# A Bibliometric Analysis on Digital Library Research Output in Asian Countries from 2014-2023

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**Abstract:** This study aims to present a bibliometric analysis of research output on Digital Libraries from Asian countries during 2014 to 2023. It explores the research activities on digital Library as well as subject wise classification of papers, journal wise publication trend, institution and country wise distribution of contribution. Also the prolific authors during 2014-2023 and keywords having more potential to cover this study area have been analyzed.

**Keywords:** Digital Library, Asian Country, Bibliometric Research

## 1. Introduction

Bibliometric analysis is a quantitative method that uses statistical and mathematical tools to evaluate the relationships and influences of publications, authors, institutions, and countries in a specific case study. Sengupta has defined bibliometric as organization, classification and quantitative evaluation of publication pattern of macro-communication along with their authorships by mathematical and statistical calculations.

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In Asian countries, it is important to note that the repository plays a significant role in preserving cultural heritage and promoting scientific research and education. A quantitative approach to assessing digital library research results, impact as well as collaboration patterns is bibliometric analysis. Researchers can use bibliographic methods for detecting influential publications, monitoring research trends and evaluating the impact of Asian countries' digital library initiatives. Numerous research gaps remain to be filled despite increasing literature on this topic. For instance, comparative studies across nations should be done; examining how scholar communication practices are affected by endeavors towards establishing digital libraries; language and cultural heritage preservation as some of their social challenges they try to address.

Several fields in Asia are covered by literature on bibliographic analysis of digital libraries, namely library science, information science and computer science. In previous researches such things were examined as collection management, user behavior, technology transfer and inter-organizational cooperation. However, a comprehensive analysis is required to address broader aspect of Asian countries and new research questions.

Finally, this study makes a significant contribution to the ongoing discussion about the role of digital libraries in Asian countries through critically examining existing studies with an aim of identifying new trends as well as areas which need more exploration. Its findings would appeal to researchers, policy makers, library science professionals, information scientists, computer scientists and others interested in understanding how digital libraries have influenced scientific communication in Asian countries. It is likely to offer valuable insights and thoughtful discussions.

### 1.1 Purposed research

There is a lack of comprehensive bibliometric analyses focusing on research outputs from Asian countries, hindering our understanding of the scholarly output, collaboration networks, and confined emphases within the region. By conducting a focused bibliometric analysis on research papers related to digital libraries in Asian countries, we can gain insights into the research landscape, identifying emerging trends, and inform future directions for digital library research.

This research project focuses on studying articles specifically about digital libraries in Asian countries. The study analysed factors such as the citation patterns, publication frequency over time and the countries & institutions producing the most research to understand which studies are influencing others. We aim to gain a deeper understanding of the state of digital library research in Asian countries. This information will be valuable for policymakers, scholars & professionals who are interested in improving digital library services and research in Asian countries. Ultimately, our aim is to provide insights that can help guide future efforts to enhance digital library initiatives in Asian countries.

There is plenty of research on digital libraries worldwide, but not particularly focused on how they are developing, especially in Asian countries, which was found in the literature that was reviewed. Therefore, using data from the Web of Science (WoS) database for 10 years (2014-2023), it is designed to experimentally assess the research output on digital libraries from the viewpoints of bibliometrics and mapping.

### 1.2 Statement of the problem

Numerous research publications were examined from a bibliometric perspective at multiple comprehensive levels, spanning from the local to global. The following important research gaps have been identified by the literature review;

- Digital libraries are essential for enabling knowledge and information access in Asian nations. We still don't fully grasp these digital libraries' operations or how they affect academic communication and the spread of knowledge, though.
- Many studies focus on digital libraries in western countries, leaving gap in understanding the unique characteristics and challenges of digital libraries in Asian countries.

In order to fill this vacuum, this research uses bibliometric analysis to undertake an extensive investigation of digital libraries in Asian nations entitled with, *"**A Bibliometric Analysis on Digital Library Research Output in Asian Countries from 2014-2023".***

## 2. Review of Literature

A literature review is a work that organises, evaluates, analyses, and summarises the writings done by other researchers on a particular subject. Before starting any research project, a thorough review of literature is necessary that points towards research gaps as well as guides a researcher's plan and evaluates his research study. A researcher must perform comparative literature before starting any research process. It simply involves a detailed search of the literature presently available in his/her research area like books, journals, articles, theses, dissertations, conference proceedings, web pages, and other print and electronic resources**.**

### 2.1 Research Studies Based on Bibliometrics

- Dantu et al. (2021) defined bibliometric analysis as a powerful scientific information exploration method, especially in the growing field of business research. It provided a step- by-step process for conducting professional bibliometric analysis and pointed out bibliometric analysis' significant connection with meta-analysis and SLRs. He purposes to present researchers with knowledge and tools that enable them to conduct professional bibliometric analysis with confidence. Hence, it is a helpful tool for gaining a genuine understanding and conducting bibliometric analysis effectively.
- Ellegaard et al. (2015) provided an overview of Bibliometric analysis, which is extensively growing in research evaluation as well as institution ranking. With AR indicating gradual increasing impact, some seem to evidence influence even within non-ILS categories. Keyword analysis gives an overview of popular subjects, with multidisciplinary articles having higher than average impact. There is an evident shift in countries with high contribution to bibliometric analysis, and self-perpetuating referencing trend.
- Glanze et al. (2003) explained that Bibliometrics is a quantitative analysis of publications, particularly in science and medicine, focusing on citations analysis and assessing journal importance. It has been controversially used to evaluate researchers. He used standard metrics, provides rankings for key Indian journals, discusses metrics perceptions, and considers technology and publishing trends.
- Rout et al. (2023) explored the social mdia research in LIS field indexed in scopus database. The study revealed the un-dependency of citation on publication no. and the most

productive country. The ranking of countries in publication trend and all other bibliometric parameters are also determined in this study.

- Arsenova et al. (2013) explore the use of bibliometrics in public libraries to improve services and management. This quantitative approach can enhance library visibility and support evidence-based decisions for resource allocation. Additionally, bibliometrics can broaden the skill set and professional scope of librarianship. Integrating these practices can lead to more efficient and modern public libraries.
- Salini et al. (2016) define bibliometrics as a branch of library science focused on applying mathematical and statistical analysis to bibliography. It involves the statistical examination of books, articles, and other publications. Initially used to analyse bibliographic data due to the significant growth in journals and scientific papers, bibliometrics has since become a key tool for evaluating scientific research.

## 2.2 Research studies based on digital library

- Alagu and Thanuskodi (2019) carried out a bibliometric analysis of digital literacy research output, examining 512 bibliographic records from the Web of Science database spanning the period from 1992 to 2011. The study's focus was on analysing various metrics, including relative growth rate, doubling time, productivity by country, top authors, most prolific journals, language distribution, leading institutions, keyword frequency, and citation references. The year 2011 saw the highest number of publications, with 126 records. The "Journal of Adolescent & Adult Literacy" topped the list of journals, having published 18 of the analysed records.
- Singh et al. (2007) performed a bibliometric study of literature

on digital libraries, using data retrieved from the LISA Plus database. They examined various bibliometric patterns, including authorship trends, author productivity, and prominent contributors. The study also analysed the distribution of articles by year, language, and country.

- Shaikh et al. (2021) analysed global research output on digital libraries, reviewing 4,278 documents from 2011 to 2020. Using bibliometric indicators, they identified 2020 as the most productive year, with Zhang Y being the most prolific author. The USA topped the list with 1,009 articles, and "Information Science & Library Science" was the dominant subject. Wuhan University emerged as the leading institution in digital library research.

- Astiti et al. (2023) developed web-based digital library products for public elementary schools using a PPE model, incorporating observation, interviews, and validation. The library includes 2013 curriculum textbooks, Kurikulum Merdeka resources, numeracy literacy modules, children's storybooks, learning videos, and teacher-supporting materials.

  The DigiQUAL validation yielded a score of 4.4, indicating high quality and potential as a useful educational tool.

- Iqbal et al. (2023) aimed to create the Integrated Digital Library User Success (IDLUS) model for Pakistan's Higher Education Commission National Digital Library (HEC-NDL) by combining existing digital library and web success models. The study analysed 355 surveys from the University of the Punjab, using confirmatory factor analysis and structural equation modeling. Results validated the IDLUS model, showing significant relationships among latent variables. The study offers insights

for system designers, programmers, and researchers involved in digital library development at national and international levels.

- Senthil Kumaran et al. (2023) Elaborate that Fully automated libraries that exist entirely in digital form and offer access to information resources from a distance, as well as to conventional users over an electronic channel, are called digital libraries. Digital libraries electronically publish a huge amount of recently created information to meet users' information requirements. Despite improvements in search engines, most users find it hard to locate the needed information. It is equally important to introduce in the framework a provision that enables adaptation of inquiries to information arenas and target learners for better service. He presented that the higher precision and lower cost of personalized learning resource prediction and recommendation in digital libraries. For creating an individualized digital learning environment, the author suggests a new approach based on an ontology-supported CF recommendation system. The idea is to make access to library resources available on an adaptive basis. One possible recommendation of the project is building a user-based CF in which learning resources would be suggested to students according to their course registration, learning preferences about topics, and virtual libraries.
- Pourjahanshahi et al. (2023) examine that the effect of website quality on digital library users' intentions on attitudes, online co-creation, and eWOM. They collected data from 402 users of the AstanQodsRazavi digital library in Iran. The data were analyzed using the SPSS and the PLS software's, and the results showed that the constructs of website quality were valid and reliable. Therefore, the results support the hypothesis that website quality positively influences user attitudes, co-creation, eWOM, and the intention to use the library. Thus, to increase users' participation

and usage intention, the design of the websites should be user friendly.

- Wang et al. (2022) outline a strategy for developing unmanned intelligent digital libraries in the "Internet+" era. This approach involves IntelliSense, network transmission, data storage, analysis, and intelligent service modules. Information in the digital library is collected using RFID technology and close-range wireless communication, transmitted via wireless LAN, and stored in a data storage and analysis module. Data mining techniques, like the k-means clustering algorithm, are used to analyse the data for intelligent service provision. The experimental results demonstrate that this strategy meets functional requirements and delivers accurate data location and intelligent services to users.
- Akintonde et al. (2022) examine that how postgraduate students in South-West Nigeria use digital libraries and activities related to digital preservation. 29,017 postgraduate students and 363 library staff members from 12 universities participated in their study. According to their report, the main goals of using digital libraries are to prepare for tests and finish assignments. Postgraduate students encounter many challenges, such as unstable power supplies, inadequate internet speeds, and unavailability of some websites. They discovered a weak, favorable, but not statistically significant link between the use of digital libraries and digital preservation measures. To increase the caliber and accessibility of digital materials, libraries should work with other organizations and give priority to investing in digital preservation techniques.

Recent studies on digital libraries have explored diverse aspects, including bibliometric trends, system models, user behavior, and educational implementation. Bibliometric analyses by Alagu & Thanuskodi (2019), Singh et al. (2007), and Shaikh et al. (2021) provided insights into global research productivity, authorship, and institutional contributions, but they lacked specific focus on Asia. Technological innovations, such as Iqbal et al.'s (2023) IDLUS model, Senthil Kumaran et al.'s (2023) adaptive systems, and Wang et al.'s (2022) unmanned digital libraries, demonstrate growing interest in personalized and automated services. Yet, these works often remain technical, with limited emphasis on scholarly output or regional patterns. In terms of user perspectives, Pourjahanshahi et al. (2023) and Akintonde et al. (2022) emphasized the role of website quality and usage behavior, highlighting the significance of user experience in digital library success. Similarly, Astiti et al. (2023) showcased how digital libraries support school-level education, although such development-based studies rarely engage with broader bibliometric trends.

Despite these contributions, four key research gaps remain evident: (1) a lack of regional focus on Asia in bibliometric studies, (2) limited analysis integrating document types, subject areas, and citation metrics, (3) absence of comparative, country-wise insights within Asia, and (4) a disconnect between user-based or technical innovations and large-scale bibliometric mapping. The present study addresses these gaps by exclusively examining digital library research trends in Asian countries from 2014 to 2023.

## 3. Objectives of study

This study aims to exclusively examine the growth and characteristics of literature on digital library research in Asian countries during the specific time span from 2014 to 2023.

So, the research question which is explored by the objectives is "What are the global research trends and patterns in digital library literature based on document type, geographic distribution, authorship, citation impact, and subject areas?"

The specific objectives of this study are,

- To examine the document types and number of documents in which digital library term used.
- To analysis the data geographically by type of document.
- To find out the source and author based on the number of publications and total citations.
- To find out the top countries in digital library research.
- To identify the number of articles published in various subject areas.

## 4. Methodology

Research type: The present study is an attempt to reveal the literature of digital library in Asian countries the field of library and information science in 10 years, from 2014 to 2023. It is a bibliometric analysis of the number of papers in the subject of digital library that have been indexed in the web of science database.

Data source selection: The bibliometric data was retrieved from web of science as it is the world's oldest, most widely used and authoritative database of research publications and citations. Since web of science offers access to a vast array of academic literature from a variety of disciplines, using it as a wise decision, due to its extensive coverage, citation analysis, and smart search features.On April 21,2024 the web of science search interfaces advanced search feature was used to conduct a literature search. Asterisk (*), Boolean operators, and various field tags were used to search through the data.

### 4.1 Data analysis and interpretation

Bibexcel and Excel spreadsheets as bibliometric tools are used for data analysis. VoS Viewer, as visualisation software, is used to improve network visualisation. The Microsoft Office suite is additionally used for organisation of the study effort, data analysis and interpretation.

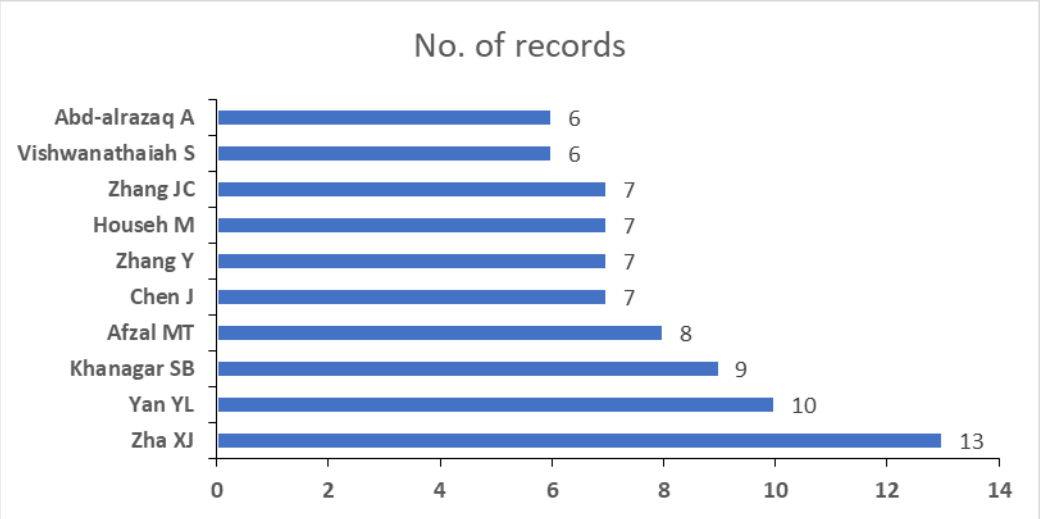
Scope and limitations

- This study is limited to search results on the term of 'digital library' in web of science database during 2014 to 2023 document types and number of documents.
- It focuses only on Asian countries' publications or articles, which are limited to coverage of geographical area.
- This study totally relies only on Web of Science Database which may not capture the full scope of digital library research; future studies should consider multiple databases to enhance coverage and comprehensiveness.

## 5. Analysis and Result

### 5.1 Author Wise Publications

Figure 1: Top 10 authors in digital library research in Asian countries




Source: WoS

The list shows a number of authors with different number of publications. This indicates how productive they are in publishing research papers. The most productive among this group is Zha XJ with 13 records. This indicates a high level of knowledge or activity in their area of expertise. Yan YL with 10 records and Khanagar SB with 9 records are also important contributors. This could indicate sustained research activity. This could indicate collaboration dynamics. For example, if authors such as Zhang Y (7 records) and Zhang JC (7 records) are co-authors or share the same research team, the data may indicate collaboration dynamics. Afzal MT leads the way with 8 entries, followed by chen J, zhang Y, househ M, and zhang JC with 7 entries each. These are active authors who are not as prolific as the first three.

### 5.2 Country Wise Publictions

Table 1: Country wise publication Growth

| Sl. No. | Country | No. of Publication |
|---|---|---|
| 1 | Peoples R China | 194 |
| 2 | India | 82 |
| 3 | Pakistan | 72 |
| 4 | Saudi Arabia | 49 |
| 5 | USA | 44 |
| 6 | Malaysia | 39 |
| 7 | South Korea | 37 |
| 8 | Iran | 37 |
| 9 | Singapore | 17 |
| 10 | UK | 16 |
| 11 | Japan | 15 |
| 12 | Turkey | 14 |
| 13 | Australia | 13 |
| 14 | Canada | 10 |
| 15 | Qatar | 10 |
| 16 | U Arab Emirates | 9 |
| 17 | Iraq | 7 |
| 18 | Germany | 7 |
| 19 | Thailand | 5 |
| 20 | Vietnam | 5 |

Source: WoS (Web of Science)

Table –1 reveals the top 20 productive countries in digital library during 2014-2023. China is the most productive country in digital

library research publication. India ranked at No.2 in digital library research publications.

### 5.3 Journal Wise Distribution of Publication

Table-2: Journal wise distribution of publication

| Sl . No | Journal Wise Name | No. of Publication |
|---|---|---|
| 1 | ELECTRONIC LIBRARY | 53 |
| 2 | LIBRARY HI TECH | 42 |
| 3 | IEEE ACCESS | 33 |
| 4 | SCIENTOMETRICS | 21 |
| 5 | APPLIED SCIENCES-BASEL | 17 |
| 6 | JOURNAL OF INFORMATION SCIENCE | 15 |
| 7 | JOURNAL OF LIBRARIANSHIPAND INFORMATION SCIENCE | 14 |
| 8 | JOURNAL OF MEDICAL INTERNET RESEARCH | 14 |
| 9 | JOURNAL OF ACADEMIC LIBRARIANSHIP | 11 |
| 10 | ASLIB JOURNAL OF INFORMATION MANAGEMENT | 10 |
| 11 | SENSORS | 9 |
| 12 | PEERJ COMPUTER SCIENCE | 8 |
| 13 | JOURNAL OF BIOMEDICAL INFORMATICS | 7 |
| 14 | INFORMATION DEVELOPMENT | 7 |
| 15 | INFORMATION PROCESSING & MANAGEMENT | 7 |
| 16 | ONLINE INFORMATION REVIEW | 6 |
| 17 | SCIENTIFIC PROGRAMMING | 6 |
| 18 | ARTIFICIAL INTELLIGENCE REVIEW | 6 |
| 19 | JOURNAL OF THE ASSOCIATION FOR INFORMATION SCIENCE AND TECHNOLOGY | 5 |

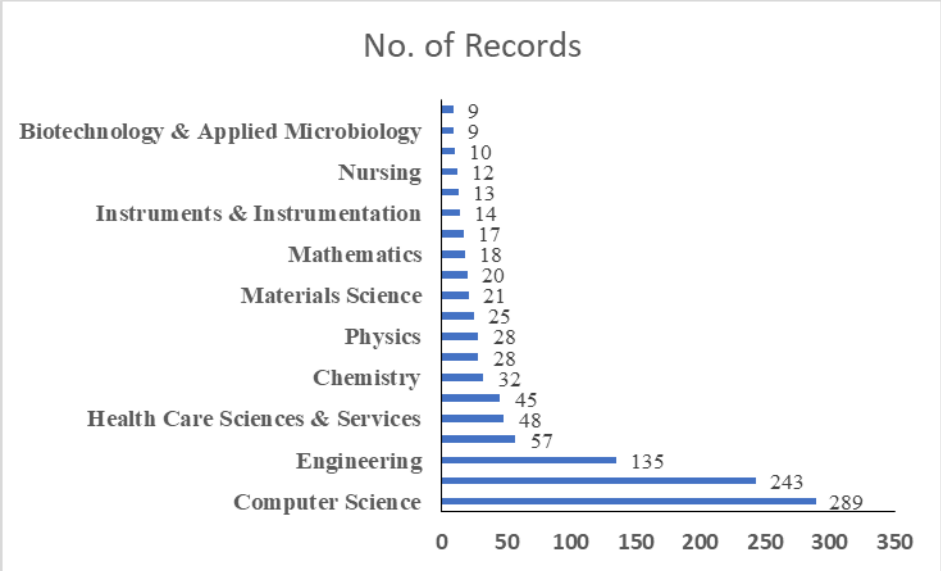
| | | |
|---|---|---|
| 20 | INFORMATION AND SOFTWARE TECHNOLOGY | 5 |

Source: WoS

Table –2, shows the top journals based on the number of publications in the field of digital library, Electronic library has the highest number of publications, with 53 papers. Library hi tech is the second highest journal with 42 publications, closely following electronic library. IEEE access ranks third with 33 publications. Scientometrics &Applied Sciences-Basel hold the fourth and fifth positions with 21 and 17 publications, respectively.

### 5.4 Different Subject Area in Digital Library Publication

Fig 2: top 20 different subject area in digital library publications




Source: WoS

Figure 2 exemplifies the top 50 subject area wise distribution of digital library research output.289 documents of digital library research belong to computer science followed by information and

library science with 243 in digital library research. While 135 documents

were published in the area of engineering. 57 and 48 documents were published in the area of telecommunication & health care sciences and services respectively. The minimum number of productivities in subject areas is Biotechnology & Applied Microbiology and Environmental Sciences & Ecology with 9 and 9 records respectively.

### 5.5 Documents Type Wise Distribution of Publications

Table 3: Documents type wise distribution of publications

| Sl. No. | Papers | No. of Records |
|---|---|---|
| 1 | Article | 443 |
| 2 | Review | 263 |
| 3 | Article; Early Access | 13 |
| 4 | Article; Retracted Publication | 12 |
| 5 | Review; Early Access | 9 |
| 6 | Meeting Abstract | 6 |
| 7 | Book Review | 2 |
| 8 | Article; Proceedings Paper | 2 |
| 9 | Editorial Material | 2 |
| 10 | News Item | 1 |
| 11 | Total | 753 |

Source: WoS

The most common document type in the dataset is articles, with a total of 443 records. Review is the second most prevalent document type, with a total of 263 records. There are 2 and 1 records

categorized as editorial material and news items, representing the lowest dataset.

### 5.6 Top 20 Keywords of Digital Library Publication (2014-2023)

Table 4: Top 20 Keywords of Digital Library Publication

| SL. NO. | KEYWORDS | NO. OF RECORDS |
|---|---|---|
| 1 | MODEL | 53 |
| 2 | DIGITAL LIBRARIES | 44 |
| 3 | TECHNOLOGY | 43 |
| 4 | IMPACT | 40 |
| 5 | SYSTEM | 36 |
| 6 | INFORMATION | 33 |
| 7 | CLASSIFICATION | 32 |
| 8 | MANAGEMENT | 28 |
| 9 | QUALITY | 27 |
| 10 | FRAMEWORK | 27 |
| 11 | INTERNET | 25 |
| 12 | SYSTEMS | 22 |
| 13 | ADOPTION | 22 |
| 14 | CHALLENGES | 21 |
| 15 | DESIGN | 20 |
| 16 | WEB | 20 |
| 17 | USER ACCEPTANCE | 19 |
| 18 | SATISFACTION | 19 |
| 19 | PERCEPTIONS | 16 |
| 20 | STUDENTS | 16 |

Source: WoS

Table –4 depicts the most used keywords in the digital library research literature during 2014- 2023. These words are used in 753

documents included in the present study. The most used keywords in research are ‘model ‘appeared in 53 records. ‘Digital libraries appeared in 44 records followed by two keywords namely ‘technology ‘appeared in 43 records and ‘impact’ appeared in 40 publications. The other most used keywords in 753 publications include ‘system’, ‘information’, ‘classification’, ‘management’ with 36,33,32,28 respectively.

### 5.7 Most Productive Institution in Digital Library Publications

Table 5: Different institutions in digital library publication

| No. of Institutions | Record Count |
|---|---|
| Wuhan University Faculty of Social Sciences | 31 |
| Wuhan University School of Information Management | 31 |
| University of Malaya Faculty of Computer Science and Information Technology | 16 |
| Wuhan University Centre for Studies of Information Resources | 15 |
| Hamad Bin Khalifa University College of Science And Engineering | 12 |
| University of Engineering and Technology Faculty of Economics and Management Sciences | 12 |
| University of the Punjab Department of Information Management | 12 |
| Nanjing University School of Information Management | 9 |
| Central China Normal University School of Information Management | 8 |
| Jazan University College of Dentistry | 8 |
| Wuhan University of Science and Technology School of Management | 8 |
| King Abdulaziz University Faculty of Computing and Information Technology | 6 |
| Universiti Malaya Jabatan Sains Maklumat Dan Perpustakaan | 6 |
| King Saud University College of Applied Medical Sciences | 5 |
| University of Malaya Department of Information Systems | 5 |

| | |
|---|---|
| University of Technology Malaysia Faculty of Engineering | 5 |
| Zhejiang University Faculty of Information Technology | 5 |
| Alice Lee Centre for Nursing Studies | 4 |

Source: WoS

Table –5 describes the top 50 most productive affiliation in digital library research output in Asian countries during the study of 2014-2023.Wuhan University Faculty of Social Sciences has been recognized as the most productive affiliation with the share of 31 publications followed by Wuhan University School of Information Management (31). The top five universities produced more than 50 articles during the research period. University Of Malaya Faculty of Computer Science And Information Technology accomplished the third position with 16 articles. Wuhan University Centre for Studies of Information Resources, Hamad Bin Khalifa University College Of Science And Engineering, University Of Engineering And Technology Faculty Of Economics And Management Sciences, University Of The Punjab Department Of Information Management produced more than 10 articles during the research period.

## 6. Findings

- Asian digital library research features authors with varied productivity. Zha XJ leads with 13 publications, followed by Yan YL and Khanagar SB with 10 and 9, respectively. Consistent contributors like Afzal MT, Chen J, and Zhang Y have 7-8 publications each. Collaboration is evident, with Zhang Y and Zhang JC sharing the same publication count, indicating possible co-authorship.
- China dominates the field with 194 publications, while India and Pakistan follow with 82 and 72. Other key countries include Saudi Arabia, the USA, Malaysia, South Korea, and Iran, showcasing a diverse geographic spread in digital library

research.

- Top journals in the field are Electronic Library with 53 publications and Library Hi Tech with 42. IEEE Access is third with 33 publications, emphasizing the technology focus. Scientometrics and Applied Sciences-Basel indicate a broader range of research topics. This journal variety points to the interdisciplinary nature of digital library studies.
- Computer Science leads in digital library research with 289 publications, followed by Information Science & Library Science with 243. Engineering is also prominent, with 135 publications. Other significant areas are Telecommunications, Health Care Sciences, Medical Informatics, and Public Health, illustrating the wide-ranging applications of digital libraries.
- The dataset is mostly composed of Articles (443 records), followed by Reviews (263 records), indicating that most outputs are original studies or literature reviews. Unique document types like Early Access Articles, Retracted Publications, and Editorial Materials add diversity to the publication formats.
- Top keywords in digital library research include "Model" (53 records), "Digital Libraries" (44), and "Technology" (43). Other frequently used terms like "Impact," "System," "Information," and "Classification" highlight key focus areas in the field. This keyword distribution reveals central themes and topics of interest in digital library research.
- Wuhan University is the top institution in digital library research, with its Faculty of Social Sciences and School of Information Management each producing 31 publications. The University of Malaya and Wuhan University's Centre for Studies of Information Resources are also prominent. This shows that some Asian universities serve as key hubs for digital library research.

## 7. Discussion

In Asian countries, China stands out as the most productive nation in the realm of digital libraries, thanks to the intervention and promotion of development assistance provided by the Chinese government at various levels. Consequently, Chinese authors now boast the highest number of publications among Asian nations (Zhen,2010).

"It is also evident at the organisational level that institutions such as Wuhan University Faculty of Social Sciences have the highest number of published papers."

The journals, such as the Electronic Library, Library Hi Tech, and IEEE Access, are specifically focused on the field and publish high-quality articles after a rigorous review process. This may explain why they have the highest number of publications in this area.

## 8. Conclusion

The analysis of digital library research in Asian countries (2014-2023) paints a picture of a dynamic and collaborative research field. China leads the way in research output, with a focus on computer science and technological advancements in digital libraries. Articles are thedominant document type, and keywords like "model," "digital libraries," and "technology" highlight the emphasis on developing innovative solutions.

This research also reveals a promising future for digital libraries in Asia. By continuing to explore user needs, address challenges in the digital age, and investigate the impact of these libraries on various fields, researchers can ensure digital libraries evolve alongside user needs and contribute significantly to scholarly communication, knowledge dissemination, and educational achievements. Through collaborative efforts, Asian countries can remain at the forefront of digital library development and empower users and researchers in the region.

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