Mapping The Landscape: A Bibliometric Analysis Of Web 2.0 Literature (2016-2020)

Shikha Patel and Dr. Shilpi Verma

Department of Library and Information Science
Babsaheb Bhimrao Ambedkar University (A Central University)
Lucknow, Uttar Pradesh. India – 226025

Abstract

A bibliometric analysis was conducted on a dataset comprising 1372 articles sourced from the Sage database, spanning the years 2016 to 2020. The primary objectives of this study were to examine the growth trends in literature, identify core journals, analyze authorship patterns, assess geographical contributions, and discern the predominant subject areas in which articles related to Web 2.0 were published. The results indicated that the year 2020 witnessed the highest number of article publications, with the most prevalent term being "social networking sites." Notably, the leading publication source was identified as New Media & Society, and the dominant subject area was found to be Communication and Media Studies. Key authors contributing significantly to this body of work included Noa Aharony, Judit Bar-Ilan, and Catherine Archer. Furthermore, a substantial proportion of the articles originated from the United States and the United Kingdom. These findings underscore the pervasive influence of Web 2.0 in contemporary living.

Keywords: Web 2.0, Social Networking Sites, Bibliometric, Wikis, Blogs, Mashups, RSS.

Introduction

O'Reilly and Dale Dougherty (1) created and popularised the term Web 2.0, which is described as;

"Web 2.0 is the business revolution in the computer industry caused by the move to the internet as platform, and any attempt to understand the rules for success on that new platform. Chief among those rules is this: Build applications that harness network effects to get better the more people to use them. (This is what I've elsewhere called "harnessing collective intelligence."(2)

(4)(5) Web 2.0 represents the second phase in the evolution of the internet, often referred to as the people-centric or participatory web, and is synonymous with the concept of the read-write web. This new generation of the web has transformed websites into collaborative, communicative, and interactive platforms. In contrast to the previous Web 1.0 era, which was characterized by static web pages and limited one-way communication through hyperlinks, Web 2.0 embraces two-way communication. This shift has made the web more dynamic, allowing users not only to read but also to actively contribute and engage with the content.

Key technologies associated with Web 2.0 include social networking sites (SNSs), blogs, wikis, social bookmarking sites, Really Simple Syndication (RSS), multimedia sharing platforms, folksonomy, social cataloging, podcasts, and mashups. These technologies collectively contribute to the interactive and engaging nature of the web, fostering a more dynamic and participatory online experience for users(3).

- **Blogs:** Websites or web pages where individuals can share their thoughts and ideas.
- **Social Networking Sites:** Online platforms that facilitate effective communication among users with shared interests.
- Wikis: Collaborative web-based tools allowing individuals to create, edit, remove, and add content to a website.
- **Really Simple Syndication (RSS):** A web feed format delivering recent and up-to-date information.
- Mashups: Integration of data from multiple sources into a single, unified tool.
- **Podcasting:** Internet-based sound recordings accessible through devices like iPods or MP3 players.
- **Social Bookmarking:** The process of users bookmarking web pages and tagging them with keywords for easy reference.

Bibliometric studies involve the statistical measurement of literature growth and trends in a particular field (6). In simple terms, bibliometrics is the study and measurement of various written communications and the publishing patterns of authors. Consequently, there have been studies conducted on the topic of Web 2.0 (7). The author, after exploring various databases, identified 1718 unique papers on Web 2.0. The evaluation spanned from the 1990s to 2008, examining the expansion of literature and significant author contributions across journals. The findings indicated that Web 2.0 has a substantial impact on diverse subject fields, extending beyond the IT industry. Moreover, it was observed that Web 2.0 plays a role in enhancing the development of social networks.. (8) The research focused on 206 articles retrieved from the Emerald database, all related to Web 2.0 in libraries. Over a five-year period, the author assessed the published articles, revealing that 2009 emerged as the most productive year. Notably, the Online Information Review journal stood out as the primary platform for articles on the subject, with a significant number of these publications authored by individuals working alone.

In a related study, (9) the investigation extended to 498 journal articles sourced from the Taylor & Francis database, specifically in the field of library and information science. The findings highlighted the 'Journal of Web Librarianship' as the leading journal, featuring the largest number of articles. Additionally, 2008 was identified as the most prolific year for article publications in this domain, with a noteworthy trend of single-authored articles prevailing.

The study (10), conducted in 2011, scrutinized 472 articles through statistical description and analysis. It involved a comprehensive content analysis of articles sourced from the Library and Information Science Abstracts (LISA) database, specifically focusing on Web 2.0 and its applications. The primary objective was to identify journals publishing content on Web 2.0 and

to discern emerging trends within the Library and Information Science (LIS) profession over the preceding three years (2006-2008). The findings of the study unveiled that the number of peer-reviewed articles on Web 2.0 was relatively low. Moreover, it was noted that three out of every two-six Web 2.0 applications journal titles concentrated specifically on library-related issues.

The research conducted in 2015 (11) delved into the application of Web 2.0 in the field of medicine. The study examined the rate of growth in literature, identifying significant journals, authors, and national contributions to this domain. A comprehensive search retrieved a total of 1347 articles from the PubMed database.

The findings highlighted a diverse range of publications, spanning those with major scientific importance. This diversity underscored a substantial interest in Web 2.0 within the biomedical community, affirming the topic's elevated significance and widespread appeal in the field. Altamini (12) conducted a lexical analysis of social software literature, aiming to explore the evolution of literature on social software and Web 2.0 technologies. The study, based on an analysis of 5356 publications, identified underrepresented tool types in the existing literature. The findings underscored the need for more scientific and academic study to investigate the real-world consequences and performance of Web 2.0 technologies, as well as the organizational challenges they present.

Objective

- 1. Assess the expansion of periodical literature and examine diverse aspects of Web 2.0 technologies.
- 2. Identify the most productive journals that extensively cover literature related to Web 2.0 technologies.
- 3. Investigate leading contributors and patterns of authorship in the field of Web 2.0 technologies.
- 4. Evaluate the global popularity and adoption of Web 2.0 technologies.
- 5. Explore the literature generated on Web 2.0 across various subject areas.

Scope

This analysis encompasses scholarly journal papers on Web 2.0 and its various technologies, sourced from 364 well-established scientific peer-reviewed publications published by Sage. The primary objective of the study is to encompass research publications within Sage journals focusing on this subject. Over the past five years, from 2016 to 2020, the study has diligently gathered significant material pertaining to this issue.

Methodology

A bibliometric study was conducted to examine the literature growth, core journals, prominent authors, and the global popularity of Web 2.0 technologies across different countries. The study is confined to the period from 2016 to 2020. Bibliographic data from papers published in the Sage database (https://journals.sagepub.com/) was collected directly using keywords such as "Web 2.0," "Microblogging," "Blogs," "Instant messaging," "Social Software," "Wikis,"

"Folksonomies," "Podcasts," "Mashups," "RSS," "Social media," "Multimedia sharing tools," and "Social networking sites."

The bibliographic details, including author names, journal titles, article titles, affiliations, subject areas, and impact factors, were systematically recorded in an MS-Excel (2016) spreadsheet. This data collection and organization serve as the basis for the comprehensive analysis aimed at fulfilling the study's objectives.

Bradford law was propounded by Samuel C. Bradford in the year 1934. The Bradford law is one of the bibliometric laws; the other two rules are Zipf's law (relates to word frequencies) and Lotka's law (relates to authors productivity) and is used extensively in the field of Library and Information Science. Bradford law of scattering states that (13)" If scientific journals are sorted based on a descending order of article productivity on a specific subject, they can be categorized into a core set of periodicals dedicated to the subject and multiple groups or zones with an equal number of articles as the nucleus. In this arrangement, the ratio of the number of periodicals in the nucleus to those in the subsequent zones follows the pattern 1: n : n²". In the study, the Bradford Law of scattering is applied to assess the journal collection on Web 2.0. This is achieved by equally distributing the journals into three zones.

Data analysis and Discussion

The information compiled from 364 journal articles was meticulously scrutinized and analyzed through MS-Excel (2016). The outcomes have been systematically tabulated and visually depicted below, along with their corresponding interpretation presented in subsequent tables and figures in a sequential manner.

Distribution of journals

Year wise distribution of Journals

Table 1

Year	No. of Articles	%	Cumulative	Rank
2016	274	19.97	274	3
2017	266	19.38	540	4
2018	279	20.34	819	2
2019	246	17.9	1065	5
2020	307	22.37	1372	1

Figure 1

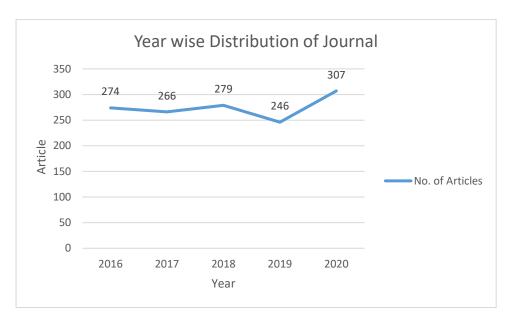


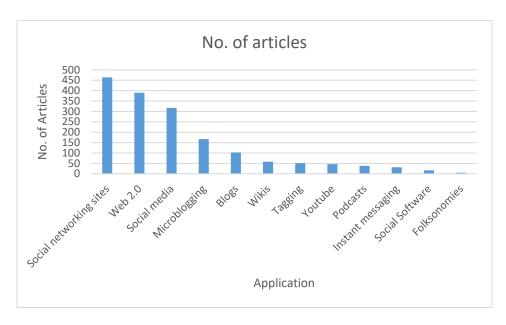
Table 1 illustrates the continuous growth of publications from 2016 to 2020 in the field of Web 2.0. The findings reveal that in 2016, there were 274 publications (19.97%), and the data suggests that 2020 was the most prolific year with 307 papers (22.375%), followed by 2018, which had 279 papers (20.34%).

Table 2 delves into the articles retrieved from searches using keywords in the Sage database. The keyword that contributed the most to the study is "social networking sites." Out of 1372 articles, 464 (33.81%) were included in the study. Following closely is the keyword "Web 2.0," which contributed 390 articles (28.42%) to the study.

Table 2 Descriptive statistics of the articles

Application	No. of articles	%
Social networking sites	464	33.81
Web 2.0	390	28.42
Social media	317	23.1
Microblogging	167	12.17
Blogs	103	7.5
Wikis	58	4.2
Tagging	51	3.7
Youtube	47	3.4
Podcasts	38	2.7
Instant messaging	31	2.25
Social Software	17	1.23
Folksonomies	5	0.36

Figure 2



Journals

Application of Bradford law

To identify core journals and assess the number of journals featuring articles related to Web 2.0, Bradford's Law was applied. The publication frequency-ranked journals were divided into three equal groups. These include Zone 1, classified as core journals, comprising 10 journals; Zone 2, identified as middle journals, consisting of 51 journals; and Zone 3, denoted as last journals, encompassing 303 journals. Each zone contains approximately an equal number of papers, as outlined in Table 3.**Table 3**

Zonal distribution of articles

	No. of		
Zones	Journal	No. of Articles	Cumulative
Core			
Journals	10	449	449
Middle	51	456	905
Last	303	467	1372
Total	364	1372	

(14) Bradford's multiplier factor is calculated by dividing the number of topic headings in a zone by the number in the preceding zone, representing the ratio of topic headings between two groups. In this case, the mean value of Bradford's multiplier is calculated as follows:

As a result, Bradford's multiplier has a mean value of;

$$=(51/10)+(303/51)\div2$$

$$\frac{\left[\left(51/_{10} \right) + \left(303/_{51} \right) \right]}{^{2}}$$

= 5.51

As a result of applying this multiplier to the zones, the Bradford formula emerges as;

- 1:n:n²
- $10:10 \times 5.51:10 \times 5.51 \times 5.51$
- 10:55.1:303.60

The calculation done above is almost matching to the result that is 10:51:303 as shown in Table 3

Table 4 presents a list of 173 (out of 364) journals that published two or more articles between 2016 and 2020, including their impact factors, subject domains, and assigned zones.

The journal "New Media & Society," a worldwide and multidisciplinary journal analyzing the social dynamics of media and information transformation, stands out as the leading journal in Table 4. It published 128 articles and boasts an impact factor of 8.8. The impact factor, introduced by Eugene Garfield, assesses a journal's performance based on the frequency of citations its articles receive (15). The next four top journals are "Social Media + Society," "Social Science Computer Review," "Convergence: The International Journal of Research into New Media Technologies," and "Journal of Information Science." Two of them are in the communication and media studies domain, one in sociology, and the fourth in information science.

Table 4 List of Journals

No.			Zones
of	Subject Domain	Metrix	
paper			
128	Communication &	8.8	
120	Media Studies	0.0	
118	Communication &	5	
110	Media Studies	3	
30	Sociology	6.7	
39	Sociology	0.7	
27	Communication &	2.1	
21	Media Studies	3.1	
26	Information	5	
20	Science	5	Core
24	Education	3.4	Corc
24	Education		(zone1)
24	Communication &	2.6	
24	Media Studies	3.0	
22	Information	2.6	
23	Science	2.6	
	of	of paper 128	of paperSubject DomainMetrix128Communication & Media Studies8.8118Communication & Media Studies539Sociology6.727Communication & Media Studies3.126Information Science524Education3.424Communication & Media Studies3.623Information Media Studies2.6

		Communication &		
Journalism	20	Media Studies	4.1	
DIGITAL HEALTH	20	Health Science	0.4	
Information Development		Information		Middle
	19	Science	3.5	(zone2)
g 0	10	Communication &	1.5	
Sage Open	19	Media Studies	1.5	
Media International	18	Communication &	1.4	
Australia	10	Media Studies	1.4	
E-Learning and Digital	17	Education	1.8	
Media	1 /	Education	1.0	
Television & New Media	17	Communication &	2.7	
	1'	Media Studies		
European Journal of	14	Communication &	4.3	
Communication	1.	Media Studies		
Journalism & Mass	14	Communication &	4.2	
Communication Quarterly	1 '	Media Studies	1.2	
Journal of Creative	13	Communication &	0.9	
Communications	13	Media Studies	0.7	
Communication & Sport	13	Communication &	2.8	
		Media Studies	2.0	
Communication and the	13	Communication &	1.4	
Public	10	Media Studies	1	
Journal of Educational	13	Education	N.A	
Technology Systems				
International Journal of		Engineering &		
Distributed Sensor	12	Computing	3	
Networks			10.5	
Big Data & Society	11	Sociology	10.2	
Journal of Health	11	Psychology &	4.9	
Psychology		Counselling		
Journal of Information	11	Information	9.8	
Technology		Science		
Public Understanding of	11	Communication &	5.7	
Science		Media Studies		
International Journal of	10	Management &		
Business Communication	10	Organization	3.3	
A		Studies		
American Behavioral	10	Psychology &	3.2	
Scientist		Counselling		
Electronic News	10	Communication &	N.A	
		Media Studies		

Mobile Media &		Communication &		
	9		4.9	
Communication		Media Studies		
Qualitative Inquiry	9	Research methods and evaluation	2	
International Communication Gazette	8	Communication & Media Studies	2.2	
Journal of Travel Research	8	Marketing & Tourism	10.9	
Communication Research	8	Communication & Media Studies	7.4	
Health Informatics Journal	8	Health Science	3.6	
Journal of Marketing	8	Marketing & Tourism	15.1	
Newspaper Research Journal	8	Communication & Media Studies	0.7	
Science Comunication	8	Communication & Media Studies	4	
International Journal of Cultural Studies	7	Cultural Studies	2.1	
Memory Studies	7	Communication & Media Studies	3.5	
European Journal of Cultural Studies	7	Communication & Media Studies	2.1	
Journal of Hospitality & Tourism Research	7	Marketing & Tourism	3.816	
Psychological Reports	7	Psychology & Counselling	1.9	
Global Business Review	6	Management & Organization Studies	1.7	
Global Media and China	6	Communication & Media Studies	N.A	
Journal of Consumer Culture	6	Cultural Studies	4.5	
Journal of Vacation Marketing	6	Management & Organization Studies	3.4	
Journalism & Mass Communication Educator	6	Communication & Media Studies	1.2	
Business and Professional Communication Quarterly	5	Communication & Media Studies	2	

Feminism & Psychology	5	Psychology &	3.4	
Temmism & Tsychology	3	Counselling	3.1	
Health Promotion Practice	5	Health Science	1.8	
Journal of Creating Value	5	Communication & Media Studies	N.A	
Proceedings of the Human				
Factors and Ergonomics	5	Social Science	0.9	
Society Annual Meeting				
Sociological Research Online	5	Sociology		
Teaching Sociology	5	Sociology	1.9	
Transportation Research	5	Urban Studies and	1.8	
Record	3	Planning	1.0	
Youth & Society	5	Sociology	4.2	
Journal of Family Nursing	4	Health Science	2.8	
Business Information	4	Management &	1.4	
Review	4	Organization	1.4	
D:		Studies		
Discourse &	4	Communication &	2	
Communication		Media Studies		
FIIB Business Review	4	Management & Organization	N.A	
TID Business Review	-	Studies	11.7	
Global Media and		Communication &		Last
Communication	4	Media Studies	1.1	(zone
		Information		3)
IFLA Journal	4	Science	2.2	
International Journal of		Research methods		
Qualitative Methods	4	and evaluation	2.7	
Journal of Adolescent		Psychology &		
Research	4	Counselling	3.7	
Journal of	1	Communication &	0.0	
Communication Inquiry	4	Media Studies	0.9	
Journal of Empirical		Dagagash		
Research on Human	4	Research methods	2.2	
Research Ethics		and evaluation		
OMEGA - Journal of	4	Psychology &	2.1	
Death and Dying	<u> </u>	Counselling	۷.1	
		Management &		
Organization Studies	4	Organization	6.4	
		Studies		

Psychology of Women		Psychology &	
Quarterly	4	Counselling	6.1
Quarterry		Political &	
Research & Politics	4	International	2.7
Research & Folitics	4	Relations	2.7
0 1 1 1 1 1			
Social Psychological and	4	Psychology &	6.8
Personality Science		Counselling	
Theory, Culture & Society	4	Sociology	4.1
Tourist Studies	4	Sociology	2.2
International Journal of	3	Economics &	1.2
Market Research	3	Development	1.2
Active Learning in Higher	2	Edward's a	F 4
Education	3	Education	5.4
Advances in Mechanical	3	Engineering &	2.1
Engineering	3	Computing	2.1
The American Review of		Public	
Public Administration	3	Administration	4
The American Surgeon	3	Health Science	1
Asia Pacific Media			
Educator	3	Education	0.6
G', 0 G ',	3	Urban Studies and	1.7
City & Community		Planning	1.7
Colore Media Colores	2	Criminology &	2.5
Crime, Media, Culture	3	Criminal Justice	3.5
Emerging Adulthood	3	Sociology	2.9
French Cultural Studies	3	Cultural Studies	0.3
International Journal of	2	Psychology &	2.5
Social Psychiatry	3	Counselling	2.5
Journal of Cases in	2	Edward'	NI A
Educational Leadership	3	Education	N.A
Journal of Histochemistry	3	Hoolth Coinne	2.0
& Cytochemistry	3	Health Science	3.9
Journal of Interpersonal	2	Psychology &	4.1
Violence	3	Counselling	4.1
Journal of Special	2		1.0
Education Technology	3	Education	1.9
Management	2	Communication &	2.5
Communication Quarterly	3	Media Studies	2.5
		Political &	
Media, War & Conflict	3	International	1.6
Wedia, war & Commet		Relations	
Men and Masculinities	3	Gender studies	2.8
	1	Solidor Studios	

N	1	1	
Nonprofit and Voluntary Sector Quarterly	3	Social Science	3.6
Proceedings of the Institution of Mechanical Engineers, Part B: Journal of Engineering Manufacture	3	Engineering & Computing	4
Public Relations Inquiry	3	Language & linguistic	1.9
Qualitative Research	3	Research methods and evaluation	
Qualitative Social Work	3	Social Science	2
Research in Comparative and International Education	3	Education	1.5
Teacher Education and Special Education	3	Education	2.8
Vision	3	Management & Organization Studies	0.8
YOUNG	3	Sociology	1.5
AlterNative: An International Journal of Indigenous Peoples	2	Cultural Studies	1.3
American Journal of Men's Health	2	Health Science	2.6
Clinical Pediatrics	2	Health Science	1.7
Contemporary Drug Problems	2	Law	3
Critical Sociology	2	Sociology	2.6
Culture & Psychology	2	Psychology & Counselling	2.7
Discourse Studies	2	Language & linguistic	2.8
East European Politics and Societies	2	Political & International Relations	1.2
Educational Policy	2	Education	4
Emerging Economy Studies	2	Economics & Development	N.A
Environment and Planning B: Urban	2	Urban Studies and Planning	N.A

Analytics and City				
Science				
Ethnography	2	Cultural Studies	1.7	
Lumography	4	Anthropology &	1./	
Field Methods	2	Antinopology & Archeology	3.2	
Games and Culture	2	Cultural Studies	3.5	
	2	Cultural Studies	N.A	
General Music Today		Education		
Gifted Child Today	2	Education	0.3	
Health	2	Health Science	3.6	
Health Education &	2	Health Science	2.8	
Behavior		0 10	7.1	
Human Relations	2	Social Science	7.1	
Index on Censorship	2	History	0.1	
Indian Journal of	2	Psychology &	1.6	
Psychological Medicine		Counselling		
InnovAiT	2		N.A	
International Journal of		Management &		
Engineering Business	2	Organization	1.9	
Management		Studies		
International Journal of	2	Music	0.9	
Music Education	<u> </u>		1.7	
International Journal of		Political &		
Police Science &	2	International		
Management		Relations		
Journal of Advertising	2	Education	0.2	
Education				
Journal of Business and	2	Communication &	2.8	
Technical Communication		Media Studies		
Journal of Cutaneous	2	Health Science	2.4	
Medicine and Surgery				
Journal of Diabetes	2	Health Science	5.4	
Science and Technology		200000		
The Journal of Early	2	Sociology	3.5	
Adolescence	<u> </u>	2 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3		
Journal of Human	2	Health Science	3.8	
Lactation	-			
Journal of Industrial		Management &		
Relations	2	Organization	0.1	
		Studies		
Journal of Language and	2	Language &	2.5	
Social Psychology	<u> </u>	linguistic		

1 (37 1		1		
Journal of Marketing Education	2	Education	3.5	
Journal of Marketing		Economics &		
Research	2	Development	8.9	
Journal of Pastoral Care &	2	1	0.2	
Counseling	2	Health Science	0.3	
Journal of Research in	2	E1	1.2	
International Education	2	Education	1.3	
Journal of School	2	Education	N.A	
Leadership	2	Education	N.A	
The Journal of School	2	Health Science	2.9	
Nursing	2	Ticattii Sciciice	2.7	
Journal of Service	2	Sociology	9.3	
Research				
Journal of Sociology	2	Sociology	2.2	
Journal of Telemedicine and Telecare	2	Health Science	4.9	
Language and Literature	2	Language & linguistic	1.4	
Management Teaching Review	2	Education	N.A	
Marketing Theory	2	Marketing & Tourism	5.5	
Nursing Science Quarterly	2	Health Science	0.9	
Organization	2	Management & Organization Studies	4.6	
		Management &		
Paradigm	2	Organization	N.A	
		Studies		
Pedagogy in Health	2	Health Science		
Promotion				
Personality and Social	2	Psychology &	5.2	
Psychology Bulletin		Counselling		
Perspectives on	2	Psychology &	14.7	
Psychological Science	2	Counselling Health Science	2.2	
Phlebology Reliev Insights from the	2	Health Science	3.3	
Policy Insights from the Behavioral and Brain		Public	20	
Sciences	2	Administration	2.9	
Probation Journal	2	Law	2.2	
1 Todation Journal		Law	4.4	

	1	1	
Professional School	2	Psychology &	N.A
Counseling		Counselling	11.71
Psychology Learning &	2	Education	1.3
Teaching	2	Education	1.5
Qualitative Health	2	Haalth Caianaa	5.2
Research	2	Health Science	5.3
Research Ethics	2	Philisophy	1.8
Review & Expositor	2	N.A	N.A
Sexualities	2	Anthropology & Archeology	1.9
SLAS DISCOVERY:			
Advancing the Science of	2	Health Science	N.A
Drug Discovery			
SLAS TECHNOLOGY:			
Translating Life Sciences	2	Health Science	N.A
Innovation			
Social Science	2	Social Science	1.3
Information	2	Social Science	1.3
Sociological Perspectives	2	Sociology	1.9
Sociology	2	Sociology	5.4
Space and Culture	2	Cultural Studies	1.4
Textile Research Journal	2	Engineering & Computing	2.6
Theoretical Criminology	2	Law	4
Tourism and Hospitality	2	Marketing &	3.3
Research		Tourism	3.3
Visual Communication	2	Communication &	1.4
v isuai Communication		Media Studies	1.7
Written Communication	2	Communication &	2.7
	_	Media Studies	

In the course of the study, it was discovered that among the 364 journals examined, 191 journals exclusively published one article, 71 journals published only two articles, and 27 journals presented three articles over the past five years (2016–2020).

The subject domain list illustrates the distribution of literature on Web 2.0 across various subject areas, including communication and media studies, health science, sociology, information science, etc. Table 5 displays the subject domains and the corresponding frequency of articles published in each area.

According to Table 5, the predominant subject category with the highest number of articles is communication and media studies, accounting for 557 articles (42.70%). The top four subjects

include Health Science with 130 articles (9.90%), Sociology with 107 articles (8.20%), Education with 104 articles (7.90%), and Information Science with 83 articles (6.30%). This highlights the diverse role of Web 2.0 across various subject areas, demonstrating its significance beyond the confines of the IT industry. The subject categorization aligns with the Sage database's subject division.

Table 5 Subject domain

Subject	Frequency	%
Communication & Media Studies	557	42.70%
Health Science	130	9.90%
Sociology	107	8.20%
Education	104	7.90%
Information Science	83	6.30%
Psychology & Counselling	78	5.90%
Management & Organization		
Studies	47	3.60%
Marketing & Tourism	32	2.40%
Engineering & Computing	27	2%
Cultural Studies	24	1.80%
Research methods and evaluation	21	1.65%
Social Science	16	1.20%
Law	15	1.15%
Urban Studies and Planning	13	0.99%
Political & International Relations	11	0.84%
Language & linguistic	9	0.69%
Economics & Development	7	0.53%
Music	6	0.46%
Public Administration	5	0.38%
Anthropology & Archeology	4	0.30%
Criminology & Criminal Justice	3	0.23%
Gender studies	3	0.23%

Top Contributors

Table 6 presents a list of authors who have contributed more than two articles in the last five years (2016–2020) on the subject of Web 2.0. The table includes details on their affiliations and the frequency of their article contributions. In total, 86 authors, encompassing all contributors to the articles, have published two or more papers. Notably, Noa Aharony, Judit Bar-Ilan, and Catherine Archer have recorded the highest number of articles, each contributing four. The majority of authors, numbering 71, have published two articles, while 11 authors have contributed three articles.

Table 6 Leading Contributors

	No. of	
Author	articles	Affiliation
Noa Aharony	4	Bar-Ilan University, Israel
Judit Bar-Ilan	4	Bar-Ilan University, Israel
Catherine Archer	4	Murdoch University, Australia
		Department of Communication and
		Media Research, University of Zurich,
		Andreasstrasse 16, CH-8060 Zurich,
Moritz Büchi	3	Switzerland
Anatoliy Gruzd	3	Ryerson University, Canada
Frederic Guerrero-Solé1	3	Ryerson University, Canada
William Housley	3	Cardiff University, UK
Helena Webb	3	Oxford University, UK
Adam Edwards	3	Cardiff University, UK
Rob Procter	3	University of Warwick, UK
Marina Jirotka	3	Oxford University, UK
		University of Virginia, Charlottesville,
Michael J. Kennedy	3	USA
		Hong Kong Baptist University, Hong
Yunya Song	3	Kong
		Amity Business School, Noida, Uttar
Ravneet Singh Bhandari	2	Pradesh, India.
		Jaipuria Institute of Management, Noida,
Ajay Bansal	2	Uttar Pradesh, India.
		Georgetown University, Washington,
Leticia Bode	2	DC, USA
		University of Arkansas, Fayetteville, AR,
Brandon C. Bouchillon	2	USA
Natascha Just	2	University of Zurich, Switzerland
Michael Latzer	2	University of Zurich, Switzerland
Bronwyn Carlson	2	Macquarie University, Australia
		Queensland University of Technology,
Stuart Cunningham	2	Australia
David Craig	2	University of Southern California, USA
G:		School of Rehabilitation Sciences,
Gino De Angelis	2	University of Ottawa, Canada
		School of Epidemiology, Public Health
Coorse A W-11		and Preventive Medicine, University of
George A Wells	2	Ottawa, Canada
Darhara Davias		School of Nursing, University of Ottawa,
Barbara Davies	2	Canada

		School of Rehabilitation Sciences,	
Judy King	2	University of Ottawa, Canada	
		School of Rehabilitation Sciences,	
Lucie Brosseau	2	University of Ottawa, Canada	
		Faculty of Educational Science,	
Amandeep Dhir	3	University of Helsinki, Finland	
		Optentia Research Focus Area, North-	
		West University, Vanderbijlpark, South	
Puneet Kaur	2	Africa	
		Department of Industrial Engineering and	
		Management, Aalto University, Espoo,	
Risto Rajala	2	Finland	
Brooke Erin Duffy	2	Cornell University, USA	
		Queensland University of Technology,	
Stefanie Duguay	2	Australia	
Nigel G. Fielding	2	University of Surrey, Guildford, UK	
		Communication Studies, Loyola	
		Marymount University, Los Angeles,	
Christopher J. Finlay	2	CA, USA	
		Sun Yat-sen University, Guangzhou,	
Chunmei Gan	2	China.	
		Department of Family, Community and	
		Preventive Medicine, Drexel University	
Florence Gelo	2	College of Medicine, USA	
		School of Communications, Dublin City	
Debbie Ging	2	University, Glasnevin, Dublin, Ireland	
		The University of Jordan, Amman,	
Faten Hamad	2	Jordan	
N. 1 1		The University of Jordan, Amman,	
Maha Al-Fadel	2	Jordan	
Eileen Le Han	2	Michigan State University, USA	
Yasmin Ibrahim	2	University of London, UK	
Klaus Bruhn Jensen	2	University of Copenhagen, Denmark	
		University of Virginia, Charlottesville,	
Hannah Morris Mathews	2	USA	
IV (D. A.I.		University of Virginia, Charlottesville,	
Kat D. Alves	2	USA	
Anders Olof Larsson	2	University of Oslo, Norway	
		The Chinese University of Hong Kong,	
Francis L.F. Lee	2	Hong Kong	
Shannon C McGregor	2	The University of Utah, USA	
D' M'		University of Auckland, Auckland, New	
Bing Mei	2	Zealand	

Gavin T. L. Brown1	2	Henan University, Kaifeng, China	
Linjuan Rita Men	2	University of Florida, Gainesville, USA	
Maria Eugenia		Universidad de Con Andrée Arcentina	
Mitchelstein	2	Universidad de San Andrés, Argentina	
Pablo J Boczkowski	2	Northwestern University, USA	
		TEMA, Linköping University,	
David Moats1	2	Linköping, Sweden	
Sirous Panahi	2	Iran University of Medical Sciences, Iran	
		Queensland University of Technology,	
Jason Watson,	2	Australia	
		Queensland University of Technology,	
Helen Partridge	2	Australia	
		Dyson College of Arts and Sciences,	
Mirjana Pantic1	2	Pace University, Pleasantville, NY, USA	
Desmond U Patton	2	Columbia University, USA	
Patrick Leonard	2	Columbia University, USA	
Rosemary Pennington	2	Miami University, Oxford, USA	
Joel Rasmussen	2	Örebro University, Sweden	
		Department of Sociology, McMaster	
Casey Scheibling	2	University, Hamilton, Ontario, Canada	
		Research Scholar, Department of	
		Commerce, Guru Nanak Dev University,	
Seerat Sohal	2	Amritsar, Punjab, India	
		Research Scholar, Department of	
		Commerce, Guru Nanak Dev University,	
Harsandaldeep Kaur	2	Amritsar, Punjab, India	
		University of Maryland, College Park,	
Catherine Knight Steele	2	MD, USA	
		University of Groningen, The	
Michael Stevenson	2	Netherlands	
Sven Stollfuß	2	University of Leipzig, Leipzig, Germany	
		Wayne State University, Detroit, MI,	
Elizabeth Stoycheff	2	USA	
Leona Yi-Fan Su	2	The University of Utah, USA	
Marika Tiggemann	2	Flinders University, Australia	
		The University of Hong Kong, Hong	
Tommy Tse	2	Kong	
		Department of Business Administration,	
Arunima Kambikanon		Mangalore University, Mangalagangotri,	
Valacherry	2	Mangalore, Karnataka, India.	
		Formerly with the Department of	
Pakkeerappagari		Business Administration, Mangalore	
Pakkeerappa	2		

		University, Mangalagangotri, Mangalore,	
		Karnataka, India.	
Alaidas Valasauaz	2	The University of Kansas, USA	
Alcides Velasquez			
		Kwantlen Polytechnic University,	
Katie Warfield	2	Canada	
Sara K. Yeo	2	The University of Utah, USA	
		University of California Los Angeles,	
Gary Yeritsian	2	USA	
		College of Computer and Information	
		Engineering, Inner Mongolia Agricultural	
Liqian Zhang	2	University, Hohhot, China	
Elizabeth Dubois	2	University of Ottawa, Canada	
Ysabel Gerrard	2	The University of Sheffield, UK	
Jeff Hemsley,	2	Syracuse University, USA	
Rebecca D. Kelly	2	Syracuse University, USA	
Jill E. Hopke	2	DePaul University, USA	
Christine McCauley		Connecticut Children's Medical Center,	
Ohannessian	2	Hartford, USA	
		University of Connecticut, Farmington,	
Anna Vannucci	2	USA	
Katy E. Pearce	2	University of Washington, USA	

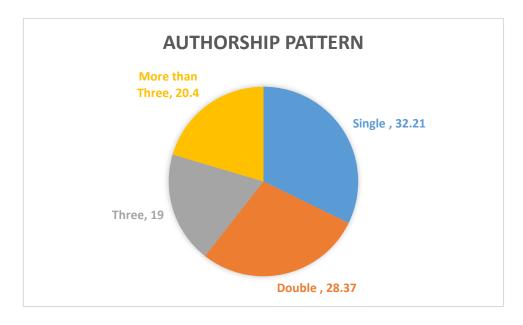
Authorship pattern

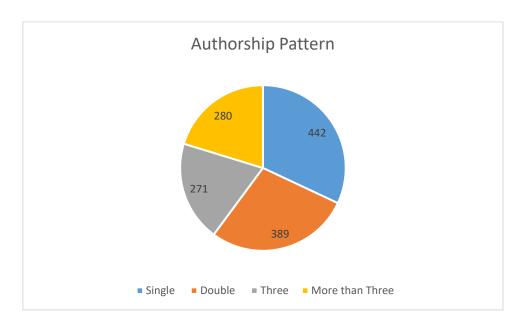
In assessing the authorship pattern, the study revealed that a predominant share of papers emerged with a single author, totaling 442 publications (32.32%). Subsequently, there were 389 articles (28%) authored by two individuals, while papers involving more than three authors amounted to 280 (20.4%). The least number of articles, specifically 271 (19%), were collaboratively authored by three individuals.

Table 7 Authorship pattern

	No. of	
Author	Paper	%
Single	442	32.21
Double	389	28.37
Three	271	19
More than Three	280	20.4
	1372	

Figure 3





Authors' Geographical Distribution

The identification of the country of origin for 110 out of the 1382 articles (8%) proved unattainable. This was attributed to the absence of author affiliation claims and location details in the papers. Consequently, 1282 articles were available for the country contribution analysis to gauge the global popularity of the topic. The study considered the geographical region of the first author and the place of publication. Table 8 outlines the countries and their respective article counts. The United States emerges as the leading contributor, accounting for the majority of papers at 404 (32%), followed by the United Kingdom with the second-highest contribution of 142 articles (11.28%). Australia secured the third-highest contribution with 88 articles (8.9%).

Table 8Country contribution

	No. of	%
Country	Articles	70
United States	404	32
United Kingdom	142	11.28
Australia	88	8.9
China	88	8.38
Germany	48	3.82
Canada	48	3.88
Canada	38	2.9
India	38	2.8
The Netherlands	31	2.48
Spain	24	1.9
Sweden	21	1.8
Italy	19	1.8
Israel	18	1.34
Sweden	18	1.34
Turkey	18	1.28
Hong Kong	14	1.1
Finland	13	1
Norway	13	1
Singapore	13	1
New Zealand	12	0.98
Belgium	12	0.98
South Korea	12	0.98
Iran	11	0.88
Denmark	9	0.81
Austria	8	0.83
Malaysia	8	0.83
England	8	0.83
Switzerland	8	0.8
Switzerland	8	0.8
South Africa	8	0.8
England	8	0.8
Taiwan	8	0.8
Portugal	8	0.8
France	8	0.48
Ireland	8	0.48
Argentina	8	0.39
Nigeria	8	0.39
UAE	8	0.39
UAE	0	0.39

Pakistan	4	0.31
Saudi Arabia	4	0.31
Japan	4	0.31
Jordan	3	0.23
Czech Republic	3	0.23
Kuwait	2	0.18
Virginia	2	0.18
Ohio	2	0.18
Malawi	2	0.18
Greece	2	0.18
Poland	2	0.18
Estonia	2	0.18
Hungary	2	0.18
Malta	2	0.18
Philippines	2	0.18
Kenya	1	0.089
Morocco	1	0.089
Namibia	1	0.089
Thailand	1	0.089
Ecuador	1	0.089
Zimbabwe	1	0.089
Kazakhstan	1	0.089
Macedonia	1	0.089
Croatia	1	0.089
Macao	1	0.089

Findings

The study yields several significant findings:

- The year 2020 stands out with the highest number of contributions, presenting 302 articles (22.38%) on the subject of Web 2.0. Following closely is 2018, recording 289 articles (20.34).
- Descriptive statistics highlight the prominence of "social networking sites" and "Web 2.0," retrieving 484 articles (33.81%) and 390 articles (28.42%), respectively.
- The top 10 journals identified in the study serve as core sources of publication.
- Communication and media studies emerge as the leading subject, hosting the highest number of published articles.
- Key authors identified in the study include Noa Aharony, Judit Bar-Ilan, and Catherine Archer, each contributing four articles over the past five years (2016-2020).
- The authorship pattern analysis reveals that single-authored articles dominate, with 442 articles (32.21%), followed by double-authored articles at 389 (28.38%).

• The study also unveils the leading contributors on a country level, with the United States and the United Kingdom contributing a substantial number of articles.

Conclusion

In conclusion, the study provides insightful findings on the landscape of Web 2.0 literature. The year 2020 and 2018 emerge as standout periods with the highest publication activity. The prevalence of terms like "social networking sites" and "Web 2.0" underscores their significance in the research domain. Core journals play a pivotal role as primary sources of publication, and communication and media studies stand out as the dominant subject area.

Noteworthy authors such as Noa Aharony, Judit Bar-Ilan, and Catherine Archer have made substantial contributions. The prevalence of single-authored articles signifies a notable trend in authorship patterns. Furthermore, the significant contributions from the United States and the United Kingdom highlight the global impact and interest in Web 2.0 research.

These findings collectively contribute to a comprehensive understanding of the trends, contributors, and dynamics within the realm of Web 2.0 literature over the past five years.

References

- 1. O'Reilly T. What is Web 2.0?: Design patterns and business models for the next generation of software. Soc Media Read. 2012;32–52.
- 2. Needleman M. Web 2.0/Lib 2.0-What Is It? (If It's Anything at All). Ser Rev. 2007;33(3):202-3.
- 3. Singh M. Adoption of Web 2.0 tools in higher education in India: a study. Glob Knowledge, Mem Commun. 2018;67(4–5):297–315.
- 4. Murugesan S. Second Generation Web Technology. IEEE Comput Soc. 2007;(August):34–41.
- 5. Wikis B& W 2. . T. Wikis, Blogs What is Web 2. 0 technology? Podcasting. 2008;1–5.
- 6. Potter WG. Introduction to library trends. Libr Trends [Internet]. 1981;30(1):5–8. Available from: https://www.ideals.illinois.edu/bitstream/handle/2142/7179/librarytrendsv30i1c_opt.pd f?sequence=1&isAllowed=y
- 7. Chu H, Xu C. Web 2.0 and its dimensions in the scholarly world. Scientometrics. 2009;80(3):717–29.
- 8. Singh KP, Gill MS. Web 2.0 technologies in libraries: A survey of periodical literature published by Emerald. Libr Rev. 2013;62(3):177–98.
- 9. Singh M. Literature Published on Web 2.0 Technologies in Libraries: A Bibliometric Study. Collnet J Sci Inf Manag. 2015;9(2):251–62.
- 10. Aharony N. Web 2.0 in the professional LIS literature: An exploratory analysis. J

Librariansh Inf Sci. 2011;43(1):3–13.

- 11. Boudry C. Web 2.0 applications in medicine: trends and topics in the literature. Med 20 [Internet]. 2015 Apr 1;4(1):e2–e2. Available from: https://pubmed.ncbi.nlm.nih.gov/25842175
- 12. ALTAMIMI L. A Lexical Analysis of Social Software Literature. Inform Econ. 2013;17(1/2013):14–26.
- 13. Stephens M, Collins M. Web 2.0, library 2.0, and the hyperlinked library. Ser Rev. 2007;33(4):253–6.
- 14. Sudhier KG. Application of Bradford's Law of Scattering to the Physics Literature: A Study of Doctoral Theses Citations at the Indian Institute of Science. DESIDOC J Libr Inf Technol. 2010;30(2):3–14.
- 15. Saha S, Saint S, Christakis DA. Impact factor: a valid measure of journal quality? J Med Libr Assoc [Internet]. 2003 Jan;91(1):42–6. Available from: https://pubmed.ncbi.nlm.nih.gov/12572533