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Quantitative Assessment of Global Literature on 'Web 2.0 and Libraries' during 2006-15

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ABSTRACT

The present study examines global publications output on 'Web 2.0 and Libraries' published during the period 2006-15. The data for the study was sourced from Scopus database. The total global research output on 'Web 2.0 and libraries' comprising 482 publications, registered 14.02 % CAGR growth, cumulated 3234 citations with an average of 6.71 citations per paper. The global contributions on 'Web 2.0 and libraries' originated from 77 countries, 179 organizations, and 159 authors. Top 10 countries accounted for 75.10 % global publications share, 90.75 % global citations share during 2006-15. Top 15 organisations contributed 13.69 %, cumulated 15.18 % citations share. Top 21 authors contributed 14.94 % publications share, cumulated 14.81 % citations share of the global output during 2006-15. 'Web 2.0 and libraries' as a subject, interacts highly with other disciplines. Social sciences accounted for the largest share (72.61 %), followed by computer science (52.28 %), and 6 other disciplines. Of the total 482 global publications on the subject, 351 appeared in 94 journals, with top 19 journals accounting for 39.21 % share. The top 30 highly cited papers registered 20 to 475 citations each, cumulated 1776 citations, averaging to 59.2 citations per paper.

Keywords: Web 2.0, Library 2.0, bibliometrics, publication analysis, citation analysis, highly cited papers, *h*-index, social networking

1. INTRODUCTION

Web 2.0 has ushered a new era of social tools, social media, and social networking facilitating social interactions on web platform. The Web 2.0, which made a debut in 2004, has been defined in several different ways like 'people to people collaboration in content creation on the web'[1], 'share information online, user generated media content constantly modified'[2], 'open-source, interactive and user-controlled online applications or creation of informal users' networks facilitating free flow of ideas and knowledge'[3], and 'to deliver rich user experience'[4]. Web 2.0, social networking and social media are inextricably linked and have in fact often been used synonymously[5]. Web 2.0 phenomena have indeed made a significant impact on the information landscape. According to Miller, 'it is a technology, a philosophy, a business plan, a behaviour and a participatory model to engage users', which led Michael Cassey to coin the term 'Library 2.0' and launch an associated blog in 2005[6]. Web 2.0 influenced the conceptualisation of the terms Library 2.0 and Business 2.0. Library 2.0 is the library sector's response to Web 2.0; Library 2.0 is a service model that relates to the delivery of library programmes and services in an innovative way[7]. Web 2.0 supports or leads to Business 2.0 or Library 2.0

It also relates as to how library and information professionals are translating the principles of Web 2.0 into the design and delivery of library services[8,9]. Web 2.0 and social media skills will become essential for library staff as they make transition to becoming Librarian 2.0. Mishra[10] asserts that Library 2.0 is a mix of concepts that focus on ongoing conversations around the ways libraries should change to make themselves and their services viable to end users. Maness[11] defined 'Library 2.0 as the application of interactive collaborative and multimedia web-based technologies to web-based library services and collections'. Library 2.0 is certainly a paradigm shift in the approach to the delivery of library services in the internet age.

2. LITERATURE REVIEW

The literature review covered here is limited to studies relating to bibliometric assessment of publications

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on 'Web 2.0', 'Web 2.0 and libraries' and 'Library 2.0'. These are two studies on the literature covering Web 2.0 alone. Chu & Xu[12] and Bharadwaj[13] in their publications carried out studies on bibliometric analysis of 1718 and 3257 documents respectively relating to Web 2.0 and its applications and explored the various dimensions and characteristics of this fast emerging field of Web 2.0. There are three studies on literature covering only Web 2.0 and libraries. Aharony[14], Singh & Gill[15] and Singh[16] in their studies used different data sets on 'Web 2.0 and Libraries' to explore the growth and dimensions of the literature on Web 2.0 and their application to libraries.

There were five studies in literature covering Library 2.0 alone. Boxen[17], Padma & Ramasamy[18], Surulinathi, Prasannakumari, Duraipandi, Nandhini[19] and Gupta, Dhawan & Bansal[20] in their respective studies focused mainly on research trends in Library 2.0 and in understanding the qualitative or quantitative impact of Library 2.0 on libraries. The authors found that even as Library 2.0 is indeed a subject of major potential to libraries, but it is yet to emerge as a popular subject for research studies in LIS. The present study is designed as a more comprehensive bibliometric study on Web 2.0 and its library applications covering global literature on the subject published during the last 10 years period to explore current research trends in the subject using publications and citations indicators.

3. OBJECTIVES

The main objective of this study is to measure and evaluate the research performance of the world on 'Web 2.0 and Libraries' covering the period 2006-15, using publications data sourced from Scopus database. In particular, the study covers the following:

(a) Growth of world literature and its distribution by type of documents and sources

(b) Citation pattern of the global research output.

(c) Contribution, global share, and citation impact of top 10 most productive countries

(d) Distribution of global research output by broad subject areas and identification of significant keywords

(e) Publication productivity and citation impact of most productive organisations and authors

(f) Leading medium of communication and to identify the characteristics of highly cited papers

4. METHODOLOGY

The study retrieved and downloaded publication data of the world as well as of top 10 productive countries on 'Web 2.0 and Libraries' from the Scopus database (http://www.scopus.com) covering the period 2006-15. In the search statement formed for the purpose, the keyword "Web 2.0" was used in the 'Keyword' tag and 'Article title' tag; in another search statement formed, the keyword "Library" was used in 'Keyword' tag, 'Article title' tag, and 'SRC Title' tag. These two search statements were combined to pull out global publications data on 'Web 2.0 and libraries' and later restricted this search output to time period 2006-15. This main search statement as shown below was further restricted to 10 most productive countries one by one in 'country tag' to pull out country publications data. Furthermore, the main search statement was restricted to 'subject area' tag, 'country' tag, 'source title' tag, and 'affiliation' tag in order to pull out data on publications stats by subject, collaborating countries, organisation-wise and journal-wise, etc. The citation data was collected from date of publication till the end of May 2016. The study has used a few quantitative and qualitative indicators to measure and evaluate research performance in 'Web 2.0 and Libraries' Relative Citation Index, used here, is defined as the ratio of global share of citations to the global share of publications.

(TITLE(Web 2.0 or library 2.0) OR KEY(Web 2.0 or library 2.0) AND TITLE(librar*) OR KEY(librar*) OR SRCTITLE(librar*)) AND PUBYEAR > 2005 AND PUBYEAR< 2016

5. DATA ANALYSIS

The global research output on 'Web 2.0 and Libraries' cumulated to 482 publications in 10 years during the study period 2006-15. The yearly global output on the subject increased from 7 in 2006 to 26 publications in 2015, highest output (79 publications) was reported in 2010 and the least (7 publications) in 2006. The global research output on 'Web 2.0 and Libraries' registered 14.02 % CAGR growth. The global research output on the subject cumulated to 233 publications during the first half of the study period 2006-10 and to 249 publications during the second half of the study period 2011-15. Despite modest increase in five-yearly output from 233 to 249, the pace of growth in research output during the two consecutive five-yearly study periods declined significantly from 62.37 % CAGR covering 2006-10 (the first-half of the study period) to -17.49 % CAGR covering 2007-15 (the second half of the study period). The global publications on 'Web 2.0 and Libraries' were cited 3234 times, and their citation impact averaged to 6.71 citations per paper during 2006-15, which decreased from 10.07 during 2006-10 to 3.57 citations per paper during 2011-15 (Table 1).

Bulk of the total 482 publications on 'Web 2.0 and Libraries', (310 (64.32 %) appeared as articles and the remaining output was distributed across conference papers (21.99 %, 106), reviews (7.47 %, 36) book chapters (3.32 %, 16), editorials (0.83 %, 4), books, articles in press and notes (0.62 %, 3 each), and survey (0.21 %. 1) during 2006-15. Of the total 482 publications, 96.47 % (465) appeared in English, 2.90 % (14) in Spanish, 0.62 % (3) in Portuguese and 0.21 % (1 each) in Chinese, Croatian, German, Persian, Russian and Catalan during 2006-15.

Table 1. Distribution of publications and citations output on 2006-2015

Publication year	TP	TC	CPP
2006	7	385	55.00
2007	33	619	18.76
2008	54	354	6.56
2009	60	494	8.23
2010	79	584	7.39
2011	68	426	6.26
2012	68	266	3.91
2013	53	139	2.62
2014	34	55	1.62
2015	26	2	0.08
2006-10	233	2346	10.07
2011-15	249	888	3.57
2006-15	482	3234	6.71

TP=Total Papers; TC=Total citations; CPP=Citations per paper

5.1 Citation Distribution

More than 66 % of the total publications output (320 out of 482 publications) on 'Web 2.0 and Libraries' was cited more than once since their publication during 2006-15. Their distribution by citations is skewed. For instance, 3 papers received more than 100 citations each, 6 received 51 to 100 citations each, 6 more received 31 to 50 citations each, 59 received 11 to 30 citations each, and 246 (33.61 %) received 1 to 10 citations each since their publication during 2006-15. Of the total cited papers, 3 contributed 25.08 % citation share, 6 contributed 10.64 % citations share, 6 more contributed 7.64 % citation share, 59 contributed 28.45 % citations share and 246 publications contributed 28.20 % citations share during 2006-15.

Table 2. Citation distribution during 2006-15

Citations range	No. of publication	No. of citations	Share of publications	Share of citations
0-0	162	0	33.61	0
1-10	246	912	51.04	28.20
11-30	59	920	12.24	28.45
31-50	6	247	1.24	7.64
51-100	6	344	1.24	10.64
>100	3	811	0.62	25.08
Total	482	3234	100	100

5.2 Country-Wise Distribution of Publications and Citations

In all, 77 countries participated in research on 'Web 2.0 and Libraries' during 2006-15. The top 10 most productive countries published from 9 to 179 publications each and together contributed 75.10 % global publications share and 90.75 % citation share during 2006-15. The USA (with 179 publications) published much above the average productivity (36.2 publications per country). Just six countries registered citation impact above the global average of 6.71 citations per paper: U.K. (19.03), Canada (12.2), Malaysia (10.89), Australia (9.25), USA (6.96) and China (6.78) during 2006-15.Six countries registered relative citation index above 1: U.K. (2.84), Canada (1.82), Malaysia (1.62), Australia (1.38), USA (1.04) and China (1.01) during 2006-15. Four countries contributed international collaborative publications share above the average (11.05 % share) of all countries: Australia (37.50 %), China (21.74 %), Germany (16.67 %) and Spain (14.29 %) during 2006-15 (Table 3, Fig. 1).

5.3 Subject-wise Distribution of Publications

The global publications output on 'Web 2.0 and Libraries' was classified using Scopus bibliographical database classification. Social science accounted for

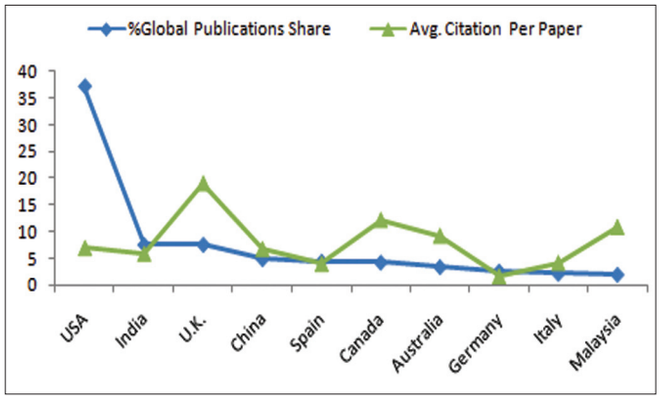

Figure 1. Global publications share of top 10 countries in (2006-15).

the largest share of publications (72.61 %), followed by computer science (52.28 %), medicine (8.71 %), engineering (6.64 %), mathematics (3.94 %), arts & humanities (3.32 %), health profession (3.11 %), business, management & accounting (2.70 %) and decision sciences (2.49 %) during 2006-15. Health profession registered the highest citation impact per paper (35.0), followed by Medicine (22.57), Decision science (18.75), Social sciences (7.89), Business, Management and Accounting (6.77), Computer science (5.59), Arts & humanities (2.69), Engineering (2.16) and Mathematics (1.21) during 2006-15 (Table 4).

5.4 Significant Keywords

Fifty three keywords have been identified as important both from the viewpoint of technology as well as in terms of technology applications. These keywords are shown in Table 5 along with frequency of their occurrence in the global literature on 'Web 2.0 and Libraries' during 2006-15.

5.5 Contribution and Citation Impact of Top 15 Organisations

The global literature on 'Web 2.0 and Libraries' originated from 179 organisations during 2006-15. The

Table 3. Scientometric profile of top 10 most productive countries on 2006-15

Name of country	Total publications			Activity Index		TC	ACPP	%TP (Glob)	%TC (Glob)	RCI	ICP	%ICP
	2006-10	2011-15	2006-15	2006-10	2011-15							
USA	111	68	179	128.28	73.54	1246	6.96	37.14	38.53	1.04	14	7.82
India	5	31	36	28.73	166.69	212	5.89	7.47	6.56	0.88	3	8.33
UK	19	17	36	109.18	91.41	685	19.03	7.47	21.18	2.84	3	8.33
China	11	12	23	98.94	101.00	156	6.78	4.77	4.82	1.01	5	21.74
Spain	7	14	21	68.96	129.05	84	4.00	4.36	2.60	0.60	3	14.29
Canada	12	8	20	124.12	77.43	244	12.20	4.15	7.54	1.82	2	10.00
Australia	5	11	16	64.65	133.08	148	9.25	3.32	4.58	1.38	6	37.50
Germany	6	6	12	103.43	96.79	20	1.67	2.49	0.62	0.25	2	16.67
Italy	3	7	10	62.06	135.50	42	4.20	2.07	1.30	0.63	1	10.00
Malaysia	2	7	9	45.97	150.56	98	10.89	1.87	3.03	1.62	1	11.11
	181	181	362								40	11.05
World	233	249	482	100	100.	3234	6.71					

Table 4. Subject-wise distribution of publications on 2006-15

Broad subject	Number of papers (TP)			Activity index		TC	ACPP	%TP (Global)
	2006-10	2011-15	2006-15	2006-10	2011-15	2006-15	2006-15	2006-15
Social sciences	158	192	350	93.39	106.19	2762	7.89	72.61
Computer science	125	127	252	102.61	97.56	1409	5.59	52.28
Medicine	23	19	42	113.28	87.57	948	22.57	8.71
Engineering	18	14	32	116.36	84.69	69	2.16	6.64
Mathematics	11	8	19	119.77	81.50	23	1.21	3.94
Arts & humanities	5	11	16	64.65	133.08	43	2.69	3.32
Health profession	5	10	15	68.96	129.05	525	35.00	3.11
Business, management & accounting	12	1	13	190.95	14.89	88	6.77	2.70
Decision sciences	7	5	12	120.67	80.66	225	18.75	2.49
Total of the world	233	249	482					

TP=Total papers; TC=Total citations; ACPP=Average citations per paper

**Publications overlap across subjects and as a result, the sum of publications under all 7 subjects is more than total global output (482)*

top 15 organisations contributed 4 to 6 publications each; together they contributed 66 publications (13.69 % global publications share) and cumulated 491 citations (15.18 % global citations share) during 2006-15. A scientometric institutional profile of top 15 most productive organistions is shown in Table 6. Five organisations contributed papers above the group average productivity (4.4 papers per organisation) covering all 15 organisations: University of Sheffield, UK (6 publications), Universidad Carlos III de Madrid, Spain (5 publications), Nanyang Technological University, Singapore (5 publications), Technological Education Institute of Thessalonki, Greece (5 publications) and University of Calcutta, India (5 publications each) during 2007-14. Eight organisations registered citation impact above the group average (7.44 citations per paper): Wuhan University, China (17.25), University of Punjab, Pakistan (15.25), San Jose State University, USA (14.25), Bar Ilan University, Israel (14.00), University of California, Los Angles, USA (12.75), Nanyang Technological University, Singapore (12.40), Texas A&M University, USA (10.75) and University of Malaya, Malaysia (10.00) during 2006-15. Six organisations scored *h-index* above the group average (2.66): Nanyang Technological University, Singapore (5), Texas A&M University, USA and Technological Education Institute of Thessalonki, Greece (4 each), University of Punjab, Pakistan, University of Malaya, Malaysia and Bar Ilan University, Israel (3 each) during 2006-15.

Six organisations contributed international collaborative papers above the group average (18.18 % share): San Jose State University, USA (75.0 %), University of Punjab, Pakistan, University of California, Los Angles, USA and Queensland University of Technology, Australia (50 % each), Wuhan University, China (25.0 % each) and Nanyang Technological University, Singapore (20.0%) during 2006-15. Eight organisations registered RCI above the world average of value 1: Wuhan University, China (2.57), University of Punjab, Pakistan (2.27), San Jose

Table 5. List of significant keywords along with their frequency of occurrence during 2006-15

S. No.	Keyword	No. of papers
1.	Web 2.0	313
2.	Digital libraries	88
3.	World wide web	73
4.	Libraries	66
5.	Library 2.0	60
6.	Internet	59
7.	Academic libraries	51
8.	Social networks	40
9.	Social media	37
10.	Information literacy	28
11.	Blogs	26
12.	Information services	25
13.	Semantic web	24
14.	Web services	22
15.	Metadata	21
16.	University libraries	21
17.	Information technology	20
18.	Wikis	19
19.	Websites	18
20.	Social networks, online	17
21.	Facebook	16
22.	Medical libraries	16
23.	Teaching	16
24.	Web 2.0 technology	16
25.	Collaboration	15
26.	Public libraries	15
27.	Information retrieval	14
28.	Library services	14
29.	User interface	14
30.	E-learning	13
31.	Education	13
32.	Information science	13
33.	Social bookmarking	12
34.	Knowledge management	11
35.	Marketing	11
36.	Social web	11
37.	Web 2.0 tools	11
38.	Wiki	11
39.	RSS	10
40.	Social networking sites	10
41.	Social software	10
42.	Web 2.0 applications	10
43.	Instant messages	9
44.	Twitter	9
45.	YouTube	9
46.	Tagging	8
47.	Web 3.0	8
48.	Flickr	7
49.	Blogging	6
50.	Database systems	6
51.	Public libraries	6
52.	Social tagging	6
53.	Web 2.0 technology	6

State University, USA (2.12), Bar Ilan University, Israel (2.09), University of California, Los Angles, USA (1.90), Nanyang Technological University, Singapore (1.85), Texas A&M University, USA (1.60), and University of Malaya, Malaysia (1.49) during 2006-15.

5.6 Contribution and Citation Impact of Top 21 Authors

In all, 159 authors contributed to global research output on 'Web 2.0 and Libraries' during 2006-15. A scientometric profile of top 21 most productive authors is shown in Table 7. The contributions of 21 top authors varied from 3 to 5 publications each; together they contributed 72 publications (14.94 % global publications share) and cumulated 479 citations (14.81 % global citations share) during 2006-15. Only six authors published above the group average productivity (3.43 per publication) covering all 21 authors: E. Garoufallou, D.H.L. Goh and De Sarkar, T (5 publications each), A. Abrizah, N. Aharony and A.Y. K. Chua (4 publications each) during 2006-15. Seven authors registered citation impact above the group average of all authors (6.65 citations per paper): K. Mahmood (20.33), A.Y.K. Chua (15.50), N. Aharony (14.0), D.H.L. Goh (12.40), H. Patridge (12.33), A. Abrizah (10.0) and E. Connor (7.33) during 2006-15. Ten authors scored *h*-index above the group average (1.67): A. Abrizah and E. Garoufallou (4 each), K. Mahmood and N. Aharony (3 each), H. Patridge, M. Stephens, T. Koltay, E.E. Baro, S. Gul and De Sarkar, T. (2 each) during 2006-15. Five authors contributed international collaborative papers above the group average (8.33 % share): K. Mahmood (66.67 %), M. Stephens, A. Etches-Johnson and C.S. Lee (33.33 % each) and D.H.L. Goh (20.0 %) during 2006-15. The relative citation index greater of seven authors was above the world average of value 1: K. Mahmood (3.03), A.Y.K. Chua (2.31), N. Aharony (2.09), D.H.L. Goh (1.85), H. Patridge (1.84), A. Abrizah (1.49), and E. Connor (1.09) during 2006-15.

5.7 Medium of Communication

Of the total 482 global publications on 'Web 2.0 and Libraries' during 2006-15, 351 appeared in 94 journals, 65 in conference papers, 32 in book series, 19 as books and 15 as trade publications. The top 19 journals together contributed 189 publications, 39.21 % of the total journal output during 2006-15. The largest number of papers (27) appeared in *Electronics Library*, followed by *Journal of Web Librarianship* (19), *Medical Reference Service Quarterly* (16), *Library High Tech News* (11), *Health Information & Libraries, Library Review, New Library World and Professional De La Informacion* (10 each), Program (8), *Internet Reference Service Quarterly* (7), *DESIDOC Journal of Library & Information Technology, Journal of Academic Librarianship, Journal of Library Administration, Science & Technology Libraries, Serials Librarian, Webology* (6 each), *Journal of Librarianship & Information Science and Technical Services Quarterly* (5 each) during 2006-15.

Table 6. Scientometric profile of top 15 most productive organisations during 2006-15

S. No.	Name of organisation	TP	TC	ACPP	HI	ICP	% ICP	RCI
1.	University of Sheffield, U.K.	6	26	4.33	2	1	16.67	0.65
2.	Universidad Carlos III de Madrid, Spain	5	15	3.00	2	0	0.00	0.45
3.	Nanyang Technological University, Singapore	5	62	12.40	5	1	20.00	1.85
4.	Alexandra Technological Education Institute of Thessalonki, Greece	5	29	5.80	4	0	0.00	0.86
5.	University of Calcutta, India	5	9	1.80	2	0	0.00	0.27
6.	Bar Ilan University, Israel	4	56	14.00	3	0	0.00	2.09
7.	Queensland University of Technology, Australia	4	14	3.50	2	2	50.00	0.52
8.	San Jose State University, USA	4	57	14.25	2	3	75.00	2.12
9.	Texas A&M University, USA	4	43	10.75	4	0	0.00	1.60
10.	University of California, Los Angles, USA	4	51	12.75	2	2	50.00	1.90
11.	University of Malaya, Malaysia	4	40	10.00	3	0	0.00	1.49
12.	Wuhan University, China	4	69	17.25	2	1	25.00	2.57
13.	Rutgers the State University of New York, USA	4	14	3.50	2	0	0.00	0.52
14.	Miami University, USA	4	6	1.50	2	0	0.00	0.22
15.	University of Punjab, Pakistan	4	61`	15.25	3	2	50.00	2.27
	Total of 15 organisations	66	491	7.44	2.66	12	18.18	
	The global total	482	3234					
	Share of top 15 organisations in global total output	13.69	15.18					

TP=Total papers; TC=Total citations; ACPP=Average citations per paper; HI=h-index; RCI=Relative citation index

5.8 Highly Cited Papers

The top 30 highly cited papers (constituting 24 articles, 4 reviews and 1 each editorial and conference paper) on 'Web 2.0 and Libraries' cumulated 20 to 475 citations each. Together these 30 papers received 1776 citations, with an average of 59.2 citations per paper. These 30 highly cited papers originated from 14 countries, the highest output (17 papers) originated from USA, followed by India (3 papers), 2 papers each from U.K., China, Malaysia and Australia and 1 each from Canada, Vietnam, Singapore, Pakistan, Egypt, Israel, Finland and Swaziland during 2006-15. Of the 30 highly cited papers, 18 were contributions by single institution each, 6 papers each were outcome from national collaboration and international collaboration.

These 30 highly cited papers involved 67 authors and 47 organisations and were published in 20 journals, including 4 papers in *Journal of Academic Librarianshi*p, 3 in *International Information & Library Review,* 2 papers each in *Library High Tech*, *Program, Library & Information Science Research and Journal of Library Administration*, and 1 paper each in *Archival Science, British Medical Journal, Computers in Libraries*, *D-Library Magazine, Health Information & Libraries Journal, IEEE Intelligent Systems, International Journal of Medical Informatics, Journal of Biomedical Informatics, Journal of the Medical Library Association, Library Trends, Medical Reference Service Quarterly, Reference Librarian,* and *Webology.*

6. SUMMARY AND CONCLUSIONS

- The global research output on 'Web 2.0 and Libraries' which cumulated to 482 publications in 10 years witnessed 14.02 % CAGR growth and their citation impact averaged to 6.71 citations per paper during 2006-15. However, the research in this field witnessed significant dip in its pace of growth to as low as -17.49 % CAGR in the second half of the study period (2007-15) after registering extremely high growth (62.37 %) during the first half of the study period (2006-10).
- USA (179 publications) published highest publications on 'Web 2.0 and Libraries'. Other top 9 countries played limited role in publication productivity as their contributions remained limited to single digits, between 1.78 % and 7.47 % of global publications share.
- In terms of quality of research, the USA dominated this field (38.53 % global citations share) followed by UK (21.18 % global citations share).
- The field of 'Web 2.0 and Libraries' intersects with several disciplines. Social science accounted for the largest share (72.61 %), followed by computer science (52.28 %), medicine (8.71 %), engineering (6.64 %), and 5 more disciplines.
- The pockets of excellence in research on 'Web 2.0 and Libraries' are scattered across select countries such as USA, UK, Spain, Germany, Malaysia, and India.
- Thirty highly cited papers were seen in the field of 'Web 2.0 and Libraries'. These originated from 14 countries,

Table 7. Scientometric profile of top 21 authors during 2006-15

S. No.	Name of author	Affiliation	TP	TC	ACPP	HI	ICP	%ICP	RCI
1.	E. Garoufallou	Alexandra Technological Education Institute of Thessalonki, Greece	5	29	5.80	4	0	0.00	0.86
2.	D.H.L. Goh	Nanyang Technological University, Singapore	5	62	12.40	1	1	20.00	1.85
3.	De Sarkar, T	University of Calcutta, India	5	9	1.80	2	0	0.00	0.27
4.	A. Abrizah	University of Malaya, Malaysia	4	40	10.00	4	0	0.00	1.49
5.	N. Aharony	Bar Ilan University, Israel	4	56	14.00	3	0	0.00	2.09
6.	A.Y.K. Chua	Nanyang Technological University, Singapore	4	62	15.50	1	0	0.00	2.31
7.	G. Alemu	University of Portsmouth, U.K.	3	12	4.00	1	0	0.00	0.60
8.	E.E. Baro	Federal University of Otuoke, Nigeria	3	9	3.00	2	0	0.00	0.45
9.	E. Connor	Military College of South Carolina, USA	3	22	7.33	1	0	0.00	1.09
10.	A. Etches-Johnson	McMasters University, Canada	3	1	0.33	1	1	33.33	0.05
11.	S. Gul	University of Kashmir, India	3	9	3.00	2	0	0.00	0.45
12.	R. Ibrahim	University Teknologi Petronas, Malaysia	3	0	0.00	0	0	0.00	0.00
13.	T. Koltay	Szent Istvan University, Hungary	3	10	3.33	2	0	0.00	0.50
14.	C.S. Lee	Nanyang Technological University, Singapore	3	0	0.00	0	1	33.33	0.00
15.	K. Mahmood	University of Punjab, Lahore, Pakistan	3	61	20.33	3	2	66.67	3.03
16.	H. Patridge	Queensland University of Technology, Australia	3	37	12.33	2	0	0.00	1.84
17.	P. Ross	University of Portsmouth, U.K.	3	12	4.00	1	0	0.00	0.60
18.	L. Si	Wuhan University, China	3	14	4.67	1	0	0.00	0.70
19.	M. Stephens	Dominican University, USA	3	19	6.33	2	1	33.33	0.94
20.	B. Stevans	University of Portsmouth, U.K.	3	12	4.00	1	0	0.00	0.60
21.	B. Yoose	Miami University, USA	3	3	1.00	1	0	0.00	0.15
		Total of 21 authors	72	479	6.65	1.67	6	8.33	
		The global total	482	3234					
		Share of top 21 authors in global total output	14.94	14.81					

TP=Total papers; TC=Total citations; ACPP=Average citations per paper; HI=h-index; RCI=Relative citation index

the highest output (17 papers) was from USA, followed by India (3 papers), 2 papers each from U.K., China, Malaysia and Australia and 1 each from Canada, Vietnam, Singapore, Pakistan, Egypt, Israel, Finland and Swaziland during 2006-15.

7. CONCLUSIONS

Geographically, research studies on 'Web 2.0 and Libraries' are highly skewed with the USA dominating this field, accounting for the bulk of the global publications share (37.14 %). Except for the USA, most other countries in the world played only peripheral role in the research studies on 'Web 2.0 and Libraries'. Slow and declining pace of research growth in 'Web 2.0 and Libraries', weak global publications share and global citations share of top 15 organisations and top 21 authors are some of the characteristics that clearly indicate that 'Web 2.0 and Libraries" is still a subject very much in its initial stage of development. But sharp dip in the pace of growth in research output raises serious concerns about the future of research in this area. Given the role that Web 2.0 tools have come to play in transforming the libraries, and to ensure that 'Web 2.0 and Libraries' remains a hot topic of research is the coming times, it is desirable and important on the part of concerned countries to take policy initiatives that seek to stimulate mainstream research in 'Web 2.0 and Libraries' and encourage collaborative research across institutions at national and international level.

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