



Globally Published Literature on Library and Information Science Professionals: A Bibliometric Review (1970-2021)

Sanila Aslam

Deputy Librarian, Rawalpindi Women University

Email: sanila.aslam@rwu.edu.pk

Muhammad Naveed

Assistant Librarian, Lahore High Court

Email: m.naveed789@gmail.com

Nusrat Ali

Deputy Librarian, Government College Women University Sialkot

Email: nusrat.ali@gcwus.edu.pk

Nadeem Siddique

HoD Library, Lahore University of Management Sciences

Email: nadeem.siddique@lums.edu.pk

Abstract

The study targets examining the exploration yield on the key terms of librarianship within 52 years (1970-2021). The investigation cover essentially the quantity of articles, language of articles, top research oriented organizations and countries, topmost publication source, highly productive authors, highly interested research area, commonly used keyword and so forth. A complete bibliometric study was directed utilizing the Science Citation Index data set, Web of Science (Core Collection). This research fills in as an asset for future research activities by revealing insight into librarianship. In particular, the outcomes uncover that the mostly chosen publication category is article and the research referred to articles are from United States and the top productive organization is also from USA. The preferred language is English for publications and the most favored research area is the “Information Science Library Science” during this time span. This bibliometric research is significant for all those researchers who relates to librarianship and who need to see the publication trends in this profession.

Keywords: Librarian, librarianship, library manager, library administration, library leadership, bibliometric analysis



Introduction

Librarianship is a profession which deals the user's information needs and focus on relevant information resources for the provision of better library services. In the field of librarianship the priority of work is to satisfy diverse queries of patrons (Ogungbade & Ipadeola, 2021). In the major objectives of librarianship, specifically its function in knowledge transmission can not be executed with out the procedure of information services and for that purpose librarians provide their services professionally. Now trends has been changed and the profession of librarianship is also going to the use of modern technologies, and this grooming is based on the requisitions and information seeking behaviors of users especially the researchers. As indicated by Falciani-White (2016), a term information seeking is frequently likened in research.

Bibliometric analysis provides the analytics of data in a statistical form and many bibliometric researches have been published in different areas of education. Library and Information Science has also published bibliometric studies in a broad way. Numerous bibliometric researches connected with the literature of LIS have been directed in various regions all over the world (Siddique, Rehman, Khan, & Altaf, 2021). Bibliometric way of analysis is viewed as a decent way for getting the specific and precise data in a factual manner. These days, bibliometric technique is measured as a strategy to introduce the examination information in a factual manner (Naveed, Aslam, Ali, & Siddique, 2021). In the bibliometric analysis, the quantitative investigation and statistics to depict examples of distributed literature inside a given field of body are applied (Thanuskodi, 2010). Bibliometric examination gives important data and broadens deliberate correlation among organizations, areas and different countries (Aslam, Naveed, Ali, & Awan, 2021).

A literature review featured that several researches related to librarianship has been incorporated which highlights the significance of this profession. It is visible that there are numerous research areas which has been practiced in librarianship but the research gap is that there is no research which calculate all those researches which relates to the following key terms: Librarian, Librarianship, Library Manager, Library Administration, Library Leadership, Bibliometric Analysis. This bibliometric research will make possible the calculations of LIS researches on the said key terms and in scope this study is novel . It is needed to gave a



comprehensive perspective on the published exploration on these library science terms to figure out the exact calculation and recognize the gap of research (Ahmad, Sheikh, & Rafi, 2020). This huge gap require the further exploration and the bibliometric study make possible to determine the quantity of research on librarianship being published. Bibliometric examination has quite a large number applications in the LIS documented in distinguishing the exploration patterns in the said subject. The research will be useful to the provision of calculated figure of research on the said subject. This review utilized bibliometric research strategies to analyze 52 years of exploration (1970-2021). This study means to give bits of knowledge regarding the terms used in the research of library and information science professionals.

Statement of the Problem

A lot of bibliometric studies have been published on various topics but distinctive reasons have been found to evaluate this study. It is needed to investigate the key terms related to the library and to find out the published documents, documents publication language, contribution of organizations and countries, top publication sources, top productive authors and topmost research area on the key terms of the library.

Literature Review

Bibliometric analysis regarding citations has an extensive history. Numerous bibliometric researches have been led on various focused areas. The researchers of LIS from all around the world have directed bibliometric studies to analyze the author's productivity, joint effort in research production, and impact of citations on the exploration in this field (N. Ali, Naveed, Aslam, & Bhatti, 2021). A bibliometric study conducted Aslam, Ali, Naveed, and Mairaj (2021) on journal of librarianship and information science for statistical data and the statistical study conclude the exact figure of published data of journal, yearly published material, most productive authors and countries etc (Doraswamy & Janakiramaiah, 2013). Another research analyzes in bibliometric way the latest trends of LIS journal's publications in India from a specific time frame 2014 to 2018 and discovered the year of highly publications and the collaborative work of authors in research (Sahu & Parabhoi, 2020).

An experimental review made in a specific time period 2004 to 2015 on LIS literature published in India and it has been depicted that 3713 exploration papers added to 14 different journals . Further referenced that scientometrics and bibliometrics were the primary capacity of



exploration in Indian LIS distributions (Dora, Anil Kumar, & management, 2017). Another research concluded the data from 1980 to 2017 and reported that a number of 967 research publications added by Library and Information Science faculty members (Parabhoi, Bhattacharjee, & Dey, 2019). A study coordinated bibliometric examination on a journal “Library Resources and Technical Services” and the assessment, depended on information taken from Web of Science (N. Ali, Aslam, Naveed, & Siddique, 2021). Khurshid (2013) analyzed the publications from Pakistani authors in international journals with the impact factor and in some publications without impact factor. He barred frequently articles distributed in the LIS journals in Pakistan that are the favored source of LIS authors in Pakistan regarding their research publications (K. Ali, 2022). A thorough bibliometric study was led utilizing the four basic databases and the article surveys 62 years (1957-2018) of exploration in Pakistan in the field of library and information science (Siddique, Rehman, Khan, et al., 2021). The basic result concluded in this research that Information Management Department at the University of the Punjab is the significant contribution in LIS literature. Further bibliometric studies have been conducted by various authors for statistical information such as (N. Ali, Shoaib, & Abdullah, 2021; Farooq, Rehman, Ashiq, Siddique, & Ahmad, 2021; Naveed, Ali, Aslam, & Siddique, 2021; Sheikh, Siddique, Qutab, Khan, & Mahmood, 2021; Shoaib, Ahmad, Ali, & Abdullah, 2021; Siddique, Rehman, Ahmad, Abbas, & Khan, 2021; Siddique, Rehman, Khan, et al., 2021; Singh, Mittal, & Ahmad, 2007; Tijjani, Ashiq, Siddique, Khan, & Rasul, 2020)

It is needed to additionally comprehend to recount the narrative of a major dataset indeed, what the library terms which have been analyzed. Consequently, an understanding regarding the bibliometric research could be valuable. Nonetheless, there are a couple of studies that concentrate on bibliometric analysis and get statistical data. This provokes the present research to seek after a particular comprehension of library key terms with regards to the library to fill the exploration gap.

Objective of the Study

Investigating this arising issue of expanded publications regarding this theme it is decided to do a bibliometric research of logical yield around here. The significant points and objectives were to study:



- Sorts of published document
- Documents publication language
- Contribution of organizations' in research
- Contribution of countries' in research
- Top publication sources
- Top productive authors
- Topmost research area
- To identify the frequently used keywords

Research Methodology

Bibliometric technique was utilized to direct this review. Planning of distributions utilizing metadata is a simple and logical technique to infer valuable data based on various indicators. The data was extricated from an index named the “Science Citation Index” data set, “Web of Science” and the date of extracted data was March 08, 2022. Various queries or keywords were utilized to get the information from WOS such as TI=(“Library administration*”) OR TI=(“Library leadership*”) OR TI=(“Library Manager*”) OR TI=(“Librarianship”) OR TI=(“Librarian*”). Duration of data was 1970-2021 and there were found 14813 total publications which were included the articles, letters, reviews, proceedings etc in this time period. After the process of screening 13527 non duplicate citations were found. Further 641 articles were omitted after the reading of abstracts and titles and in 12886 articles further 439 articles were excluded on this satge after the reading of full text and 464 through data mining. 11983 overall citations were comprised after the all selection procedures in the bibliometric research (Figure 1). For the data analysis, ScientoPy, Biblioshiny, VOSviewer and MS Excel software were applied.

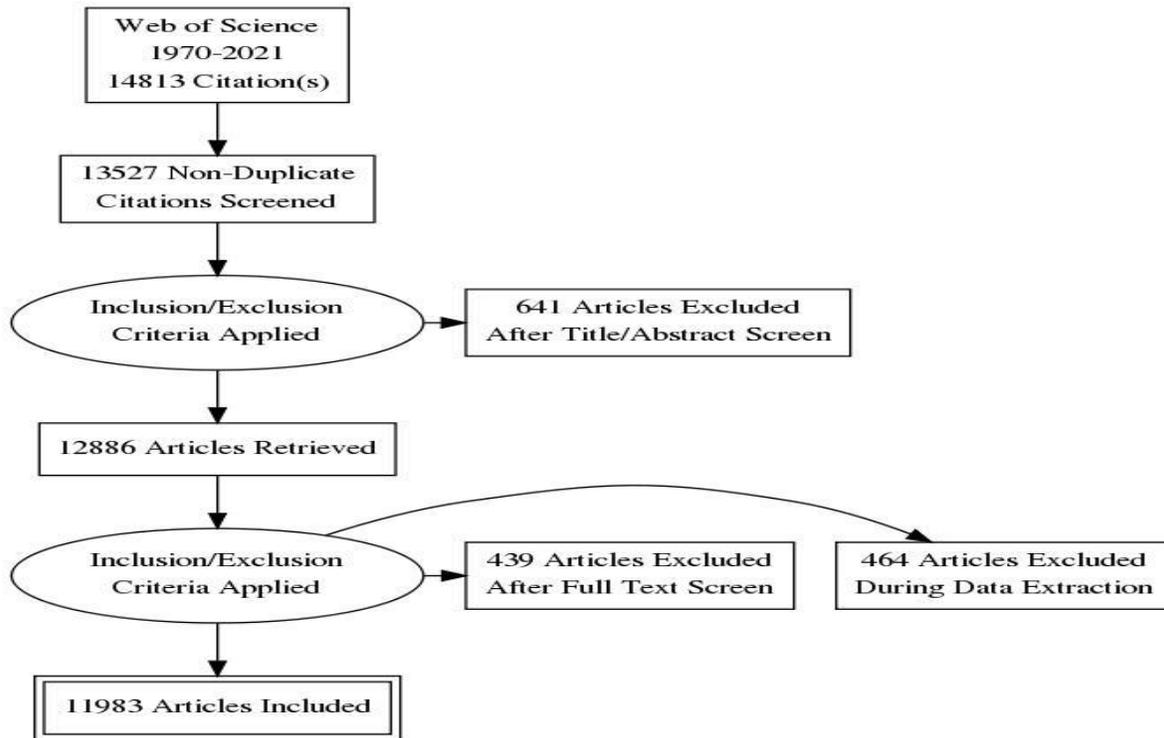


Figure 1. Data Extraction and Screening Process

Data Evaluation

Data evaluation demonstrates that a total of 14813 publications were found from the WOS core collection with a particular time period 1970 to 2021. The absolute references 14813 were retrieved and 11983 applicable outcomes were downloaded. The outcomes (Table 1) show the various kinds of distributions in writing and orders of the published documents during 52 years and the most elevated rate of publication is articles 5041 (42.07%). Gradually, 4299 (35.87%) Book Reviews have been distributed and the least amount of documents is considered Script 2 (0.02%). It is most clear that the trend among library professionals have to publish their research in articles' form in the field of LIS.

Table-1 Types of Published Document

Document Type	<i>f</i>	%	Document Type	<i>f</i>	%
Article	5041	42.07	Bibliography	50	0.42
Book Review	4299	35.87	Item about an Individual	32	0.27
Editorial Material	945	7.89	Correction	27	0.23
Proceedings Paper	700	5.84	Discussion	17	0.14
Letter	343	2.86	Poetry	16	0.13
Review	180	1.50	Software Review	15	0.13
Meeting Abstract	118	0.98	Reprint	07	0.06
Note	101	0.84	Fiction, Creative Prose	04	0.03
News Item	86	0.72	Script	02	0.02

The language used in the published manuscripts from 1970 to 2021 are featured in Table 2. The outcomes indicate the commonly used language is English with 10919 (91.12%) reports. The second-most noteworthy calculation of the language in publications is German Language 367 (3.06%). The least used languages are Norwegian 1 (0.01%) and Slovak 1 (0.01%). Every language is importance but the authors preferred to write their research publications in English language.

Table-2 Publication Language

Document Language	<i>f</i>	%	Document Language	<i>f</i>	%
English	10919	91.12	Japanese	17	0.14
German	367	3.06	Catalan	14	0.12
Spanish	221	1.84	Czech	5	0.04
Portuguese	107	0.89	Dutch	2	0.02
Turkish	88	0.73	Polish	2	0.02
Italian	78	0.65	Ukrainian	2	0.02
French	69	0.57	Unspecified	2	0.02
Russian	49	0.41	Hungarian	2	0.02
Croatian	19	0.16	Norwegian	1	0.01
Chinese	18	0.15	Slovak	1	0.01

The year wise publication report from 1970 to 2021 are featured in figure 2. A data set of 14813 published records have been organized year-wise. The outcomes determine the most productive year of distribution is 2014 with 393 records. Secondly the most elevated pace of the distributed records is 387 in the years 2013. The least distributions with the quantity of records 77 are in 1973. Consistently was useful yet the researchers showed their interest in this area of research in the year 2014.

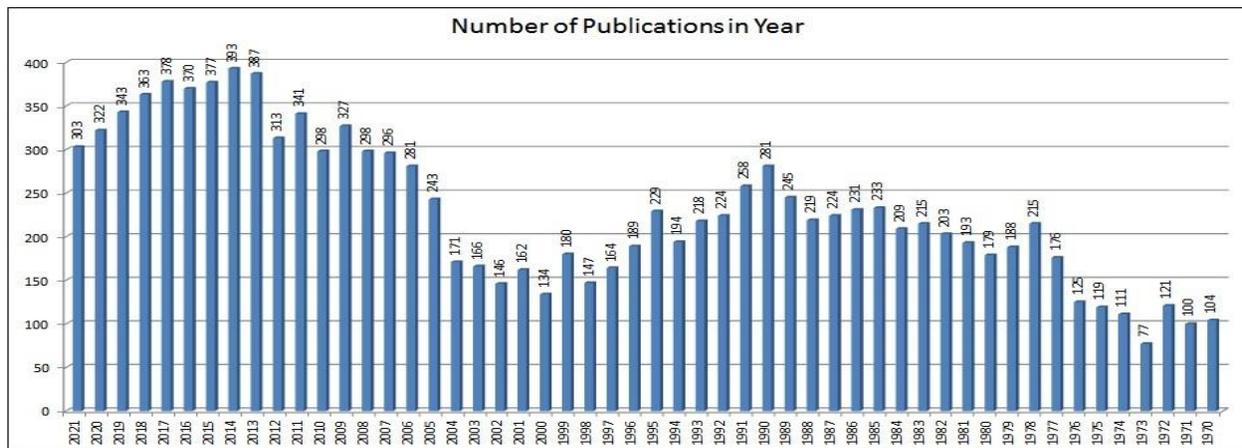


Figure 2. Distribution of Publication Years (1970-2021)

Table 3 uncovered the information about top ten associations engaged in publication process with 11983 distributed records. The Univ. Illinois, United States is on topmost with the most noteworthy 44 distributions, trailed by Rutgers State Univ., United States with 29 research work. Minimal measure of published documents 20 by Sch. Lib. and Informat Sci., United States. The outcomes depicted that associations of the United States are front in productive literature in the field of LIS.

Table-3 Top Organization

Institution with country	TP*	AGR*	ADY*	PDLY*	h-index
Univ. Illinois, United States	44	3	3	6.8	9
Rutgers State Univ., United States	29	0	3	10.3	7
Univ. Tennessee, United States	29	2	3	10.3	10
McGill Univ, Canada	28	-1	2	7.1	9

Univ. Nacl Autonoma Mexico, Mexico	28	0	0	0.0	1
Univ. British Columbia, Canada	25	2	2	8.0	7
Univ. N Carolina, United States	22	4	4	18.2	8
Univ. Malaya, Malaysia	21	0	0	0.0	7
Univ. Sheffield, United Kingdom	21	-1	1	4.8	9
Sch. Lib. & Informat Sci., United States	20	0	0	0.0	9

TP* = Total Publication AGR* = Average Growth Rate, ADY* = Average Documents per Year PDLY* = Percentage of Documents in Last Years

Table 4 and figure 3 lay emphasis on the top 10 productive countries with highly published documents. The outcomes announced that the USA as productive nation is on the top highest as far as creating most elevated 1823 publications followed by United Kingdom 265, Canada 264, and the minimum 68 publications are from Turkey. It is clear that the USA plays a significant role in publishing LIS research.

Table-4 Top Countries

Country	TP*	AGR*	ADY*	PDLY*	h-index
United States	1823	16	111	6.1	39
United Kingdom	265	-2	8	3.0	19
Canada	264	4	13	4.9	23
Australia	122	-1	5	4.1	15
Brazil	118	5	12	10.2	6
China	89	4	6	6.7	10
Spain	85	-1	3	3.5	9
Nigeria	80	2	11	13.8	8
South Africa	78	-7	6	7.7	8
Turkey	68	5	8	11.8	4

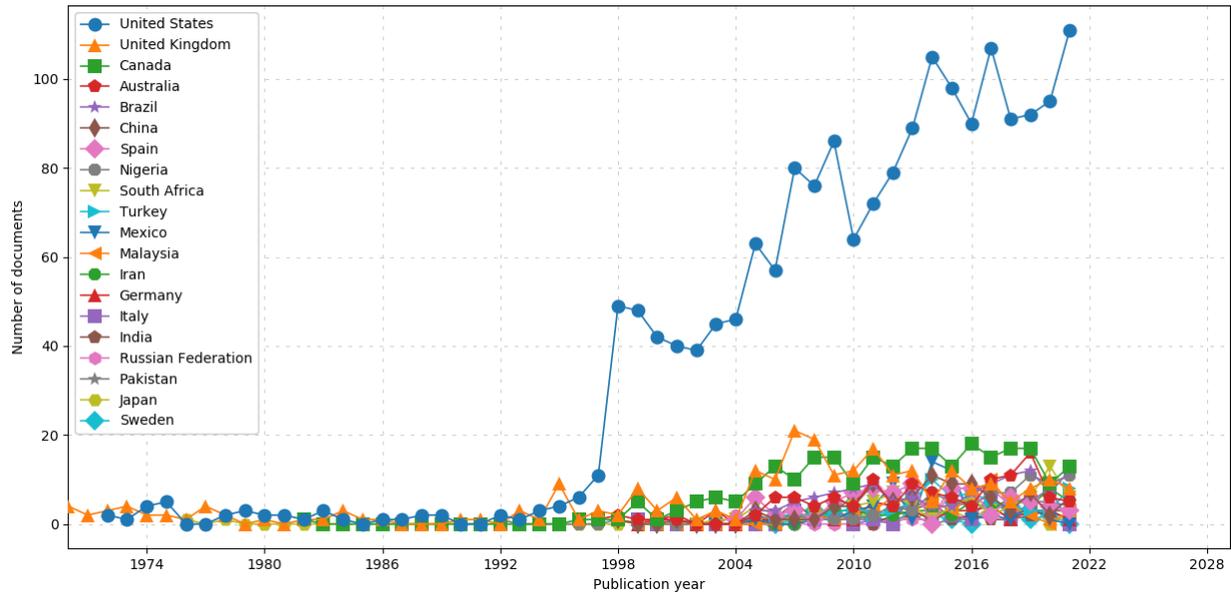


Figure 3. Distribution of Top Research Oriented Countries

Table 5 describes the ten (10) exceptionally distributed sources from 1970 to 2021. The Library Journal was the highly published source with 1172 publications. Another highly sourcee was “Journal of Academic Librarianship with 646 publications count on WOS. The least publications were found in Bulletin of The Medical Library Association with 238 publications count. It is evident that the Library Journal has a vast contribution in the development of LIS field.

Table-5 Top Publication Sources

Publication Source	Publication	Citation	h index	g index	m index	PY start
Library Journal	1172	587	10	12	0.189	1970
Journal of Academic Librarianship	646	2606	23	32	0.52	1979
College & Research Libraries	571	3317	27	34	0.51	1970
Library Quarterly	367	937	16	25	0.30	1970
Canadian Library Journal	268	116	6	7	0.11	1970
Law Library Journal	244	545	10	13	0.19	1970
Journal of The Medical Library Association	242	1549	20	29	0.95	2002

Bulletin of The Medical Library Association	238	1239	18	27	0.34	1970
Library Journal	1172	587	10	12	0.19	1970
Journal of Academic Librarianship	646	2606	23	32	0.52	1979

The data about the publications by authors describes in table 6. Stevens N. as an author is having lead with 83 biggest number of published documents. The Berry J.N. was on the second number in number games of publications with 46 publications. The Calvert P. and Raitt D. were on the most minimal productivity in the table with 20 research publications.

Table-6 Top Productive Authors

Author	Publication	Citation	h.index	g index	m index	PY start
Stevens N.	83	4	1	1	0.02	1973
Berry J.N.	46	84	6	7	0.12	1973
White H.S.	30	39	3	4	0.07	1977
Horrocks N.	28	0	0	0	0.00	1970
Berry J.	23	26	4	5	0.08	1971
Fialkoff F.	23	8	2	2	0.06	1991
Johnson I.M.	21	30	4	4	0.12	1989
Wiegand W.A.	21	129	4	11	0.09	1977
Calvert P.	20	13	2	3	0.08	1998
Raitt D.	20	3	1	1	0.03	1984

Data (Table 7) highlights the authors areas of research from the period 1970 to 2021. The Information Science Library Science is the most focused area of research with 10451 publications. The second most focused area was Computer Science with 822 publication and the least focused area of research was Art with 29 publications only. It is apparent that the common of the researchers were concerned in publishing their research in area of Information Science Libray Science.

Table-7 Top Research Area

Study Areas	Publication	% of 11983	Study Areas	Publication	% of 11983
Information Science	10451	87.215	Chemistry	76	0.634
Library Science			Business Economics	58	0.484
Computer Science	822	6.86	Communication	57	0.476
Education Educational Research	472	3.939	General Internal Medicine	53	0.442
Government Law	325	2.712	Science Technology	50	0.417
Arts Humanities Other Topics	150	1.252	Other Topics	46	0.384
Music	146	1.218	Engineering	46	0.384
Literature	121	1.01	Public Environmental Occupational Health	40	0.334
Social Sciences Other Topics	101	0.843	Health Care Sciences Services	39	0.325
History	96	0.801	Psychology	32	0.267
History Philosophy of Science	96	0.801	Art	29	0.242

Table 8 highlights most used or collective keywords utilized in 11983 published documents during 52 years. The consequences indicate the most mutual keyword is Librarians (376). The subsequent most conversed keyword is Academic Libraries (268) and the minimum keywords repetitions are Knowledge (54) and University Libraries (54). Mostly authors utilized the keyword “Librarians” in their published documents in time period of 1970 to 2021. Biblioshiny tool has been used for the word librarians in Figure 4 and it highlights the data of keywords.



Discussion

The outcome of the evaluation encounters the research objectives and evaluate the research productivity of librarianship as profession. A total of 11983 publications were found from the WOS (core collection) with a particular time period 1970 to 2021. Various kinds of distributions in writing and orders of the documents which published during 52 years such as Articles, Book Review, Editorial Material, Proceedings Papers, Letters, Review etc. The subsequent arguments meet the objectives of the bibliometric research: The ranking of authorship in writing articles is high and the highest ratio of publication language is English. In productive organizations 'The Univ. Illinois, United States' is on upper position and USA as a country is on the upmost state in terms of constructing the research. Many journals published research on these key areas but 'The Library Journal' is the highly published source in articles distribution and the author's publications signifies that 'Stevens N' is leading in this area of publications. The most focused area of research is originate 'The Information Science Library Science' and many common keywords used in these published document during the fifty two years but the most determined keyword is 'Librarians'.

Findings

The findings meet the following objectives of the study:

The most prominent publication frequency type is research articles which shows that the authors are much interested in contribution of their research in the form of articles to enhance the literature of LIS. Every language has its own importance but English is a most preferred medium of writing in literature contribution. The majority of authors have preferred to write their contributions in English over other languages. The published records were sorted year-wise. Each year was productive but the year 2014 was noteworthy as compare to other years with highest contribution in a single year. The researchers of different countries contributed well but the upshots showed that the researchers of USA has a outsized contribution in publication of LIS research. Similarly, associations of USA are in forefront in producing prolific literature in the field of LIS. Moreover, USA is on the top highest nation insofar as creating most elevated publications. It is apparent that USA has a enormous role in the development and growth of LIS literature. As for as the publications concerns the Journal namely Library Journal was the highly published source with 1172 publications. It is evident that the Library Journal has a vast

contribution in the development of LIS literature. The authors writing frequency has been analyzed in this study. Stevens N. was the most prolific author as compare to other authors with most number of published documents. The most intensive area of research was Information Science Library Science. Majority of authors have preferred to work in this area of research and published their publications in this context. Finally, the most persistent keyword remained in literature is “Librarians”. Generally the researchers used the keyword “Librarians” in their published documents during the period of 1970 to 2021.

This kind of study is never conducted before this. Moreover, this distinctive type of study help the researchers to trace the exact literature globally published on Library and Information Science professionals.

Conclusion

Libraries has a long history and this profession and its services expanded with the passage of time. Numerous scientific indicators are determined, scientific output is assessed, journals are chosen for libraries, and even the future potential of a certain area is predicted using bibliometric techniques. The adoption of bibliometric techniques in a variety of disciplines has gained popularity, which has greatly accelerated the creation of bibliometrics-related literature. By combining a bibliometric analysis with a literature review, the goal of this study was to provide an overview of the past and present, research orientations of the key terms of librarianship, library administration, librarian and library leadership and concluded the 52 years of data which shows the writing trends, highly used language, productive authors, organizations and countries on the said key terms. The study results exposed that society has concerned the awareness of such key terms and writing trends.

References

- Ahmad, K., Sheikh, A., & Rafi, M. (2020). Scholarly research in Library and Information Science: an analysis based on ISI Web of Science. *Performance Measurement Metrics*, 21(1), 18-32.
- Ali, K. (2022). Digital Information Literacy Skills among Library and Information Science Professionals in University Libraries of Sindh Pakistan. *Journal of Information Management Practices*, 2(1), 41-61.



- Ali, N., Aslam, S., Naveed, M., & Siddique, N. (2021). Fifty Six Years Research Productivity of Library Resources and Technical Services: A Bibliometric Analysis. *Library Philosophy and Practice*, 1-15.
- Ali, N., Naveed, M., Aslam, S., & Bhatti, M. W. (2021). Research Trend of Journal of Information Science: A Bibliometric Analysis through Web of Science Database. *Library Philosophy and Practice*, 1-18.
- Ali, N., Shoaib, M., & Abdullah, F. (2021). Trends of research visualization of digital collections and resources in academic libraries from 2001 to 2020: a bibliometric analysis. *Library Philosophy and Practice*, 5598, 1-25.
- Aslam, S., Ali, N., Naveed, M., & Mairaj, M. I. (2021). Research Productivity of Journal of Librarianship and Information Science from 1999-2019: A Bibliometric Study. *Library Philosophy and Practice*, 1-20.
- Aslam, S., Naveed, M., Ali, N., & Awan, M. R. (2021). Research on digital and online resources of academic libraries from 1981 to 2020: A bibliometric analysis. *Library Philosophy and Practice*, 0_1-17.
- Dora, M., Anil Kumar, H. J. C. j. o. s., & management, i. (2017). An empirical analysis of the research trends in the field of library and information science in India–2004-2015. *11(2)*, 361-378.
- Doraswamy, M., & Janakiramaiah, M. (2013). Information use pattern of library and information science professionals: a bibliometric study of conference proceedings. *International Journal of Digital Library Services*, 33(11), 33-44.
- Falciani-White, N. (2016). Understanding the “complexity of experience”: Modeling faculty research practices. *The Journal of Academic Librarianship*, 42(2), 118-126.
- Farooq, R. K., Rehman, S. U., Ashiq, M., Siddique, N., & Ahmad, S. (2021). Bibliometric analysis of coronavirus disease (COVID-19) literature published in Web of Science 2019–2020. *Journal of family & community medicine*, 28(1), 1.
- Khurshid. (2013). Contributions of Pakistani authors to foreign library and information science journals. *Aslib Proceedings*, 65(4), 441-459.



- Naveed, M., Ali, N., Aslam, S., & Siddique, N. (2021). Research Output of The Library Quarterly: A Bibliometric Analysis during 2010-2019. *Library Philosophy and Practice*, 1-15.
- Naveed, M., Aslam, S., Ali, N., & Siddique, N. (2021). Research Visualization of Journal of Library Administration (2005-2020): A Bibliometric Study. *Library Philosophy and Practice (e-journal)*, 5696, 1-15.
- Ogungbade, A. A., & Ipadeola, L. O. (2021). From Classroom to the Field of Library Practice: the Gaps and its Cost in the Librarianship Profession. *Library Philosophy and Practice*, 1-15.
- Parabhoi, L., Bhattacharjee, H., & Dey, S. (2019). *Library and information science research in East and North-East India*: LAP LAMBERT Academic Publishing.
- Sahu, R. R., & Parabhoi, L. (2020). Bibliometric Study of Library and Information Science Journal Articles during 2014-2018: LIS Research Trends in India. *DESIDOC Journal of Library & Information Technology*, 40(6).
- Sheikh, A., Siddique, N., Qutab, S., Khan, M. A., & Mahmood, K. (2021). An investigation of emerging COVID-19 research trends and future implications for LIS field: A bibliometric mapping and visualization. *Journal of librarianship and information science*, 09610006211053043.
- Shoaib, M., Ahmad, A., Ali, N., & Abdullah, F. (2021). Trend of research visualization of learning, classroom, and class participation in higher education institutions: a bibliometric analysis from 2001 to 2020. *Library Philosophy and Practice*, 5743, 1-26.
- Siddique, N., Rehman, S. U., Ahmad, S., Abbas, A., & Khan, M. A. (2021). Library and information science research in the Arab World: a bibliometric analysis 1951–2021. *Global Knowledge, Memory and Communication*.
- Siddique, N., Rehman, S. U., Khan, M. A., & Altaf, A. (2021). Library and information science research in Pakistan: A bibliometric analysis, 1957–2018. *Journal of librarianship and information science*, 53(1), 89-102.
- Singh, G., Mittal, R., & Ahmad, M. (2007). A bibliometric study of literature on digital libraries. *The electronic library*.



- Thanuskodi, S. (2010). Journal of Social Sciences: A bibliometric study. *Journal of Social Sciences*, 24(2), 77-80.
- Tijjani, B., Ashiq, M., Siddique, N., Khan, M. A., & Rasul, A. (2020). A bibliometric analysis of quality research papers in Islamic finance: evidence from Web of Science. *ISRA International Journal of Islamic Finance*.