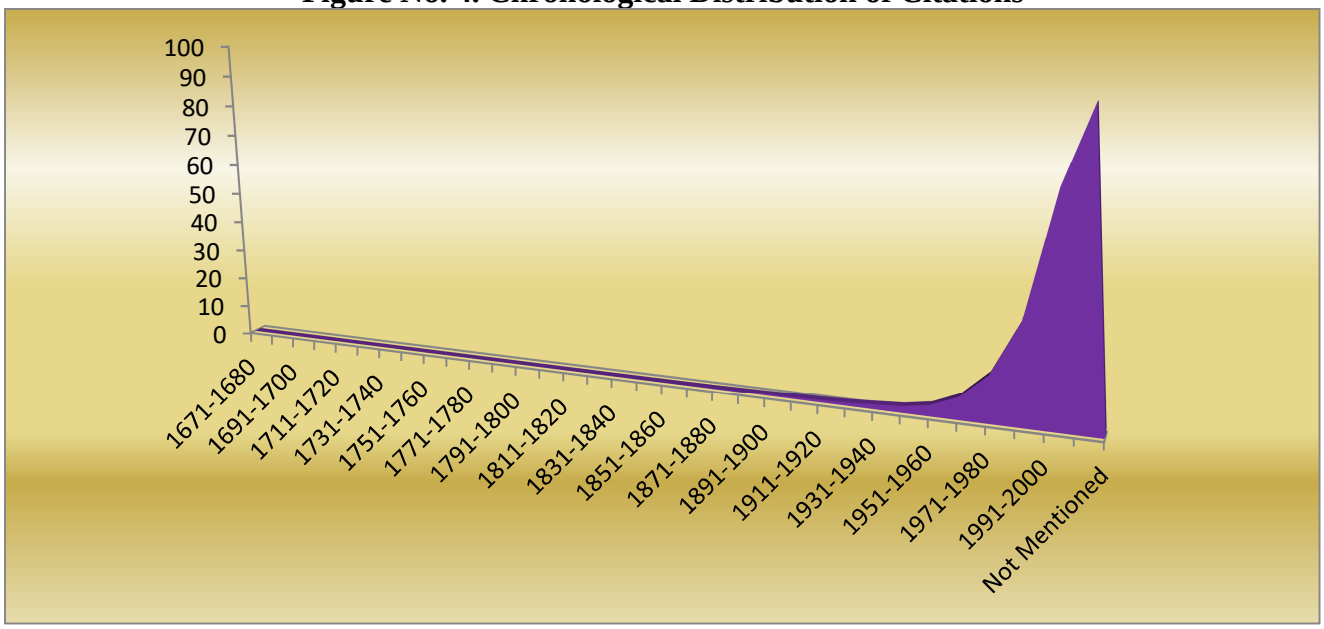
The period-wise distribution of citations was measured by number of year which elapsed between the publications of a cited document. The whole time span of the documents is used. It was divided into period groups, each group has 10 years duration. The total 22 volumes of Current Science journals were distributed in different chronological distribution of citations as shown in Table No. 5. and Figure No. 4.

Table No. 5. Chronological Distribution of Citations

Sr. No.	Citation Year	No. of Citation	Percentage	Cumulative No.	
				Citation	Cumulative %
1	1671-1680	1	0.0007	1	0.0007
2	1681-1690	4	0.002	5	0.003
3	1691-1700	4	0.002	9	0.006
4	1701-1710	0	0	0	0.006
5	1711-1720	0	0	0	0.006
6	1721-1730	0	0	0	0.006
7	1731-1740	1	0.0007	10	0.007
8	1741-1750	0	0	0	0.007
9	1751-1760	6	0.004	16	0.011
10	1761-1770	3	0.002	19	0.013
11	1771-1780	8	0.005	27	0.019
12	1781-1790	0	0	0	0.019

13	1791-1800	2	0.001	29	0.021
14	1801-1810	6	0.004	35	0.025
15	1811-1820	12	0.008	47	0.034
16	1821-1830	12	0.008	59	0.043
17	1831-1840	20	0.01	79	0.057
18	1841-1850	34	0.02	113	0.082
19	1851-1860	41	0.03	154	0.11
20	1861-1870	36	0.02	190	0.14
21	1871-1880	96	0.07	286	0.2
22	1881-1890	156	0.11	442	0.32
23	1891-1900	147	0.1	589	0.43
24	1901-1910	225	0.16	814	0.6
25	1911-1920	206	0.15	1020	0.74
26	1921-1930	411	0.3	1431	1.05
27	1931-1940	721	0.52	2152	1.58
28	1941-1950	764	0.55	2916	2.14
29	1951-1960	2017	1.5	4933	3.61
30	1961-1970	5033	3.68	9966	7.3
31	1971-1980	10862	7.95	20828	15.26
32	1981-1990	23247	17.03	44075	32.3
33	1991-2000	55647	40.8	99722	73.06
34	2001-2010	33528	24.6	133250	97.63
	Not Mentioned	3232	2.4	3232	2.4
	Total	**136482**	100		**100**

Figure No. 4. Chronological Distribution of Citations



The table No. 5. and figure No. 4. shows that the citations are divided into 10 periods of ten years each. the maximum number of citations are covered during the period of 1991-2000 accounting to 55647 (40.80%), followed by year 2001-2010 accounting to 33528 (24.60%), and in the period of 1981-1990 accounting to 23247 (17.03%) citations in term of chronological distribution of citations. It is noticed, however, that of the 136482 citations counted, 3232 (2.40%) citations had in completed data pertaining to year of publication.

6. Obsolescence of Current Science Journal

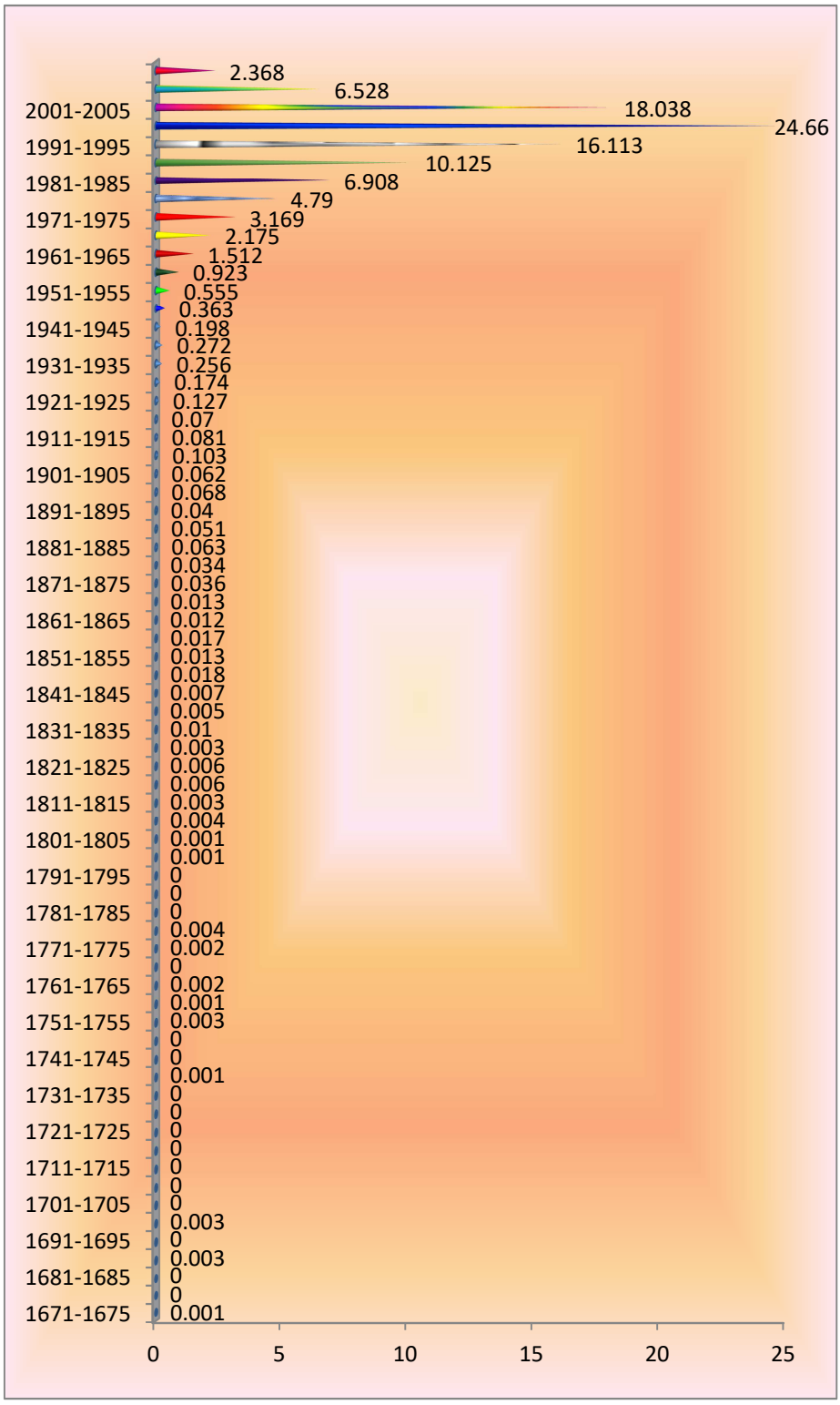
Citation analysis techniques are becoming more popular to study to characteristics of literature of a subject. Half-life and other obsolescence studies help the working librarians and information scientist in deciding which item to keep and which item to store or discard in order to maintain the need based and moderate collections in libraries.

Table No. 6. Obsolescence of Current Science Journal

Sr. No.	Year	Age in Year	No. of Citation	Percentage
1	1671-1675	01-05-	1	0.001
2	1676-1680	06-10	0	0.000
3	1681-1685	11-15	0	0.000
4	1686-1690	16-20	4	0.003
5	1691-1695	21-25	0	0.000
6	1696-1700	26-30	4	0.003
7	1701-1705	31-35	0	0.000
8	1706-1710	36-40	0	0.000
9	1711-1715	41-45	0	0.000
10	1716-1720	46-50	0	0.000
11	1721-1725	51-55	0	0.000
12	1726-1730	56-60	0	0.000
13	1731-1735	61-65	0	0.000
14	1736-1740	66-70	1	0.001
15	1741-1745	71-75	0	0.000
16	1746-1750	76-80	0	0.000
17	1751-1755	81-85	4	0.003
18	1756-1760	86-90	2	0.001
19	1761-1765	91-95	3	0.002
20	1766-1770	96-100	0	0.000
21	1771-1775	101-105	3	0.002
22	1776-1780	106-110	5	0.004
23	1781-1785	111-115	0	0.000
24	1786-1790	116-120	0	0.000
25	1791-1795	121-125	0	0.000
26	1796-1800	126-130	2	0.001

27	1801-1805	131-135	1	0.001
28	1806-1810	136-140	5	0.004
29	1811-1815	141-145	4	0.003
30	1816-1820	146-150	8	0.006
31	1821-1825	151-155	8	0.006
32	1826-1830	156-160	4	0.003
33	1831-1835	161-165	13	0.010
34	1836-1840	166-170	7	0.005
35	1841-1845	171-175	9	0.007
36	1846-1850	176-180	25	0.018
37	1851-1855	181-185	18	0.013
38	1856-1860	186-190	23	0.017
39	1861-1865	191-195	17	0.012
40	1866-1870	196-200	18	0.013
41	1871-1875	201-205	49	0.036
42	1876-1880	206-210	47	0.034
43	1881-1885	211-215	86	0.063
44	1886-1890	216-220	70	0.051
45	1891-1895	221-225	54	0.040
46	1896-1900	226-230	93	0.068
47	1901-1905	231-235	85	0.062
48	1906-1910	236-240	140	0.103
49	1911-1915	241-245	111	0.081
50	1916-1920	246-250	95	0.070
51	1921-1925	251-255	173	0.127
52	1926-1930	256-260	238	0.174
53	1931-1935	261-265	350	0.256
54	1936-1940	266-270	371	0.272
55	1941-1945	271-275	270	0.198
56	1946-1950	276-280	495	0.363
57	1951-1955	281-285	757	0.555
58	1956-1960	286-290	1260	0.923
59	1961-1965	291-295	2064	1.512
60	1966-1970	296-300	2969	2.175
61	1971-1975	301-305	4325	3.169
62	1976-1980	306-310	6537	4.790
63	1981-1985	315-320	9428	6.908
64	1986-1990	321-325	13819	10.125
65	1991-1995	326-330	21991	16.113
66	1996-2000	331-335	33656	24.660
67	2001-2005	336-340	24619	18.038
68	2006-2010	341-345	8909	6.528
		Not Mentioned	3232	2.368
		Total	136482	100.00

Figure No. 5. Obsolescence of Current science Journal



The Table No. 6. and the Figure No. 5. represents the obsolescence rate of literature. It can be assessed by citation analysis which can give us an indication of how far a researcher must go back to obtain a representative sample of the published literature in the given field. The present study made an attempt to

determine the half life period of Current Science literature which will help the librarian in building need based collection.

The researchers of Current Science cite the literature with time span of 331-335 years with 33656 (24.660%) citations, followed by the time span of 336-340 years with 24619(18.038%) citations, the researchers cite mostly the literature published in the year 1996 to 2005 in their research work. The result indicates that the Current Science researchers prefer to cite currant or recent literature in their research article.

The half life period of Current Science literature cited by the researchers was calculated as 10 years from 1996-2005 with 58275 (42.69%) citations.

7. Authorship Pattern of Citations

The characteristics of any subject literature include not only the basic publishing pattern but that of authors themselves so the authors were analyzed to determine the percentage of single, two, three and more than three authors. In order to have a clear picture the result of analysis of authors are presented. The total numbers of 136482 citations in 22 volumes of Current Science journals in the period 2000 to 2010 were written by single author, two authors, three authors, five authors, six authors and more than seven authors are shown in the Table No. 7. and Figure No. 6.

Table No. 7. Authorship Pattern of Citations

Vol. No.	Author 1	Author 2	Author 3	Author 4	Author 5	Author 6	More then 6	No. of citation	Percentage of citation
78	6767	4926	3088	1874	1180	712	414	12194	0.64
79	5058	3768	2320	1368	807	468	262	8993	0.64
80	4733	3758	1985	1118	648	358	157	8024	0.63
81	5879	3819	2249	1257	696	327	149	8497	0.59
82	6172	3852	2252	1271	707	355	122	8559	0.58
83	6300	4267	2815	1654	942	458	191	10327	0.62
84	5432	3831	2327	1349	733	359	137	8736	0.62
85	6506	4496	2787	1659	902	431	163	10438	0.62
86	5456	3414	1932	972	510	258	86	7172	0.57
87	6258	3986	2358	1311	680	316	111	8762	0.58
88	7076	4934	2879	1648	866	410	162	10899	0.61
89	9008	6195	3598	1913	1030	521	193	13450	0.60
90	5877	3800	2200	1176	590	292	100	8158	0.58
91	4605	2816	1684	908	491	211	57	6167	0.57
92	4607	2918	1786	1010	521	313	59	6607	0.59
93	5706	3674	2208	1302	700	348	110	8342	0.59
94	4765	3115	1894	1067	550	259	82	6967	0.59
95	5299	3504	2154	1196	548	228	62	7692	0.59

96	5165	3436	2038	1156	610	292	132	7664	0.60
97	6878	4418	2556	1448	738	340	92	9592	0.58
98	5610	386	2510	1582	976	526	202	6182	0.52
99	5401	3793	2319	1276	616	257	104	8365	0.61
total	128558	83106	51939	29515	16041	8039	3147	191787	100

Figure No. 6. Authorship Pattern of Citations

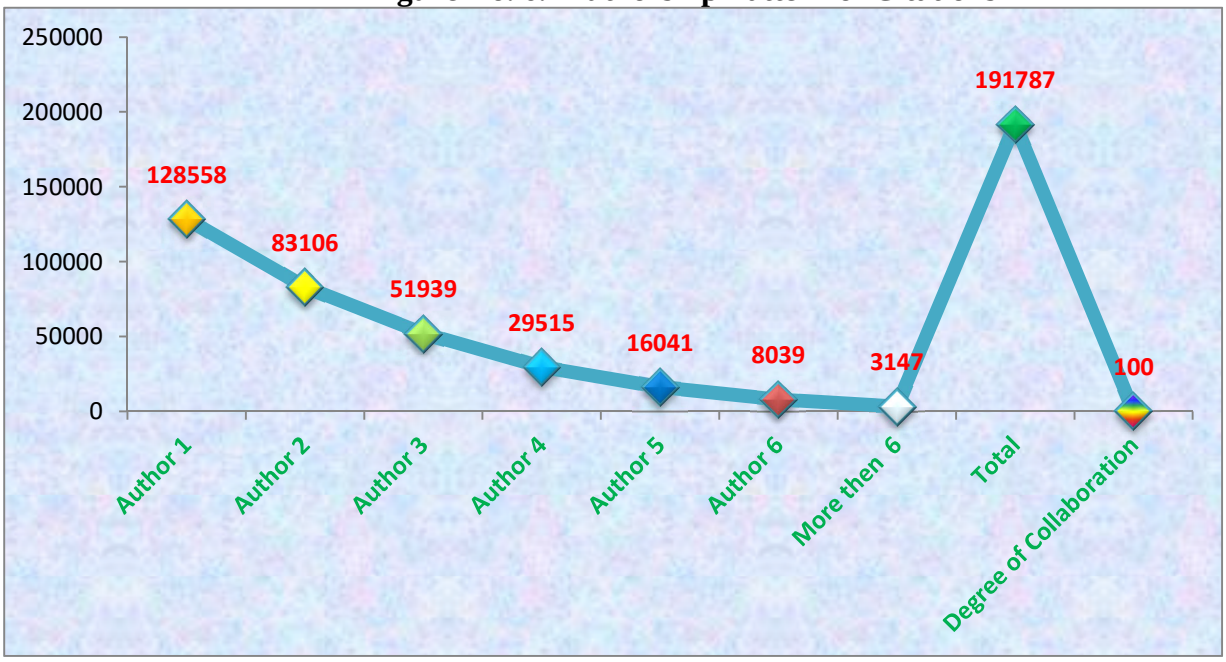


Table 7. and Figure No. 6. shows the authorship pattern of citations appended to 7460 research articles in Current Science, the source journal. The table indicates that out of the total of 320345 authors, 128558 citations were cited by Single Author were as 191787 citations were cited by multi authors which indicates that multiauthors were predominant than single author.

8. Degree of Collaboration

The author collaboration study is a matter of concern. Subramaayam (1983) proposed a mathematical formula for calculating author's degree of collaboration in a discipline. The degree of collaboration among authors is the ratio of the number of collaborative publications to the total number of published in a discipline during certain period of time. The mathematical expression of this formula is;

$$g = \frac{Nm}{Nm + Ns}$$

Where g = Group Coefficient of a discipline

Nm = Number of multiple authors during a specific period in a discipline

Ns = Number of single authored works in a discipline during a given period of time.

In this study, 328481 total citations are by authors. Among these 128558 are single authored citations and 191787 citations are of collaborative authors. So group coefficient can be find out of it. Total number of collaborative authors are 191787.

Here Nm = 191787

Ns = 128558

So group coefficient g = 191787/191787+128558

g = 0.59

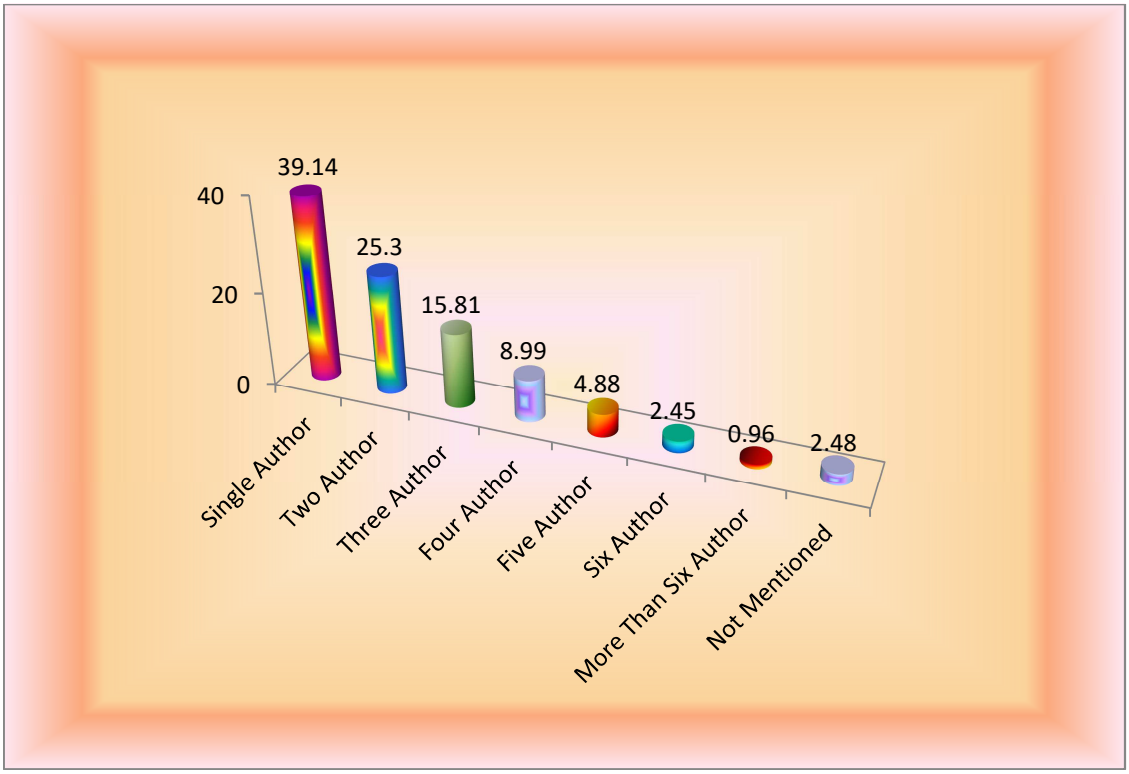
9. Author Wise Distribution of Citations

The characteristics of any subject literature include not only in the basic publishing pattern but that of authors themselves, so the authors were analyzed to determine the percentage of single, two, three and more than three authors. In order to have a clear picture the result of analysis of authors are presented in the table No. 8. And figure No. 7.

Table No. 8. Author Wise Distribution of Citations (Scientific Productivity)

Sr. No.	No. of Authors	No. of Citation	Percentage
1	Single Author	128558	39.14
2	Two Author	83106	25.30
3	Three Author	51939	15.81
4	Four Author	29515	8.99
5	Five Author	16041	4.88
6	Six Author	8039	2.45
7	More Than Six Author	3147	0.96
8	Not Mentioned	8136	2.48
	Total	**328481**	**100.00**

Figure No. 7. Author Wise Distribution of Citations



The table No. 8. and Figure No. 7. indicates that out of total number of 136482 citations 128558 (39.14%) are by single author, followed by 83106 (25.30%) citations by two authors, 51939 (15.81%) citations have three authors. 8136(2.48%) citations did not mentioned the name of authors. The finding also shows that the least citations are by more than six authors i.e. 3147 (0.96%) citations respectively.

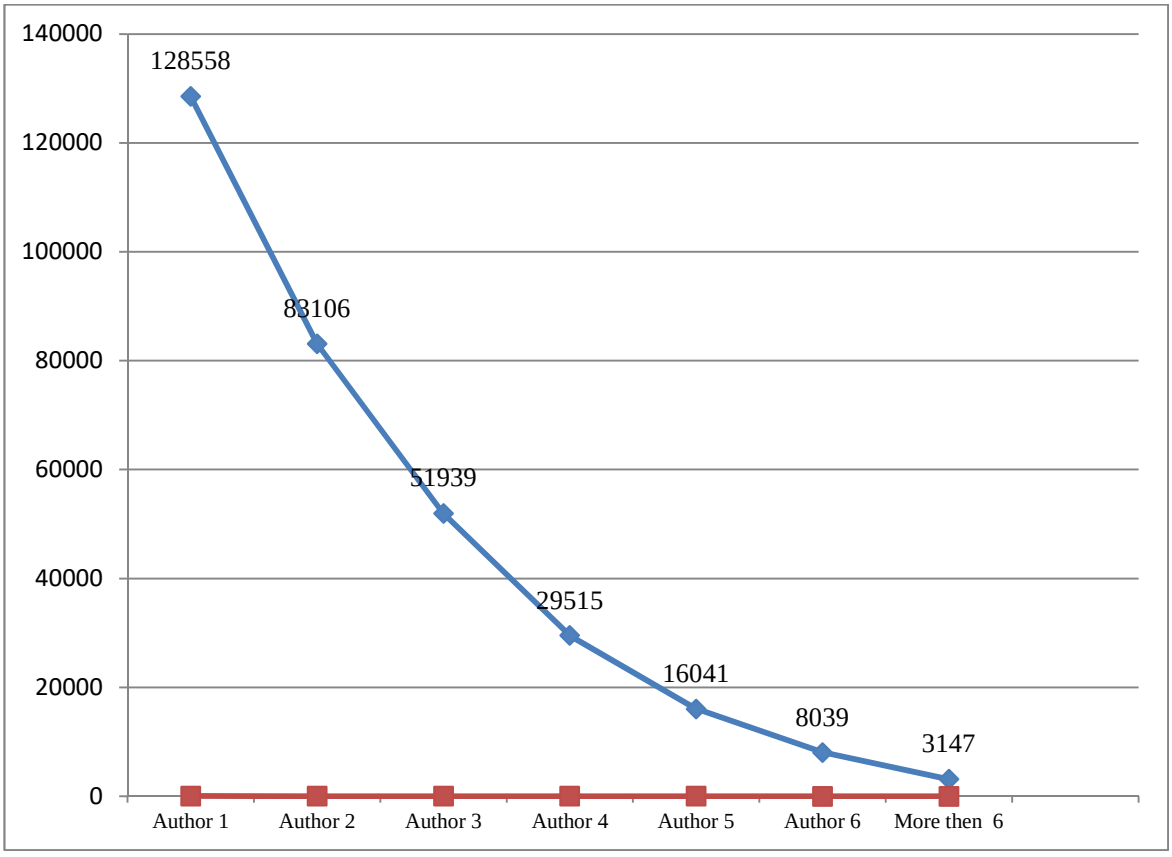
The total number of 136482 citations in 22 volumes of Current Science journals are written by single, two, three, Four, five, six, and more than six authors, It was also observed that in average number of authors single authored citations were seen in 128558 and rest 191787 citations were having two and three authored citations respectively.

10. Lotkas Laws of Scientific Productivity

Table No. 9. Lotkas Laws of Scientific Productivity

No of Authors	Author 1	Author 2	Author 3	Author 4	Author 5	Author 6	More then 6	Total
Scientific Productivity	128558	83106	51939	29515	16041	8039	3147	320345
Percentage	40.13	25.94	16.21	9.21	5.01	2.51	0.98	100

Figure No. 8. Lotkas Laws of Scientific Productivity



Conclusion:

On the basis of this study conclude that joint authorship is new trend of research in current sciences now a day. With the above study can infer that:

1. Volume wise distributions of citations per article published during 2000-2010 were 7460 and the total numbers of citations were 136482. Year wise analysis of citations shows that average number of per article is maximum (26.7) in the year 2005 and it also seen minimum (11.9) in the year 2007.
2. Content category wise distribution of research articles in Current Science Journal shows that out of the total 7460 articles, volume and issue wise analysis content categories article shows that average no. of per category is 'Research Communication' scores the top position with 1961 (26.29%) articles, second position goes to 'Correspondence' with 1870 (25.07%) articles, followed by 'Scientific Correspondence' with 890 (11.93%) articles respectively.
3. Researchers depend more on journals literature for their investigations. It was seen that different forms of literature was used by researcher in Current Science Journal which heavily depend on periodicals sources for their studies. It was found that the journals are the major form of media used with citation count, of 89985(65.93%) of total literature used, where as non-periodical sources account for 46497(34.07%) therefore periodicals are the first hand original and latest information in the subject and are most preferred channel of information use.
4. Collaboration coefficient is high for references from periodicals. It means scientists collaborate together in current science research and publish more and more joint authored papers in journal.
5. The chronological distribution of citations shows that maximum number of citations are covered during the period of 1991-2000 i.e. 55647 (40.80%).
6. The ranking of authors depicted that "Kumar R." is the first ranked author with 1046(0.318%) citations.
7. The ranking of web citation shows that only 1629 (1.20%)citations are web citation and remaining 134853 (98.80%) citations are printed citations. It was also observed that difference between p-citation and web citation shows that the printed resources were mostly referred by the researchers.
8. The half life period of Current Science Journal cited by the researchers with time span of 331-335 years with 33656 (24.660%) citations, followed by the time span of 336-340 years with 24619(18.038%) citations, the researchers cite mostly the literature published in the year 1996 to 2005 in their research work. The half life period of Current Science literature cited by the researchers was calculated as 10 years from 1996-2005 with 58275 (42.69%) citations.

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