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Research Productivity and Citations of Authors in University of Madras: A Study

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ABSTRACT

This paper is discussed about the published research articles and its citation available in the Indian Citation Index by the authors from University of Madras. The relevant data are collected from Indian Citation Index and it was were analyzed. It shows among 620 articles, Among the 620, 74(11.94%) articles published in 2013, 66(10.65%) articles 2011 & 2005 and 64(10.32%) articles in 2012. But in the 2006, 38(7.06%) articles only published. The lowest no.of articles i.e 2 was published in the year 2015. Based on the citation during the period 419 citations were made. Among the 419 Citations, 109(26.01%) citations in 2004, 59(14.08%) citation in 2005, 49(11.69%) citations in 2006 and 44(10.50%) citation in 2007 was identified

Keywords: ICI; Year wise Distribution; Citation Analysis; Document Type

INTRODUCTION

India is a huge part of the global society, has long and distinguished history as country, possess capability and vital resource to influence, mark presence on the emerging universe of knowledge. India is contributing good amount of knowledge but there is no tool for evaluation and measurement of its knowledge. At international level few tools/databases are available but coverage of Indian knowledge contents particularly published in local national journals are negligible. Therefore, these tools/databases are not adequate to evaluate/ analyze India's knowledge contents. To resolve similar limitation, few countries, like China, Korea, Japan etc. have already brought out their own citation indexes.

INDIAN CITATION INDEX (ICI)

Indian Citation Index (ICI) is a home grown abstracts and citation database. It provides powerful search engine basically to perform search and evaluation for researchers, policy makers, decision makers etc. At present, it is planned to launch this long awaited and needed information tool with five years back files (depth) which would go over 10 years and beyond in a year's time. ICI database is a powerful tool that let you search, track, measure and collaborate in the sciences, social sciences, arts, and humanities to turns raw data/information into the powerful knowledge you need. Indian Citation Index (ICI) database is an abstracts and citation database intended to measure and perform two basic functions, general literature

search and evaluation using citations similar to international databases. A database in general is a collection of information that is organized so that it can easily be accessed for various purposes, managed, and updated regularly. Citations symbolize the association of R&D ideas. The references that researchers cite in their papers make explicit links between their current research and prior work in the literature archive. Indian Citation Index (ICI) use intellectual links by listing both cited and citing works. Like other indexes, this enables one to move back in time to previously published papers. But uniquely one can also look forward in time to determine who has subsequently cited an earlier piece of research. ICI is the abbreviation of "Indian Citation Index "(ICI). It is a multidisciplinary abstract and citation database of journals publish from India. ICI is useful for researchers, administrators, policy makers, editors, librarians and analysts for their respective nature of work. Once you get registered with the site you will be given a 30 days trial to see and adjudge its usability.

REVIEW OF LITERATURE

Some of the recent study on bibliometric study has been reviewed. Mooghali et al (2011) using bibliographic records from the Social Science Citation Index, Science Citation Index, and Arts & Humanities Citation Index, tried to give a complete view of the evolution of the field of Scientometrics based on its literature published during 1980 to 2009. This is a descriptive survey using scientometric indicators. Lapon-Kandeishein and Prebor (2011) presented the state of bibliographical research in the discipline of Hebrew printing during a 30-year period, ranging from the latter quarter of the twentieth century until the beginning of the third millennium (1976-2006). Krampen, Eye and Schui (2011) studied bibliometric data on psychology publications from 1977 through 2008 are modelled and forecasted for the 10 years following 2008. Dhanavandan and Tamizhchelvan (2014) discussed the published research articles, citations and self-citations in the library and information science journals which are available in Indian Citation Index. There are 15 journals listed in the Indian Citation Index, 444 (15.95%) article from SRELS Journal of Information Management and 303(10.88%) articles from Annals of Library and Information Studies published. Uma and Dhanavandan (2014) discussed about research assessment and comparative exercise of productivity and citations in universities. Such University of Madras and Anna University, Chennai. This study only focus from 2009 to 2014 on the data available in Indian Citation Index as on 10th September 2014. As per the sources available in the Indian Citation Index more than 121 articles were published from Chemistry subject which includes 42(10.99%) from University of Madras and 79 (20.68%) from Anna University.

METHODOLOGY

This study is aimed to discuss about the analysis of the citation index of the research output by faculty members of University of Madras, Chennai. The relevant sources and data are collected from Indian Citation Index on 28th April 2015. Based on the available sources the following discussions were made.

ANALYSIS AND INTERPRETATION

The distribution of the research output by the authors from University of Madras, Chennai that are available in Indian Citation Index were analyzed in the table 1.

Table 1: Year Wise Distribution of Published Articles Vs Citations

Sl.No.	Year	Articles	%	Citation	%	Citation density	article citation
1	2004	52	8.39	109	26.01	2.096	0
2	2005	66	10.65	59	14.08	0.894	1
3	2006	39	6.29	49	11.69	1.256	1
4	2007	50	8.06	44	10.50	0.88	1
5	2008	53	8.55	37	8.83	0.698	1
6	2009	43	6.94	27	6.44	0.628	2
7	2010	62	10.00	29	6.92	0.468	2
8	2011	66	10.65	27	6.44	0.409	2
9	2012	64	10.32	30	7.16	0.469	2
10	2013	74	11.94	5	1.19	0.068	15
11	2014	49	7.90	3	0.72	0.061	16
12	2015	2	0.32	0	0.00	0	N/A
		620	100.00	419	100.00	7.927	43

Table 1 shows the year wise distribution of articles published by the various authors from University of Madras. From 2004 to till date (28th April 2015) 620 articles were published which are indexed in Indian Citation Index. Among the 620, 74(11.94%) articles published in 2013, 66(10.65%) articles 2011 & 2005 and 64(10.32%) articles in 2012. But in the 2006, 38(7.06%) articles only published. The lowest no.of articles i.e 2 was published in the year 2015.

Based on the citation during the period 419 citations were made. Among the 419 Citations, 109(26.01%) citations in 2004, 59(14.08%) citation in 2005, 49(11.69%) citations in 2006 and 44(10.50%) citation in 2007 was identified. But in the year 2014, only 3 Citations were identified in the respective source. And, the citation densities for the above period were 7.927. In the year 2004, the citation density was 2.096 and followed by 0.894 from the year 2005, 1.296 citation densities from 2006 It is pointed out that very less citation density i e 0.062 from the 2014.

Table 2: Author Wise Distribution of Articles and Citations (TOP 15)

Sl. No.	Author	Articles	%	Citation	%	Citation density	%
1	Babu B Ramesh	21	10.55	47	29.01	2.238	20.61
2	Kaviyarasan V	19	9.55	24	14.81	1.263	11.63
3	Velmurugan D	18	9.05	7	4.32	0.389	3.58
4	Kalaichelvan P T	17	8.54	10	6.17	0.556	5.12
5	Narayanan V	15	7.54	1	0.62	0.067	0.62
6	Muthumary J	14	7.04	15	9.26	1.071	9.86
7	Subramanian S	14	7.04	6	3.70	0.429	3.95
8	Kaliyaperumal K	13	6.53	1	0.62	0.077	0.71
9	Gopalakrishnan S	12	6.03	18	11.11	1.385	12.75
10	Rajeswari S	11	5.53	14	8.64	1.273	11.72
11	Raaman Nanjian	9	4.52	0	0.00	0	0.00
12	Ramanibai R	9	4.52	3	1.85	0.333	3.07

13	Rengasamy R	9	4.52	1	0.62	0.111	1.02
14	Natarajan K	9	4.52	15	9.26	1.667	15.35
15	Murugan M	9	4.52	0	0.00	0	0.00
	Total	**199**	**100.00**	**162**	**100.00**	**10.859**	**100.00**

The table 2 shows the author wise distribution of the articles published and citations are available in the Indian Citation Index. Only we consider in the top fifteen authors. Among the 15, Dr.B.Ramesh Babu (Library and Information Science) occupied the first position with 21 articles and 47 citations and V. Kaviyarasan is in the second position with 19 articles and24 citations (Ranked by Articles only). Nearly ten authors they have published more than 10 articles among the top 15 authors. In the case of highest citations Dr.B.Ramesh Babu is in the first position with 47 citations and V.Kaviarasan occupies the second position with 24 citations. It is pointed out that the seven authors are having more than 10 citations among the top 15 authors.

Table 3: Subject Wise Distribution of Cited Articles (TOP 15)

Sl.No.	Subject Category	Articles	%	Citation	%
1	Biological Science	106	14.83	91	18.84
2	Chemistry	104	14.55	39	8.07
3	Pharmacology and Pharmaceutical Science	102	14.27	61	12.63
4	Health Science	68	9.51	77	15.94
5	General Science & Technology	65	9.09	83	17.18
6	Library and Information Science	46	6.43	54	11.18
7	Engineering Science And Technology	45	6.29	3	0.62
8	Environmental Science	38	5.31	10	2.07
9	Biotechnology	27	3.78	16	3.31
10	Botany	26	3.64	19	3.93
11	Social Science	23	3.22	4	0.83
12	Physics	22	3.08	11	2.28
13	Pollution	15	2.10	7	1.45
14	Earth and Geological Science	14	1.96	3	0.62
15	Agriculture	14	1.96	5	1.04
		715	100.00	483	100.00

Table 3 shows the top 15 subjects it includes various articles published and cited from the University of Madras that are available in the Indian Citation Index. As per the sources available in the Indian Citation Index, 715 were identified from the top 15 subjects. Among the 623, 106(14.83%) articles from Biological Science and it is in the first rank, 104(14.55%) articles from Chemistry with second rank and 102(14.27%) articles from Pharmacology and Pharmaceutical Science subject in third rank were identified. But in the Library and Information Science subject 45(7.22%) articles was published and it is in the sixth rank. It is revealed from the table the Biological Science subject has the highest citations 91(18.84%) when comparing other subjects.

Table 4: Distribution of Top 15 Cited Journals

Sl.No.	Publications	Articles	%	Citation	%
1	Indian Journal of Science And Technology	30	12.50	44	22.11
2	Journal of Pharmacy Research	26	10.83	7	3.52
3	International Journal of Pharmacy And Pharmaceutical Sciences	25	10.42	32	16.08

4	Asian Journal of Chemistry	24	10.00	3	1.51
5	Current Science	23	9.58	38	19.10
6	International Journal of Chemtech Research	19	7.92	0	0.00
7	Indian Journal of Chemistry Section B - Organic Including Medicinal	14	5.83	0	0.00
8	Indian Journal of Experimental Biology	14	5.83	49	24.62
9	Pollution Research	11	4.58	5	2.51
10	Indian Journal of Applied Psychology	10	4.17	1	0.50
11	Journal of Chemical Science	10	4.17	0	0.00
12	Journal of Geological Society of India	9	3.75	2	1.01
13	Trends In Biomaterials & Artificial Organs	9	3.75	8	4.02
14	Asian Journal of Experimental Biological Sciences	8	3.33	1	0.50
15	DESIDOC Journal of Library & Information Technology	8	3.33	9	4.52
		240	100.00	199	100.00

The data presented in the table 4 shows the top 15 journals that are articles published and cited by authors in University of Madras. Among the top 15, Journal of Indian Journal of Science and Technology occupies the first place, the second place in Journal of Pharmacy Research and the third place in International Journal of Pharmacy And Pharmaceutical Sciences based on the article publications. But based on the citations, Indian Journal of Experimental Biology occupies the first position, Indian Journal of Science and Technology is in the second position and Current Science occupies third position. It is concluded that among the top 15 journals, library and information science journals occupies in the fifteenth position.

Table 5: Distribution of Document Type (Articles Cited)

Sl.No.	Document Type	Articles	%	Citation	%
1	Research Article	561	90.48	381	90.93
2	Short Communication	19	3.06	27	6.44
3	Case Study	11	1.77	2	0.48
4	Review Article	10	1.61	4	0.95
5	Research Note	7	1.13	5	1.19
6	Editorial	7	1.13	0	0.00
7	Proceedings Paper	2	0.32	0	0.00
8	Special Article	2	0.32	0	0.00
9	Research Method	1	0.16	0	0.00
	Total	620	100.00	419	100.00

The table 5 indicates the distribution of document type based on the articles published from University of Madras. It shows among the 920 articles, which includes 561(90.48%) Research Articles, 19 (3.06%) short communication and 11 (1.77%) article from Case Study type. Among 419 Citations, which includes 381(90.93%) Research Articles type, 27(6.44%) short communication type and 5 (1.19%) from research note. It is concluded that the highest articles and citations are from research type of document.

CONCLUSION

Indian Citation Index to offer an easy-to-use, reliable bibliographic and citation database to users. But based on the citations authors from University of Madras among the top fifteen authors. Dr.B.Ramesh Babu (Library and Information Science) occupied the first position with 21 articles and 47 citations. But among the top 15 journals, library and information science journals occupies in the fifteenth position. So, the library science professionals, Researchers and students are must bring out the more number of publications in their specializations.

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