

Bibliometric Analysis of the International Journal of Web Information Systems for the Year 2005-2015

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ABSTRACT

This paper deals with the analysis of the 212 original Contributions of the journal entitled “International Journal of Web Information Systems” published at the time of 2005-2015. The paper covers the bibliometric analyses of year-wise distribution of articles, category-wise classification of papers, geographical distributions and authorship patterns of the International Journal of Web Information Systems brought out during 2005-2015. The study finds that topmost number of citations was more than three authored (31.60 %), and Category-wise classification of papers 84.90 % citations were from Research Paper and come after by only 10.38 % citations were from Technical Paper. The country-wise scattering of citations reveals that 32 (15.09 %) citations were from Japan and it was followed by Austria and USA.

Keywords: Bibliometric Study, Citation counts, International Journal of Web Information Systems.

1. INTRODUCTION

Periodicals are the primary source of information and an vital media for communication. They play a main role for communicating the latest research findings and publishing the articles containing the current development in any field of knowledge. Research is a prolonged process, aiming at discovering the truth and is a means for acquiring knowledge about any natural or human phenomena. Research in all fields is growing at a faster rate and particularly the field like Library and Information Science is advancing. This is due to the gradual change in the trends of research. In the process of identifying the research trends in a field, it is essential to analyse the various patterns that are evident in the literature in that field. Due to information explosion and multidisciplinary growth of subjects, it is very difficult to analyze the various patterns that are evident in the field. The bibliometric studies, which are mostly related to quantification of items and their pattern of distributions are useful in understanding some information phenomena and may help in planning many of the library activities. The first recorded study of Bibliometric topic was in 1971 by Coles and Eales with the ‘Statistical analysis of literature on history of comparative anatomy; which served as a model for applying the counting technique in the evaluation

of international activities (Cole and Eales,1971). Alan Pritchard first introduced the term Bibliometrics' in 1969 to mean 'the applications of mathematics and statistical methods to books and other media of communications (Pritchard,1969).

International Journal of Web Information Systems:

International Journal of Web Information Systems (ISSN: 1744-0084) is a well-known quarterly journal started publishing Online from 2005 published by Emerald Group Publishing, Ltd. The journal is intended for people interested in Web information systems and related areas at all levels. The primary audience of this journal includes academics, students, developers, engineers, innovators, research strategists and IT-managers who are looking visionary concepts and stimulating ideas in Web information systems at both the theory and application levels.

Related Studies :

Paramasivam and Venkatachalam review the journal titled "The Indian concrete" Journal from January 2012 to December 2012. The study revealed that utmost number of papers have been written by 23(39%) of two authors in the articles contribution, which shows collaborative research practice in The Indian Concrete Journal articles are especially cited from Journals, Books, Conferences, Proceedings and Technical Reports, ASTM standards.

Raina (1984) analysed citations of Annual Review of Biochemistry to check the stability of ranks of some significant journals of the subject.

Just Now surveyed on single journal bibliometric studies was conducted by Santhanakarhikeyan, Grace and Jeyshankar (2014) were studied the Indian journal of cancer and they were analysed 611 papers, 98.77 % of the papers were multi-authored. Out of 22 countries contributed 244 research papers during the study period of the 244 articles, 168 (68.85 per cent) were published from India. In another study conducted by Gudodagi (2014) analysed highest number of research papers (14.27%) was published in the year 2009. The study revealed collaborative research is high (45.36%) most of the research papers give by Indians.

Shokeen and Kaushik (2004) studied the Indian Journal of Plant Physiology, volume 7. There are 61 articles with a total of 1,149 citations. Of the 61 articles, 19 (31%) were contributed by three or more authors.

Sujatha and Padmini analyzed 3442 papers published in the journal IEEE Transactions on Antennas and Propagation during the period 2010-2014. They found that on an average 688 papers are published annually between the above said period. Number of publications in the journal from Indian authors was found to be very less as compared to European and Western countries.

Objectives and methodology:

- To make an analysis of articles published in International Journal of Web Information Systems.
- To ascertain the number of papers published in the International Journal of Web Information Systems from 2005 to 2015
- To investigate year-wise distribution of papers
- To review the authorship pattern of papers
- To examine geographical distribution of the articles state wise and country wise

Scope :

The present study analyses the contribution of Volume 1-11 (Year 2005-2015) of International Journal of Web Information Systems.

Methodology:

The methodology applicable in the current study is bibliometric scrutiny, which is used to analyses in detail the bibliographic attributes of the articles published in the International Journal of Web Information Systems from 2005-2015. Eleven volumes (Vol. 01 to 11) containing 44 issues of the International Journal of Web Information Systems have been taken up for the study. The data for the study Scopus was used for collecting data and then used MS Excel to organize, tabulate and analyze the data for the study.

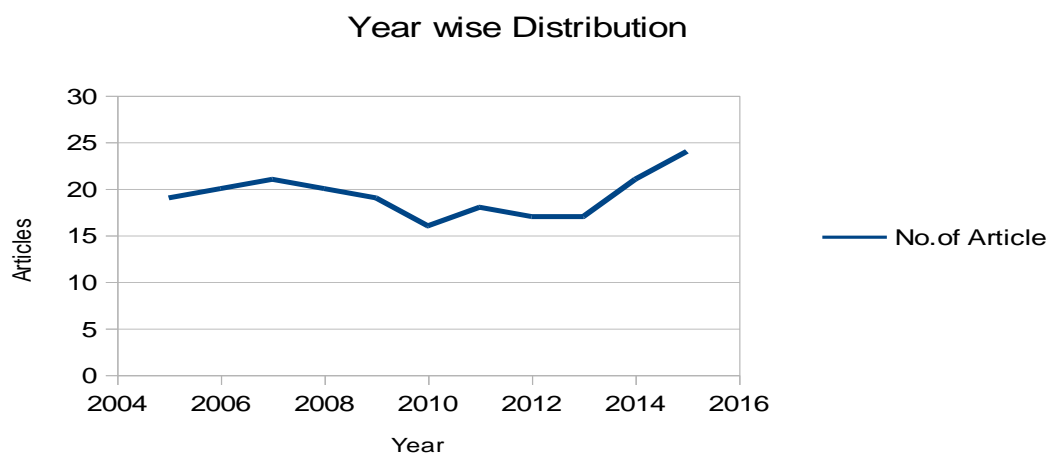
Data analysis and interpretation:

The International Journal of Web Information Systems have extracted all the details such as author(s), year of publication, Geographical distribution, pagination etc of all articles published from 2005 to 2015 were recorded for the following analysis

During the period January 1, 2005 to December 31, 2015, 212 articles were published. Table 1 show that the numbers differs from year to year .Out of total 212 articles, the best numbers of articles are in the year 2015 contributing 24 articles, which are 11.32 % to the total publications. The lowest numbers of articles are in the year 2010 with 16 articles, which are 7.55% to the total publications.

Year	No. of Article	Percentage	Cumulative	Cumulative %
2005	19	8.96	19	8.96
2006	20	9.43	39	18.40
2007	21	9.91	60	28.30
2008	20	9.43	80	37.74
2009	19	8.96	99	46.70
2010	16	7.55	115	54.25
2011	18	8.49	133	62.74
2012	17	8.02	150	70.75
2013	17	8.02	167	78.77
2014	21	9.91	188	88.68
2015	24	11.32	212	100.00
Total	212	100		

Table 1. Year wise Distribution of Articles



Authorship patterns

Table 2 reveals the authorship pattern of the articles published during the period of study. The huge number of articles had Three authors 67 (31.60%). This is followed by more than three authors 60 (28.30%), Two authors 58 (27.36%) and single author with 27 (12.74%) of the total articles.

Table 2. Authorship patterns

Year/Author	Single	Two Author	Three Author	More than Three Author	Total
2005	1	4	8	5	18
2006	2	3	3	2	10
2007	4	8	10	8	30
2008	5	5	6	5	21
2009	2	7	6	6	21
2010	0	3	7	5	15
2011	3	4	7	3	17
2012	2	6	6	3	17
2013	4	4	5	5	17
2014	4	8	3	5	22
2015	0	6	6	11	23
Total	27	58	67	60	212
Percentage	12.74	27.36	31.60	28.30	100

Type of Documents

Table 3 indicates that the majority of the contributors preferred Research Paper as the source of information which occupied the top position with the greatest number of citations 180(84.90%) of the total 212 citations. The second highest position is occupied by online Technical paper with 22 (10.38%) citations. It is followed by General Review with 4(1.89%), Literature Review with 3(1.42%), case study 2 (0.94%)and conceptual Paper 1(0.47%).

Table 3. Category-wise classification of papers

Document Type	No. of Documents	Percentage	Cumulative	Cumulative %
Research Paper	180	84.91	180	84.91
Technical Paper	22	10.38	202	95.28
Case Study	2	0.94	204	96.23
Conceptual Paper	1	0.47	205	96.7
General Review	4	1.89	209	98.58
Literature Review	3	1.42	212	100
Total	212	100		

Geographical Distribution of Research:

Table 4 gives that there are 212 publications during the study period. It has been identified that the greatest contributions is from Japan with 32 (15.09%) publications, followed by Austria with 20 (9.43%) contributions and occupies Second Position, USA contributed 16 (7.55%) publications and occupied third position. Australia had 14 (6.6%) publications and occupies fourth position and lowest number i.e., 1 (0.47%) has been contributed from different Country i.e., Algeria, Chile, Hong Kong, Iran, Ireland, Kuwait, Netherlands, Romania, Portugal, India and Tunisia.

Table 4. Geographical Distribution

S.No	Country / Countries	Articles	Percentage
1	Japan	32	15.09
2	Austria	20	9.43
3	USA	16	7.55
4	Australia	14	6.6
5	Germany	11	5.19
6	Canada	9	4.25
7	Italy	9	4.25
8	Saudi Arabia	8	3.77
9	Brazil	7	3.3
10	France	6	2.83
11	Malaysia	6	2.83
12	VietNam	6	2.83

13	UK	6	2.83
14	Taiwan	5	2.36
15	Czech Republic	4	1.87
16	Greece	4	1.87
17	Spain	4	1.87
18	China	3	1.42
19	Colombia	3	1.42
20	Finland	3	1.42
21	New Zealand,	3	1.42
22	Singapore	3	1.42
23	Switzerland	3	1.42
24	Argentina	2	0.94
25	Egypt	2	0.94
26	Norway	2	0.94
27	Oman	2	0.94
28	South Korea	2	0.94
29	Sweden	2	0.94
30	Thailand	2	0.94
31	UAE	2	0.94
32	Algeria	1	5.19
33	Chile	1	0.47%
34	Hong Kong	1	0.47%
35	Iran	1	0.47%
36	Ireland	1	0.47%
37	Kuwait,	1	0.47%
38	Netherlands	1	0.47%
39	Romania	1	0.47%
40	Portugal	1	0.47%

41	India	1	0.47%
42	Tunisia	1	0.47%
Total		212	100

Relative Growth Rate and Doubling Time

Table 5. RGR and DT

Year	No. of Article	Cumulative	W1	W2	RGR	DT
2005	19	19		2.94		
2006	20	39	2.94	3.66	0.72	0.96
2007	21	60	3.66	4.09	0.43	1.61
2008	20	80	4.09	4.38	0.29	2.41
2009	19	99	4.38	4.6	0.21	3.25
2010	16	115	4.6	4.74	0.15	4.63
2011	18	133	4.74	4.89	0.15	4.77
2012	17	150	4.89	5.01	0.12	5.76
2013	17	167	5.01	5.12	0.11	6.46
2014	21	188	5.12	5.24	0.12	5.85
2015	24	212	5.24	5.36	0.12	5.77
Total	212					

Relative Growth Rate

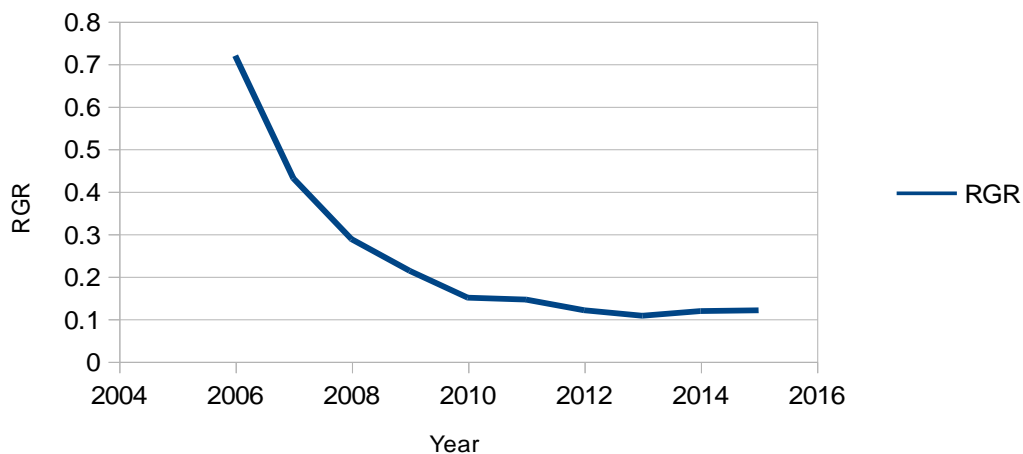


Fig1

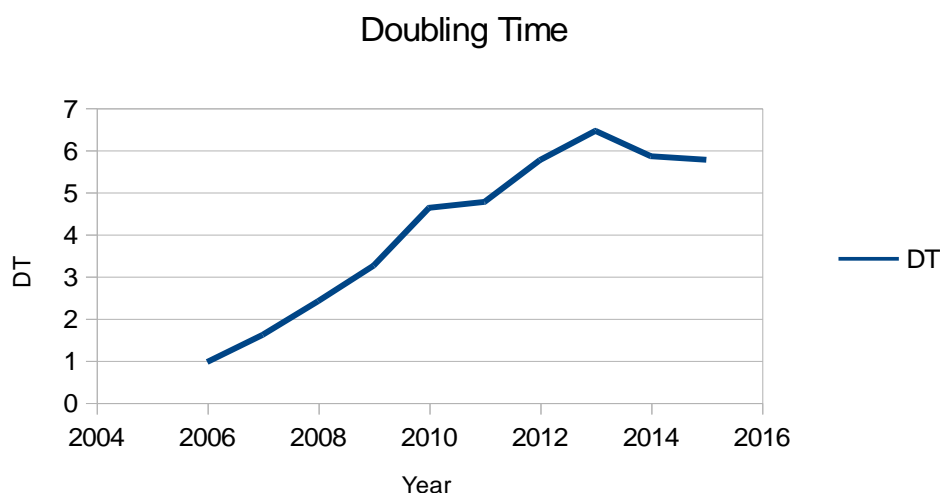


Fig2

Relative growth rate(RGR)and Doubling time (Dt)

It is seen from Table 4 and Figure 1 that RGR has been decreasing from 2006 (0.72 to 2015 (0.12). On the other hand, the Doubling Time (DT) has shown an increasing trend. The data in Table 5 reveals that Doubling time has increased from 0.96 in the year 2006 to 5.77 in the year 2015 (Figure 2)

Findings and Conclusion

There are total 212 publications published in International Journal of Web Information Systems in the year 2005-2015. The year 2015 has the topmost number of 24 (12.04%) publications, whereas the year 2010 has the lowest number of 16 (7.55%) publications. It has been pinpointed that the maximum contributions are from Japan with 32 (15.09%) publications, followed by Austria with 20 (9.43%) contributions and occupies second position, USA contributed 16 (7.55%) publications and occupied third position. Australia had 14 (6.6%) publications and occupies fourth position and the lowest number i.e., 1 (0.47%) has been contributed from several countries i.e., Algeria, Chile, Hong Kong, Iran, Ireland, Kuwait, Netherlands, Romania, Portugal, India and Tunisia.

On the other hand, a journal refers to a record of events, experiences, thoughts, and observations kept on a regular basis by an individual for personal use. Writers often keep a regular journal to record ideas and material that may later be incorporated into their works.

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