

DIGITAL ARCHIVES RESEARCH IN WEB OF SCIENCE: A SCIENTOMETRIC ANALYSIS OF SCHOLARLY TRENDS AND KNOWLEDGE DOMAINS

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Abstract :

This paper examines the scholarly landscape of digital archives research indexed in the Web of Science database through a scientometric approach. The study is based on 233 publications and analyses publication growth, document type distribution, productive authors, subject categories, research areas, affiliations, countries, publishers, and source titles. The results indicate a marked rise in digital archives research in recent years, with the highest publication output recorded in 2025. Articles constitute the dominant document type, confirming that the field is primarily journal-oriented. The subject profile demonstrates that digital archives research is deeply interdisciplinary, drawing from Library and Information Science, digital humanities, computer science, engineering, and health-related information domains. The study highlights the intellectual breadth of digital archives research and situates it within contemporary concerns of digital preservation, access, metadata, cultural heritage, and digital scholarship. The findings may support researchers, librarians, archivists, and policy makers in understanding the development and direction of digital archives scholarship.

Keywords : Digital archives; Scientometrics; Web of Science; Scholarly communication; Digital preservation

Introduction :

Digital archives have become a central concern in contemporary library, archival, and



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information environments. The shift from print-based and analogue collections to born-digital and digitized resources has transformed the way cultural memory, institutional records, research outputs, and heritage materials are preserved and accessed. Digital archives now encompass not only archival repositories in the traditional sense but also institutional repositories, digital heritage collections, manuscript digitization projects, research data repositories, community archives, and other digital preservation initiatives. In this expanded context, digital archives are closely linked with questions of long-term preservation, metadata creation, interoperability, discoverability, user access, and digital stewardship.

From a Library and Information Science perspective, digital archives represent an important intersection of archival theory, information organization, digital curation, preservation strategy, and user-oriented access systems. They are shaped by technological developments such as metadata standards, content management systems, optical character recognition, linked data, machine learning, and digital preservation infrastructures. At the same time, digital archives are influenced by broader concerns of memory studies, digital humanities, cultural heritage management, and open access scholarship.

The rapid expansion of digital archival practices has led to a corresponding growth in scholarly literature. However, the literature is dispersed across multiple disciplines and publication venues, making it difficult to obtain a consolidated view of the field. Scientometric analysis provides a useful way to examine the structure and development of this literature by identifying publication trends, productive contributors, major subject areas, leading institutions, and patterns of scholarly communication. The present study therefore analyses digital archives research indexed in Web of Science to understand its publication growth, disciplinary composition, and intellectual profile.

Review of Literature :

Bibliometric and scientometric approaches have long been used to examine the production, communication, and evaluation of scholarly literature. Pritchard (1969) introduced the term bibliometrics to describe the application of mathematical and statistical methods to books and communication media. Broadus (1987) further clarified the concept by framing bibliometrics as the quantitative study of published units and bibliographic records. Hood and Wilson (2001) later discussed the interrelationship of bibliometrics, scientometrics, and informetrics, demonstrating their value in studying research communication and knowledge production.

In the context of research evaluation, scientometric methods have become increasingly important for mapping publication growth, citation patterns, subject structures, and collaboration trends. Ellegaard and Wallin (2015) showed that bibliometric analysis can reveal the development of scholarly production and the impact of research within and across disciplines. Mingers and Leydesdorff (2015) highlighted the importance of scientometric indicators for journal analysis, research mapping, and institutional assessment. Donthu et al. (2021) provided practical guidance for conducting bibliometric studies and emphasized the



role of such methods in identifying influential authors, themes, journals, and collaboration networks.

Research on digital archives has developed within a distinctly interdisciplinary environment. In Library and Information Science, digital archives are often discussed in relation to digital preservation, institutional repositories, metadata standards, digital curation, and information access. In archival studies, attention is given to authenticity, provenance, appraisal, and the preservation of born-digital records. Digital humanities scholarship has explored the role of archives in cultural memory, public history, and computational access to heritage collections. Meanwhile, computer science and engineering literature address system architecture, digitization workflows, image processing, machine learning, and information retrieval in archival environments. Health-related and domain-specific literature also engages with archival concepts, especially in relation to digital image repositories, clinical documentation, and preservation of specialized data collections.

Although there is a growing body of research on digital archives, comprehensive scientometric overviews of the field remain relatively limited. Much of the existing literature focuses on specific repositories, technologies, or case studies rather than on the broader publication landscape. The present study contributes to the literature by providing a Web of Science-based scientometric profile of digital archives research and by interpreting the findings from a Library and Information Science perspective.

Objectives of the Study

The study was conducted with the following objectives:

1. To analyse the year-wise growth of digital archives research indexed in Web of Science.
2. To examine the distribution of publications by document type.
3. To identify the most productive authors in the field.
4. To identify the major Web of Science categories and research areas associated with digital archives research.
5. To examine leading affiliations and contributing countries.
6. To identify prominent source titles and publishers in the field.
7. To present the overall scientometric profile of digital archives research from a Library and Information Science perspective.

Scope and Limitations of the Study :

The study is limited to digital archives publications indexed in the Web of Science database and represented in the uploaded summary dataset. The analysis is based on aggregated bibliographic counts rather than full record-level metadata. Accordingly, the study focuses on publication growth, document type, productive authors, subject categories, research areas, affiliations, countries, publishers, and source titles. Citation-level network



analysis, co-authorship mapping, and keyword co-occurrence analysis were beyond the scope of the present dataset.

Methodology :

The study adopts a scientometric research design. Data were taken from the Web of Science summary dataset relating to digital archives research. The dataset includes tabulated information on publication years, document types, researcher profiles, Web of Science categories, affiliations, countries/regions, publishers, research areas, and source titles. The total number of publications was determined from the document type distribution, which showed 233 records. Frequencies and percentages were used to analyses publication patterns and research trends. Since Web of Science assigns more than one category or research area to some publications, the totals in subject-based tables may exceed the total number of publications.

Data Analysis and Interpretation :

1. Year-wise Distribution of Publications :

Table No. 1		
Year	Publications	Percentage
2026	29	12.45
2025	43	18.45
2024	29	12.45
2023	18	7.73
2022	19	8.15
2021	15	6.44
2000–2020	80	34.31
Total	233	100.00

Table No.1 reflect the year-wise distribution indicates a clear rise in digital archives research in recent years. The highest number of publications was recorded in 2025, followed by 2024 and 2026. The concentration of output in the most recent years suggests growing scholarly engagement with digital preservation, digitization, archival access, and digital heritage systems.



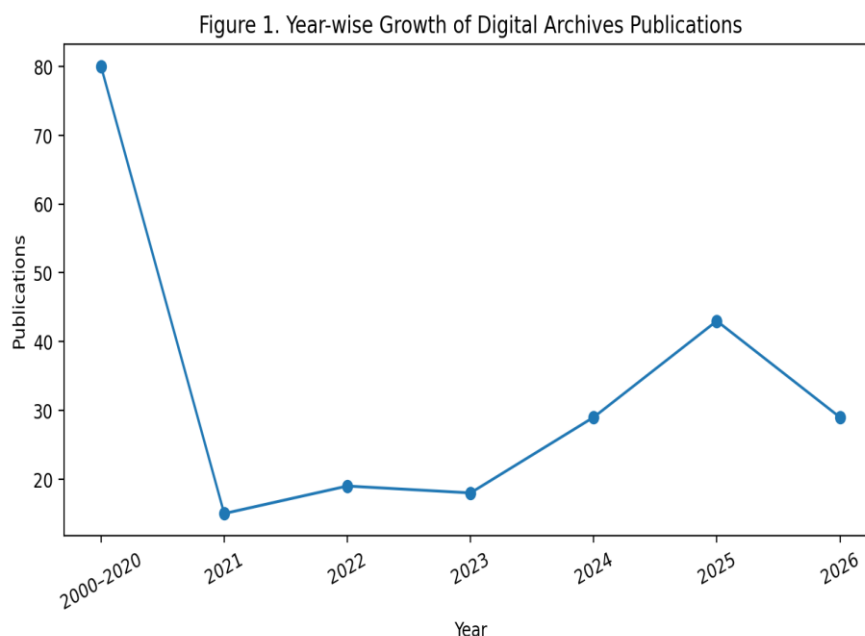


Figure 1. Year-wise Growth of Digital Archives Publications

2. Distribution by Document Type :

Table No. 2		
Document Type	Publications	Percentage
Article	161	69.10
Book Review	23	9.87
Editorial Material	19	8.15
Review Article	16	6.87
Early Access	5	2.15
Letter	3	1.29
Proceeding Paper	3	1.29
News Item	2	0.86
Poetry	1	0.43
Total	233	100.00

Table No.2 shows that articles are the dominant document type, accounting for 161 publications (69.10%) of the total 233 records. Book reviews constitute 9.87%, followed by editorial materials (8.15%) and review articles (6.87%). Other document types, including early access papers, letters, proceeding papers, news items, and poetry, represent only a small proportion of the literature. The results indicate that digital archives research is primarily communicated through research articles.



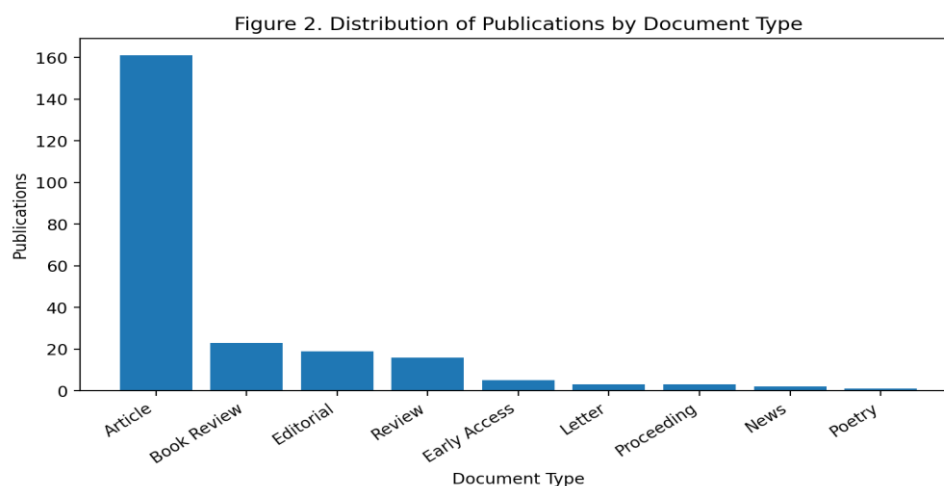


Figure 2. Distribution of Publications by Document Type

3. Most Productive Authors :

Table No. 3		
Rank	Author	Publications
1	Giansanti, Daniele	4
2	Jaillant, Lise	3
3	Tizhoosh, Hamid R.	3
4	Aske, Katie	2
5	Giovagnoli, Maria R.	2
6	Krause, Gerd	2
7	Modiba, Mashilo	2
8	Monoscalco, Lisa	2

Table No.3 presents the most productive authors contributing to digital archives research. Daniele Giansanti ranks first with four publications, while Lise Jaillant and Hamid R. Tizhoosh contributed three publications each. The remaining leading authors produced two papers each. The relatively small differences in publication output suggest that research in this field is distributed among several scholars rather than being concentrated among a few highly productive authors.

4. Web of Science Categories :

Table No. 4		
Rank	Category	Records
1	Information Science & Library Science	36
2	Humanities Multidisciplinary	22
3	Computer Science, Information Systems	21
4	Computer Science, Interdisciplinary Applications	14
5	Engineering, Electrical & Electronic	12



6	Pathology	12
7	History	10
8	Oncology	9
9	Construction & Building Technology	7
10	Multidisciplinary Sciences	7

Table No.4 indicates that Information Science & Library Science is the leading Web of Science category with 36 records. It is followed by Humanities Multidisciplinary with 22 records and Computer Science, Information Systems with 21 records. Categories such as engineering, pathology, history, oncology, and multidisciplinary sciences are also represented. This distribution demonstrates the interdisciplinary character of digital archives research.

5. Leading Research Areas :

Table No. 5		
Rank	Research Area	Records
1	Computer Science	40
2	Information Science & Library Science	36
3	Arts & Humanities – Other Topics	24
4	Engineering	24
5	Pathology	12
6	History	10
7	Oncology	9
8	Science & Technology – Other Topics	9
9	Construction & Building Technology	7
10	Health Care Sciences & Services	7

Table No.5 reveals that Computer Science is the leading research area with 40 records, followed by Information Science & Library Science with 36 records. Arts & Humanities and Engineering each contribute 24 records. The presence of pathology, oncology, health-care sciences, history, and construction technology shows that digital archival concepts and technologies are being applied across diverse academic disciplines.

6. Leading Affiliations :

Table No. 6		
Rank	Affiliation	Records
1	University of London	8
2	University of California System	6
3	University College London	5
4	Istituto Superiore di Sanità ISS	4
5	Mayo Clinic	4
6	Sapienza University Rome	4



7	Loughborough University	3
8	Northwestern University	3
9	RWTH Aachen University	3
10	University of Edinburgh	3

Table No.6 shows that the University of London is the most productive affiliation with eight records, followed by the University of California System with six and University College London with five. Several institutions from Europe and North America also appear among the leading contributors. The distribution indicates broad institutional participation in digital archives research without strong concentration in a single organization.

7. Country-wise Contribution :

Table No. 7		
Rank	Country/Region	Records
1	USA	60
2	England	27
3	People's R China	18
4	Germany	14
5	Italy	14
6	Canada	13
7	Spain	9
8	Australia	8
9	Switzerland	8
10	Türkiye	8

Table No.7 shows that the Table followed by England with 27 and People's Republic of China with 18 records. Germany and Italy contributed 14 records each, while Canada contributed 13. The representation of countries from North America, Europe, Asia, and Australia indicates that digital archives research has gained considerable international attention.



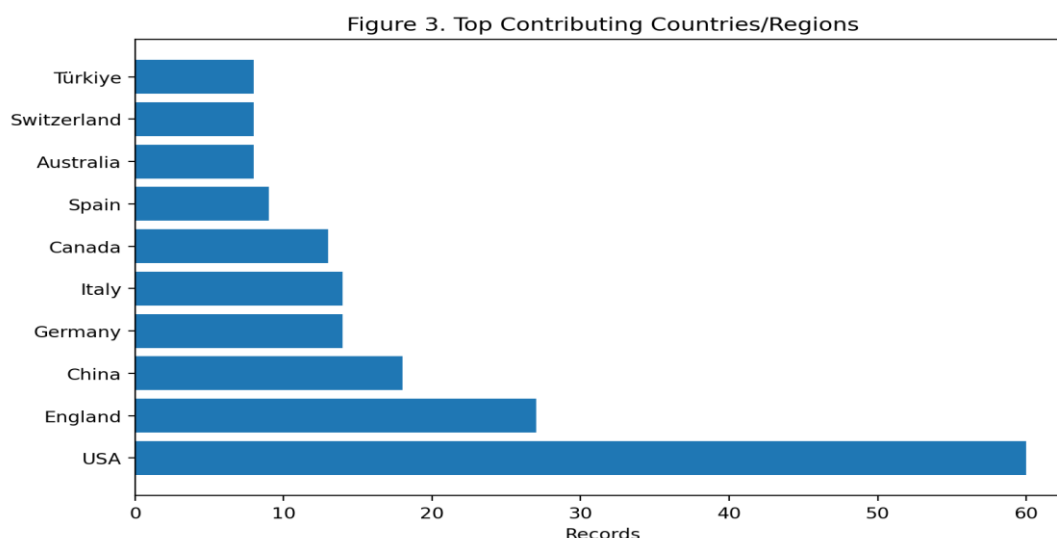


Figure 3. Top Contributing Countries/Regions

8. Leading Source Titles :

Table No. 8		
Rank	Source Title	Publications
1	ACM Journal on Computing and Cultural Heritage	8
2	Archives and Records	5
3	Healthcare	4
4	Journal of Documentation	4
5	Applied Sciences	3
6	Buildings	3
7	Cancers	3
8	Diagnostics	3
9	Electronic Library	3
10	IEEE Antennas and Propagation Magazine	3

Table No. 8 identifies the ACM Journal on Computing and Cultural Heritage as the leading source with eight publications, followed by *Archives and Records* with five publications. *Healthcare* and *Journal of Documentation* contributed four publications each. The variety of source titles covering computing, archives, library science, health, engineering, and cultural heritage further confirms the multidisciplinary nature of the research field.

9. Major Publishers :

Table No. 9		
Rank	Publisher	Records
1	Taylor & Francis	18
2	Springer Nature	16
3	Wiley	14



4	Elsevier	13
5	MDPI	12
6	Oxford University Press	8
7	Sage	6
8	ACM	5

Table No.9 shows that Taylor & Francis is the leading publisher with 18 records, followed by Springer Nature with 16, Wiley with 14, and Elsevier with 13, and MDPI with 12 records. Oxford University Press, Sage, and ACM also contribute to the literature. The presence of several major international academic publishers indicates that digital archives research is disseminated through a broad range of established scholarly publishing platforms.

Major Findings :

The major findings of the study are as follows:

1. Research articles constitute the largest document type, representing 69.10% of the total publications.
2. Daniele Giansanti is the most productive author with four publications.
3. Information Science & Library Science is the leading Web of Science category with 36 records.
4. Computer Science is the most prominent research area with 40 records.
5. The University of London is the leading contributing affiliation with eight records.
6. The USA is the highest contributing country with 60 publications, followed by England and China.
7. The ACM Journal on Computing and Cultural Heritage is the most productive source title with eight publications.
8. Taylor & Francis is the leading publisher with 18 records.
9. Digital archives research shows substantial participation from Library and Information Science, computer science, humanities, engineering, and health sciences.
10. Overall, the findings demonstrate the multidisciplinary and internationally distributed nature of digital archives research.

Conclusion :

The present scientometric study provides an overview of the publication characteristics of digital archives research indexed in the Web of Science database. The findings demonstrate that the field has developed as an interdisciplinary area connecting Library and Information Science, computer science, digital humanities, engineering, cultural heritage, and health sciences.

Research articles constitute the major form of scholarly communication, while the participation of authors, institutions, countries, journals, and publishers indicates that research activity is widely distributed. Information Science & Library Science remains an important



disciplinary foundation of the field, whereas the strong contribution of computer science highlights the increasing role of digital technologies in archival management and preservation.

The substantial contribution of countries such as the USA, England, China, Germany, Italy, and Canada also demonstrates the international relevance of digital archival research. The presence of major academic publishers and multidisciplinary journals further reflects the expanding scholarly interest in the subject.

Overall, the study indicates that digital archives have moved beyond traditional archival management towards a technology-oriented and interdisciplinary research domain. For Library and Information Science professionals, the findings emphasize the growing importance of digital preservation, metadata management, digital creation, repository development, long-term access, and technological competencies in the management of digital scholarly and cultural resources.

Scope for Further Research :

Future studies may extend the present research in the following directions:

1. A comparative scientometric analysis of Web of Science and Scopus databases may provide broader coverage of digital archives literature.
2. Keyword co-occurrence analysis may be conducted to identify the major themes and emerging research trends in digital archives.
3. Country-level collaboration may be studied to understand patterns of international research cooperation.
4. Future studies may examine specific areas such as digital preservation, artificial intelligence, metadata, digital humanities, institutional repositories, and cultural heritage archives.
5. Comparative studies may be carried out across different time periods to understand the evolution of digital archives research.
6. Further research may investigate the contribution of Library and Information Science professionals and libraries to the development and management of digital archives.

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