

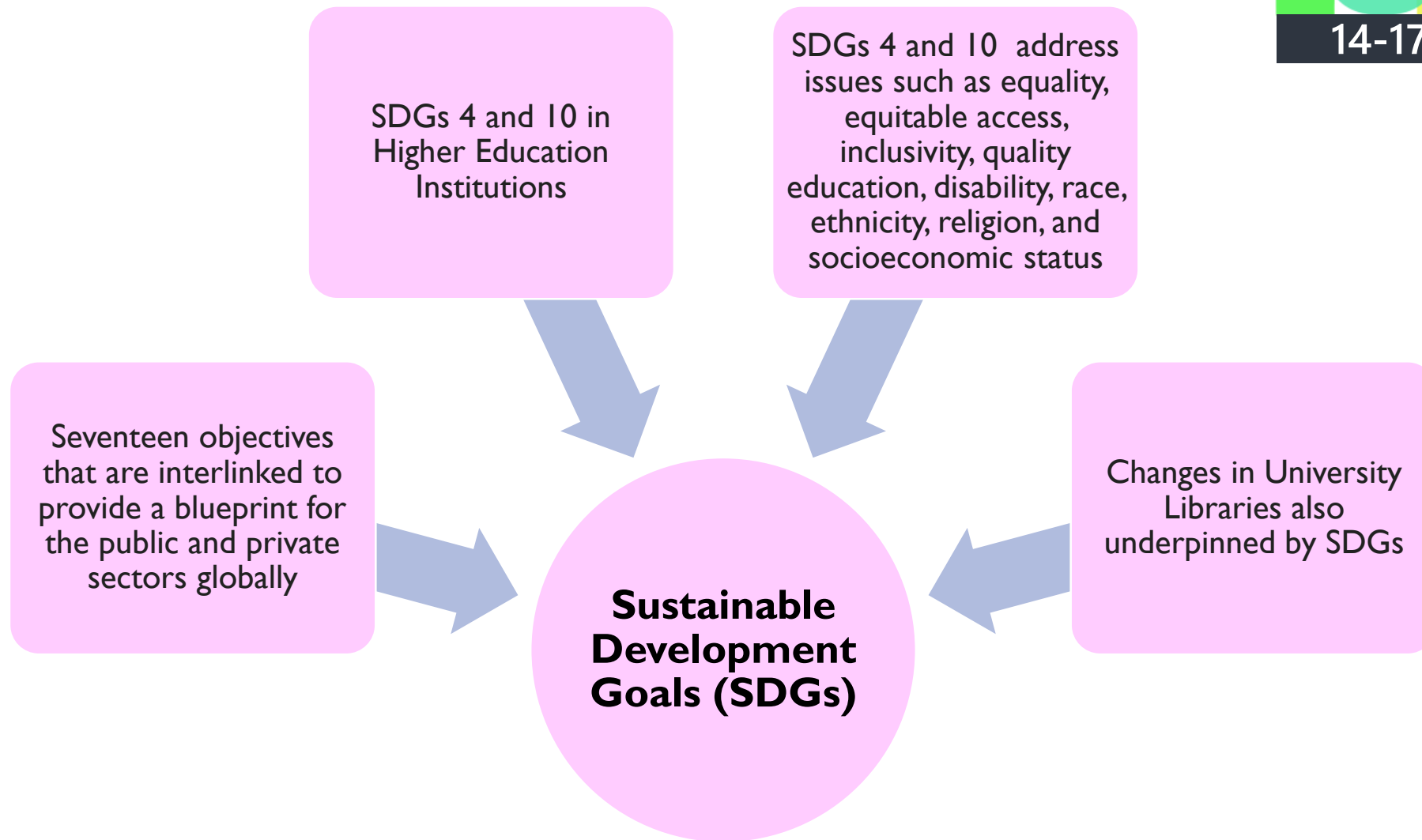


Emerging Technologies and Higher Education Libraries: a bibliometric analysis of the global literature

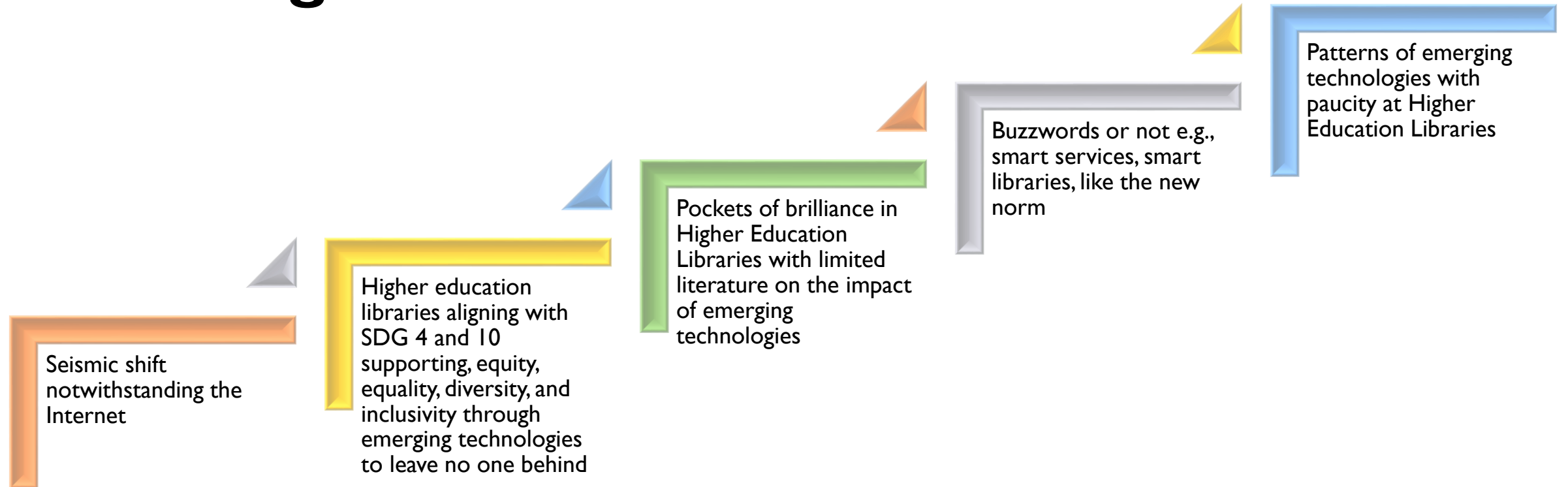
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Higher Education Libraries and Emerging Technologies



Bibliometric Analysis

- Provides scientific direction and productivity trends related to a specific topic that is currently emerging in a specific field
- Bibliometrics are rigorously applied methods that analyze large amounts of scientific data
- Findings from scientific mapping and performance analysis as the primary techniques for emerging technologies in Higher Education Libraries
- Smart libraries, data mining, AI, robotics, virtual reality, machine learning, data analytics, assistive technologies, research data management, digital preservation, Internet of Things, and others are being probed in the extant literature vis-à-vis higher education libraries and emerging technologies

Research Questions

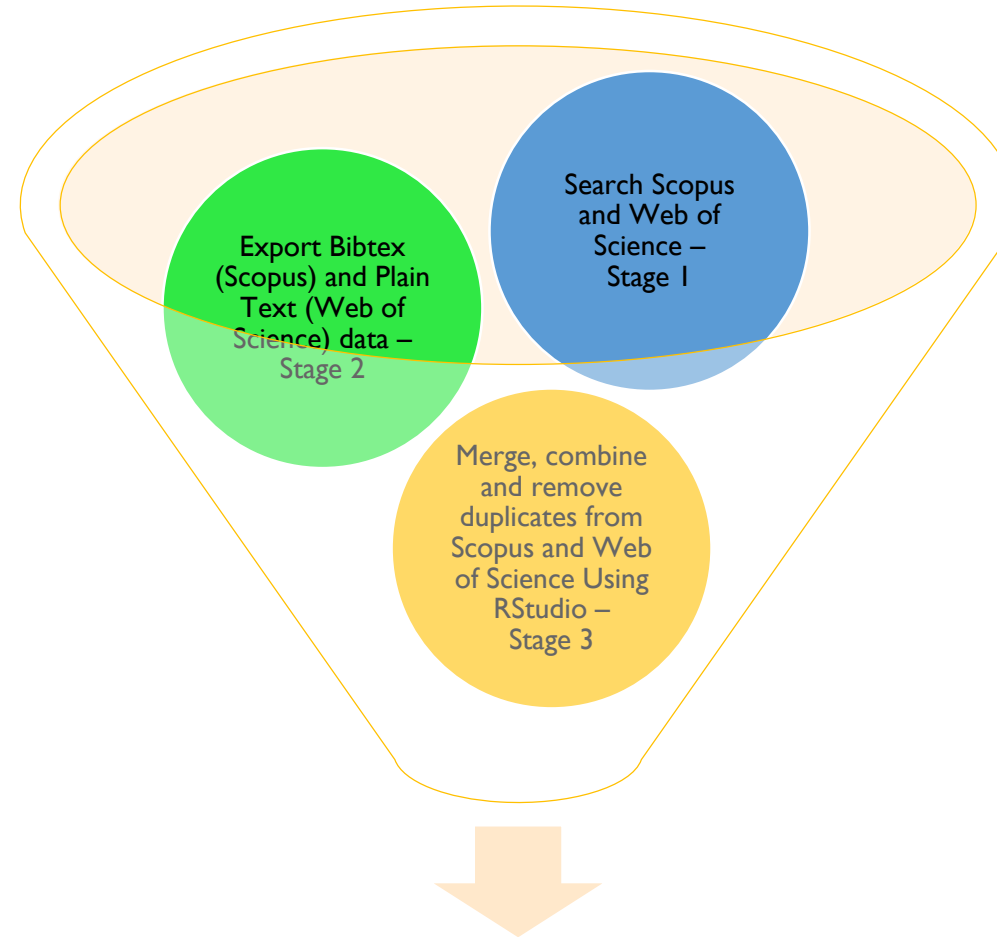
- What are the global research trends related to emerging technology and higher education libraries between 1994 and 2024?
- Which are the leading journals that have actively contributed to emerging technology research in higher education libraries?
- Who are the leading authors', and which are the countries that have actively contributed to emerging technology research in higher education libraries?
- Which are the most cited articles that contribute to the body of knowledge in emerging technology research and higher education libraries?

Search Strategy

“3D printing” OR 4IR OR “4th industrial revolution” OR “adaptive spaces” OR AI OR “artificial intelligence” OR “assistive technolog*” OR “augmented reality” OR automation OR “big data” OR “biometric authentication” OR chatbots OR chatgpt OR “cloud computing” OR “collaborative learning” OR “collaborative space*” OR “collaborative technolog*” OR “computing technology” OR “data analytics” OR “data mining” OR “data science” OR “deep learning” OR “digital archiving” OR “digital literac*” OR “digital preservation” OR “digital resources” OR “electronic tags” OR “emerging technolog*” OR “facial recognition” OR “fingerprint recognition” OR “futuristic technolog*” OR gaming OR “generative artificial intelligence” OR “innovative technolog*” OR repositior* OR “integrated library system*” OR “Internet of things” OR IOT OR “iris recognition” OR “Learning commons” OR “learning spaces” OR “machine learning” OR makerspace OR “meta literac*” OR “mobile app*” OR “natural language processing” OR “new technolog*” OR “online resource*” OR “online service*” OR “online teaching” OR “open access publishing” OR “open source software” OR podcasting OR “radio frequency identification” OR RDM OR “research commons” OR “Research data management” OR RFID OR robotics OR sensors OR “smart librar*” OR “smart service*” OR “social media” OR “software application*” OR “technology trend*” OR “virtual reality” OR “voice recognition”

"university librar*" OR "academic librar*" OR "college librar*" OR "higher education librar*" OR "tertiary librar*"

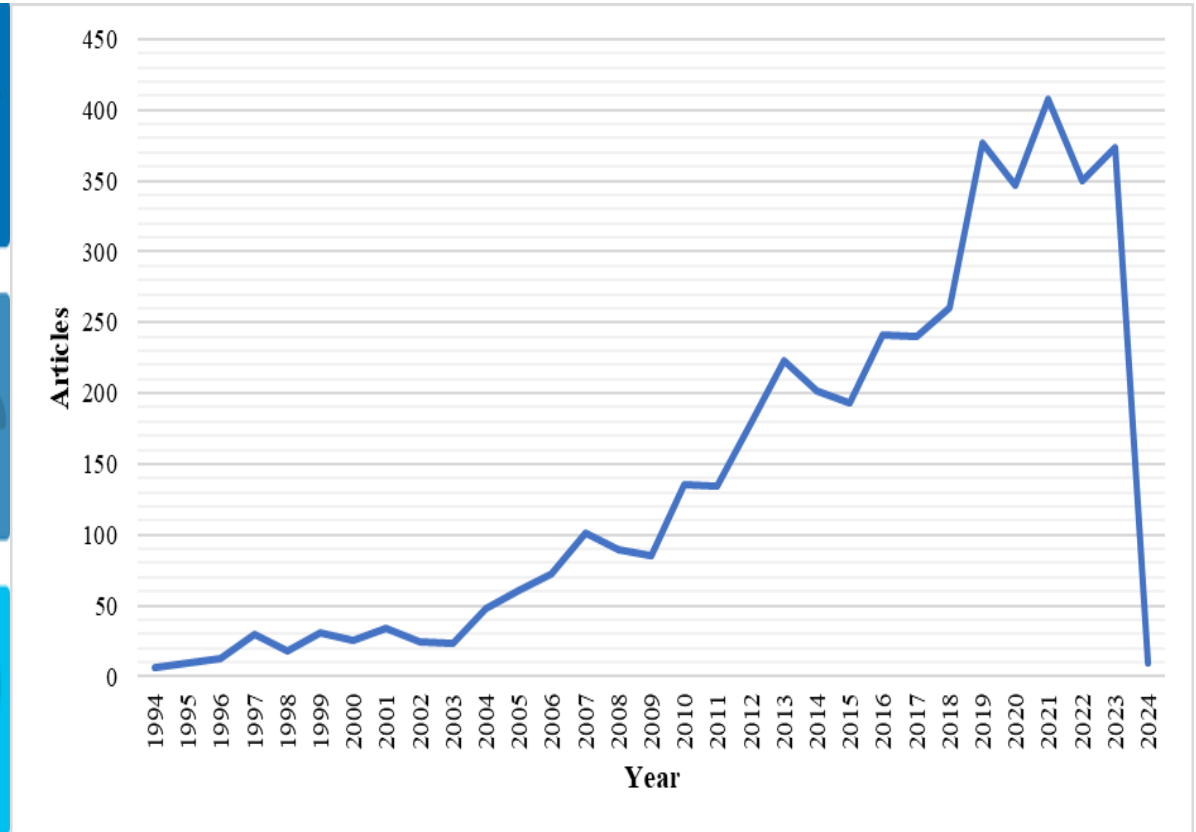
Merging and Mapping the Data



Upload combined Scopus and Web of Science Excel file into Biblioshiny (Bibliometrix) for analysis and visualization patterns – Stage 4

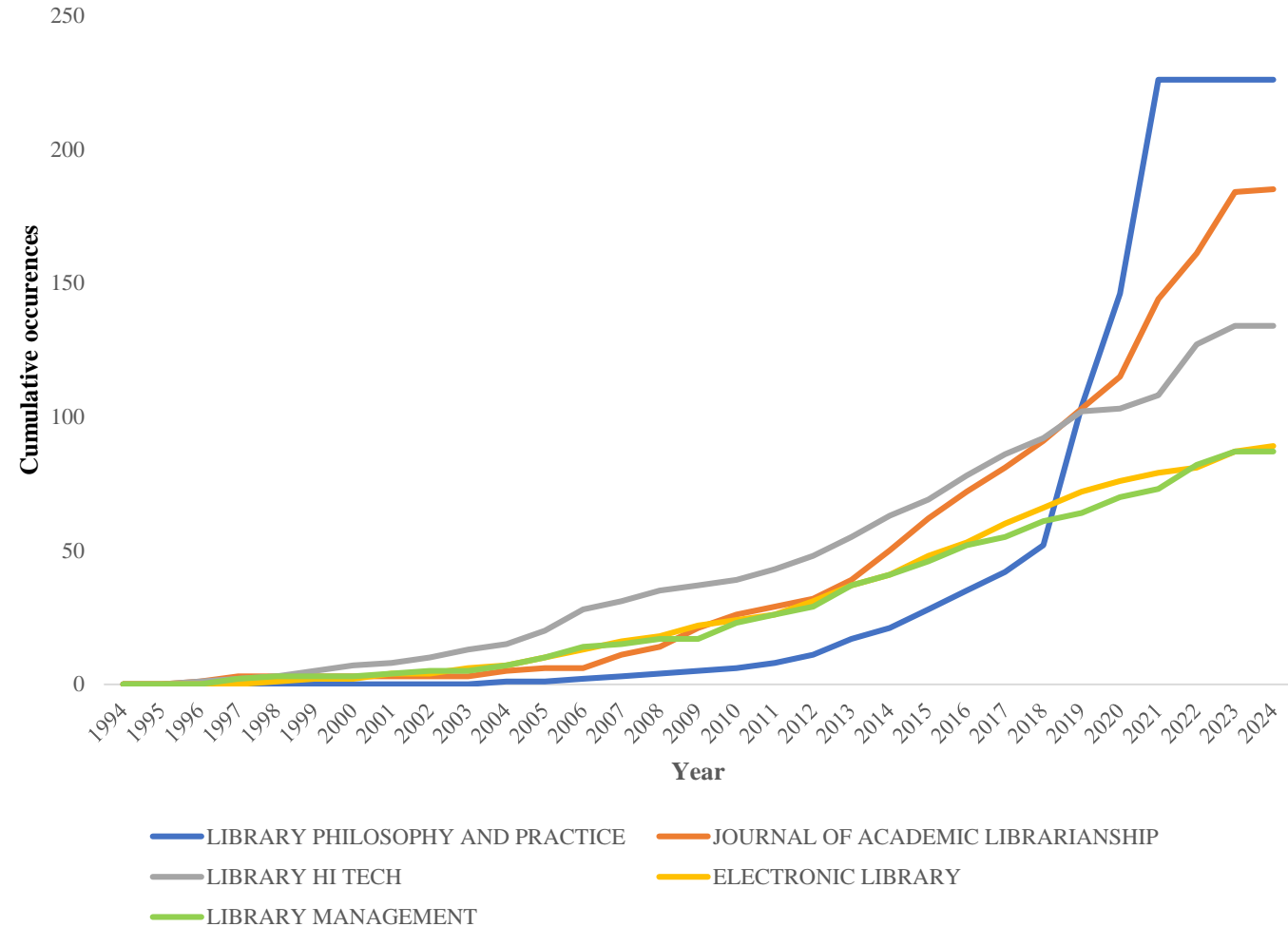
Global Research Trends 1994 -2024

Timespan 1994:2024	Sources 1040	Documents 4345	Annual Growth Rate 1.72 %
Authors 6989	Authors of single-authored docs 1271	International Co-Authorship 5.017 %	Co-Authors per Doc 2.23
Author's Keywords (DE) 7361	References 42736	Document Average Age 8.25	Average citations per doc 6.425



Leading Journals vs Top 5 Producing Journals

Sources	Rank	cumFreq	Zone
Library Philosophy and Practice	1	226	Zone I
Journal of Academic Librarianship	2	411	Zone I
Library Hi Tech	3	545	Zone I
Electronic Library	4	634	Zone I
Library Management	5	721	Zone I
Reference Services Review	6	801	Zone I
Library Hi Tech News	7	880	Zone I
New Review of Academic Librarianship	8	949	Zone I
Journal Of Library Administration	9	1013	Zone I
Evidence Based Library and Information Practice	10	1072	Zone I

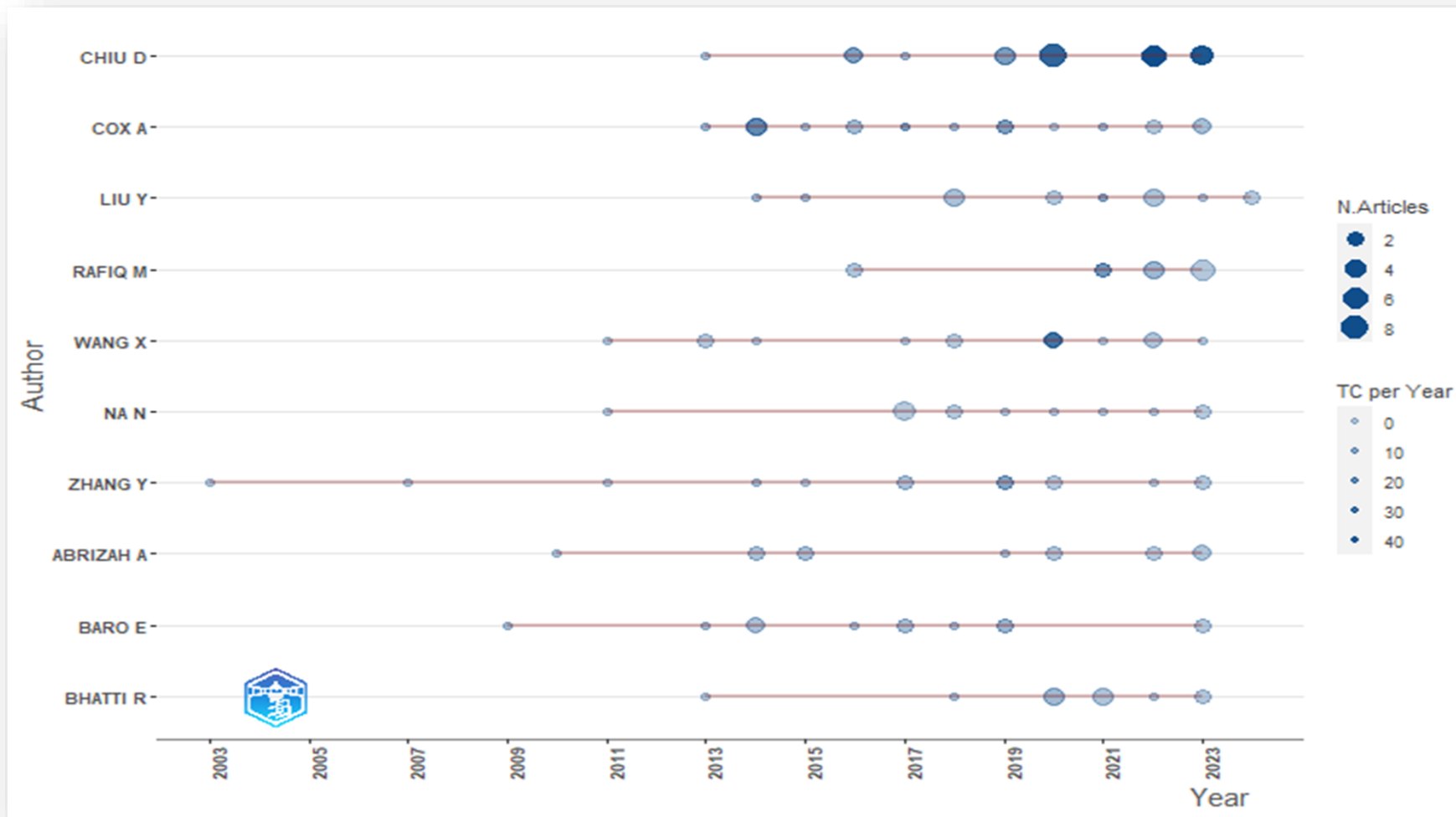


Leading Authors based on h-index

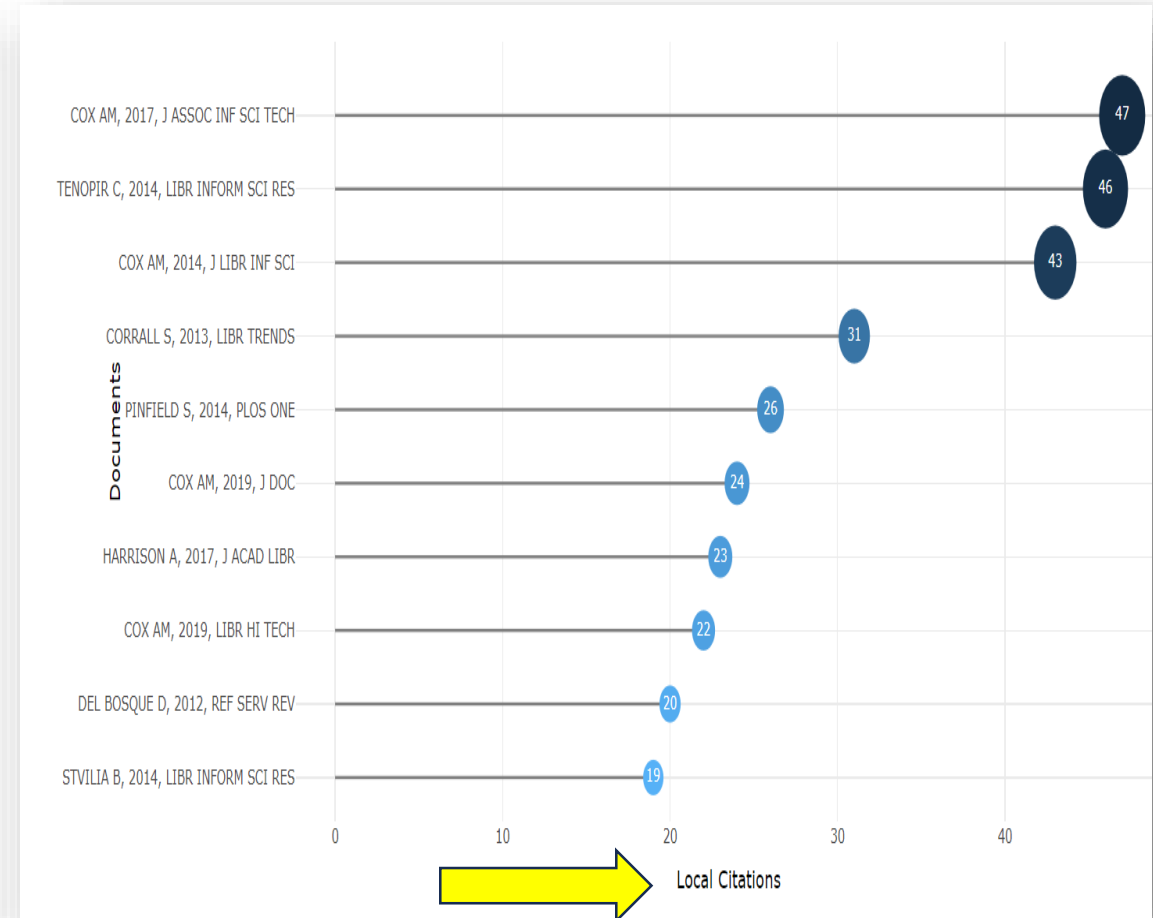
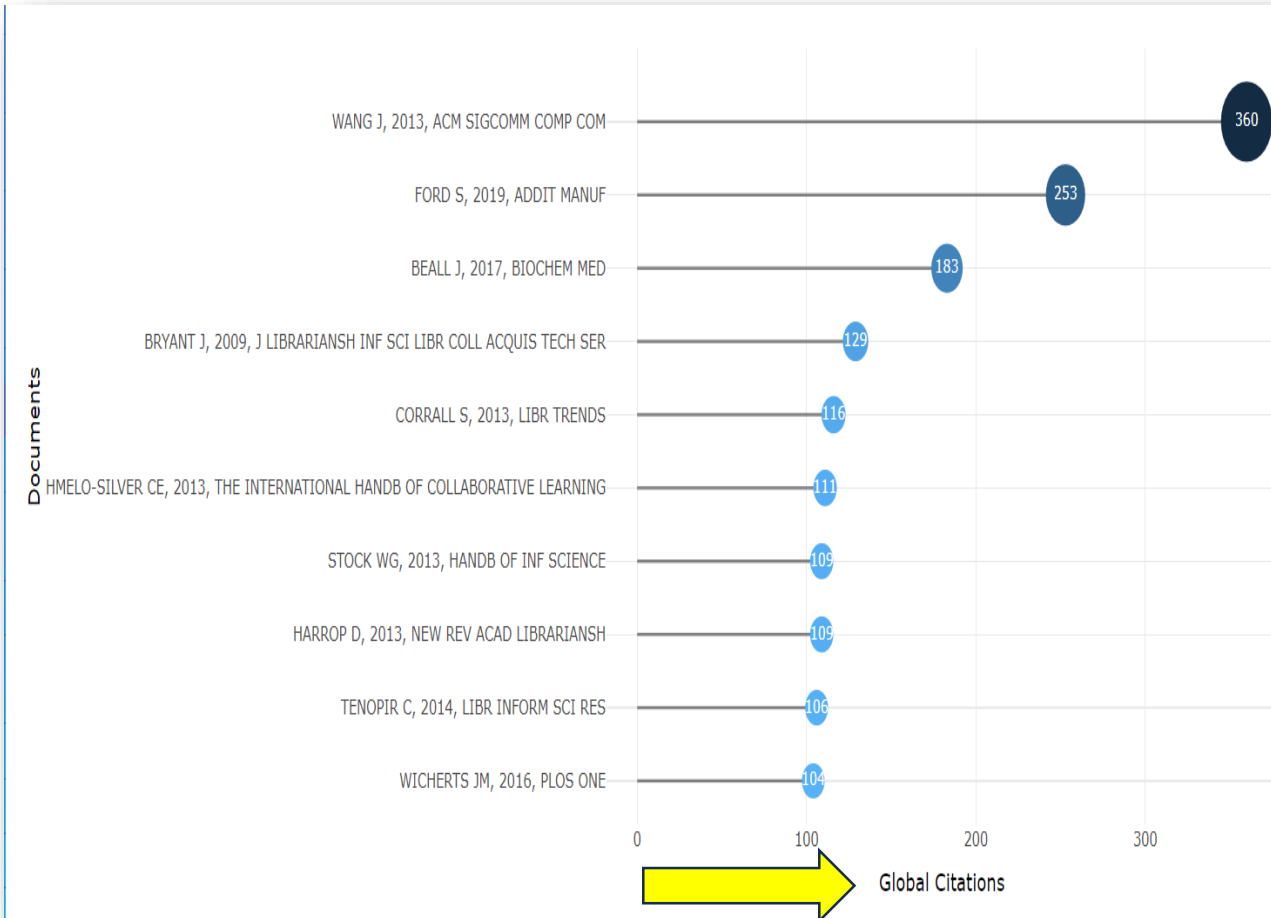
Authors	h -index	Total Citations	Number of Publications	Publication Year_Start
Chiu D	18	629	29	2013
Cox A	13	584	19	2013
Baro E	10	180	13	2009
Lo P	10	240	12	2013
Ho K	8	230	9	2016
Koltay T	7	219	11	2010
Lam E	7	194	7	2019
Mutula S	7	94	13	2001
Pinfield S	7	386	7	2014
Wang Y	7	261	12	2007

Authors	h -index	Total Citations	Number of Publications	Publication Year_Start
Khan A	6	67	10	2013
Abrizah A	5	87	13	2010
Ahmad K	5	81	11	2019
Al-Daihani S	5	92	5	2016
Allard B	5	96	5	2017
Bennett S	5	172	6	2007
Blummer B	5	55	9	2006
Chan D	5	108	7	2005
Groenendyk M	5	95	5	2013
Hamad F	5	68	9	2021

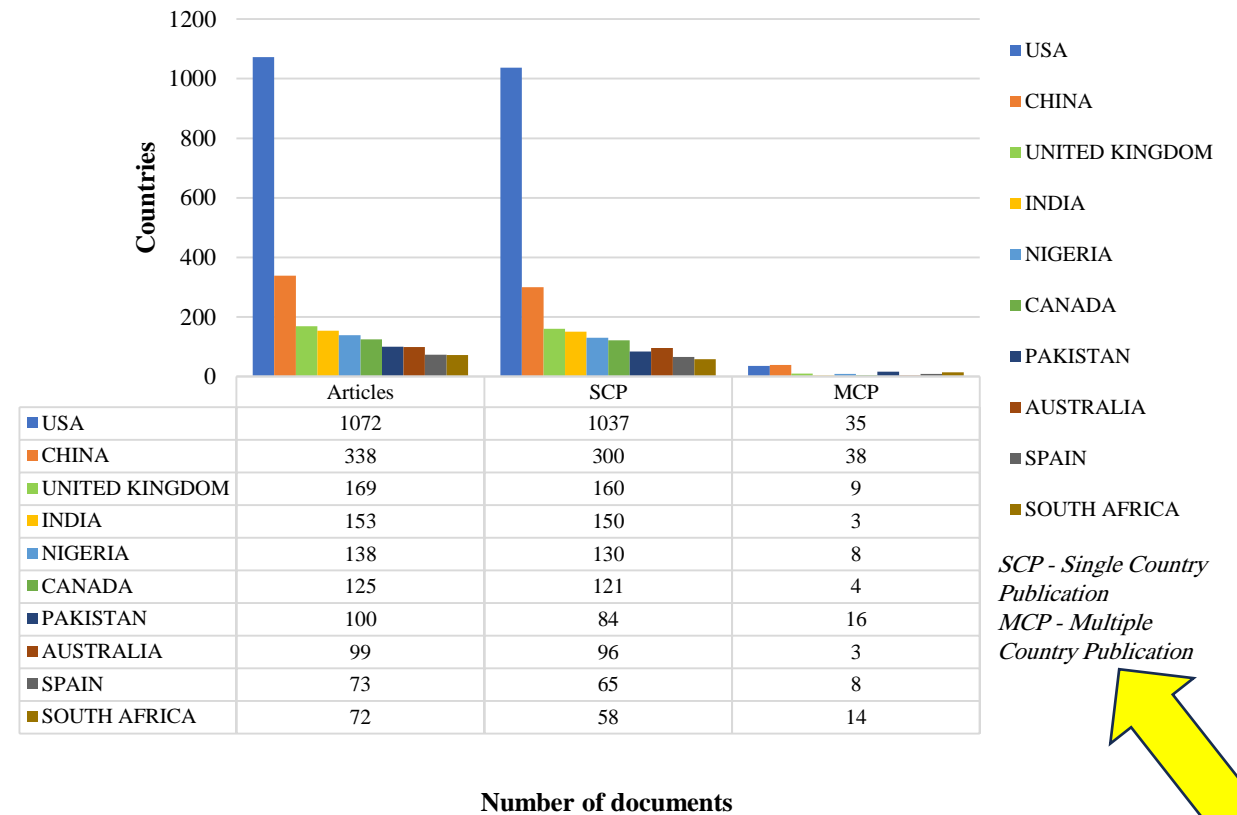
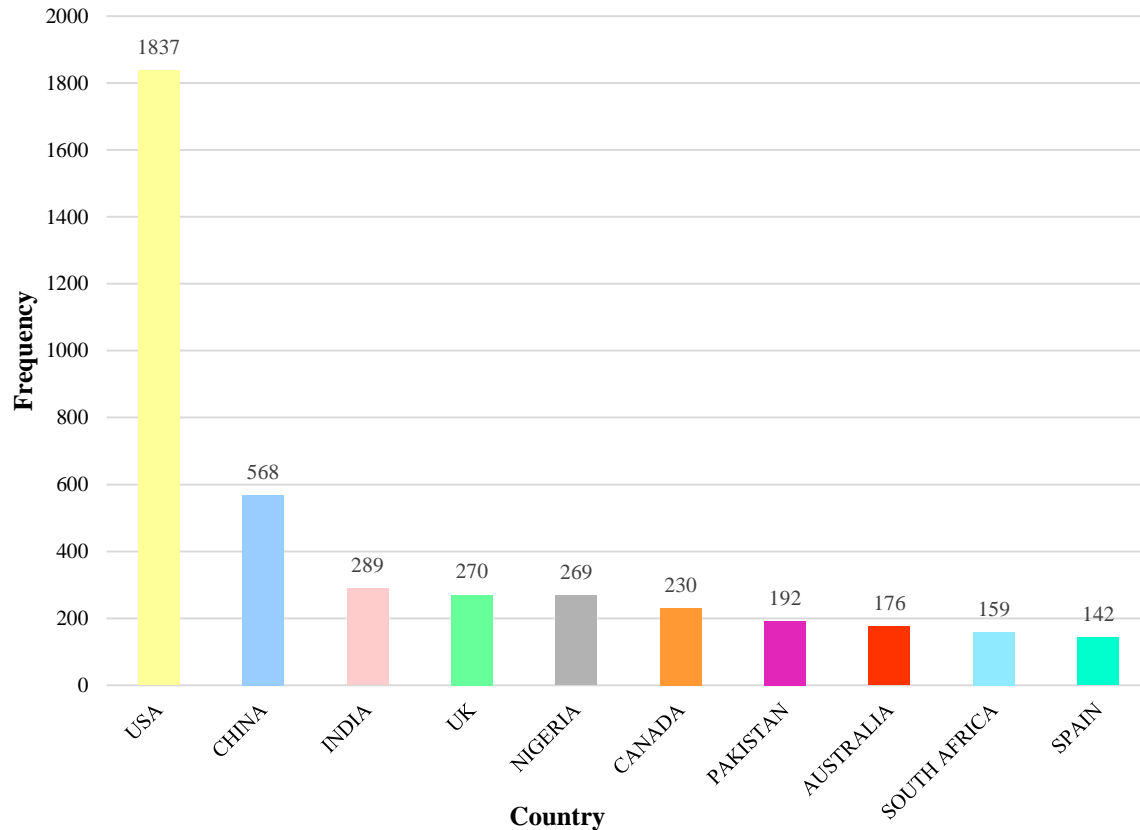
Lotka's Law and Author Production



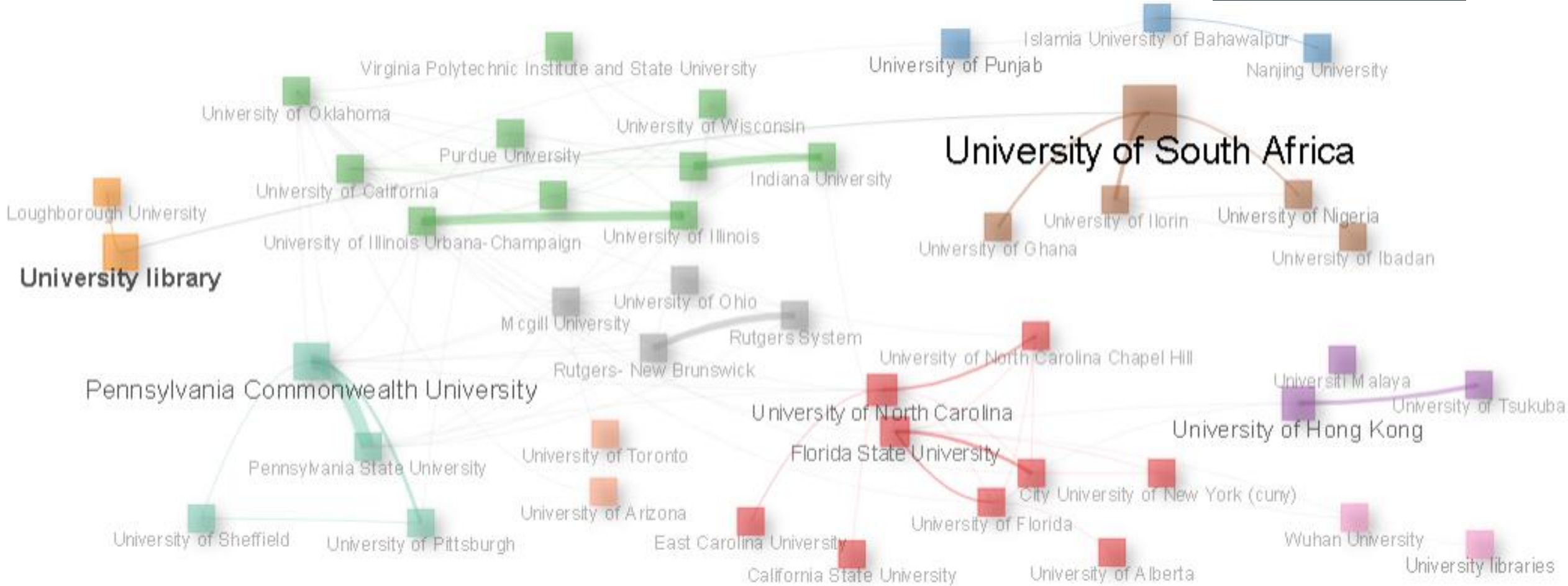
Most Cited Documents



Scientific Production Author Country



Collaboration Network - Institutions



Highlights

- Notably, the core journals based on Bradford's law –correlate with the top five producing journals.
- The USA, China, India, and the United Kingdom are the *top four most productive countries*, simultaneously, and are also the *top four corresponding author countries*
- Some of these challenges are understanding artificial intelligence, big data, cloud computing, data mining, digital resources, virtual reality, augmented reality, e-learning, 3D printing, digital storage, open access, institutional repositories, and how to implement them in a higher education library setting.
- Furthermore, the literature explicitly mentions that such challenges exist due to outdated Library and Information Science curricula, leadership crises, lack of human resources, financial issues, technological problems, and limited continuous professional development opportunities (Ashiq *et al.*, 2021; Hamad *et al.*, 2022; Gunapala *et al.*, 2020; Shahzad and Khan, 2023).
- Global South leading the discussions in the literature concerning emerging technologies and higher education libraries.

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Thank You

