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An Analysis of Trending Topics in Library and Information Science Using Google Trends Arup Dhara

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ABSTRACT

The field of Library and Information Science (LIS) is continually transforming due to technological advancements, shifting societal needs, and new research opportunities. These changes necessitate an understanding of emerging trends to adapt effectively and guide the future direction of LIS. This research investigates the current trending topics within LIS by analyzing Google Trends data, which tracks the frequency of search queries over time. The purpose is to identify popular topics, provide insights into the evolving LIS landscape, highlight areas of growing interest, and inform future research directions. The study explores trending topics in LIS, focusing on themes like digital libraries, artificial intelligence in information retrieval, open access, information privacy, and the role of librarians in the digital age. By analyzing Google Trends data, the research presents a comprehensive overview of the key themes shaping the discipline, offering valuable insights for LIS professionals and researchers.

KEYWORDS: Library and Information Science, Google Trends, trending topics, digital libraries, information technology, data analysis, information behavior, research trends

1. INTRODUCTION

Library and Information Science (LIS) is an interdisciplinary field that encompasses the management, retrieval, and dissemination of information. LIS professionals work in a variety of settings, including libraries, archives, museums, and information agencies, to organize, curate, and preserve knowledge. Over the past few decades, technological advancements, digitalization, and the growing reliance on the internet have transformed the LIS landscape.

The rise of digital tools and technologies has led to a dramatic shift in how information is accessed, shared, and preserved. Furthermore, societal changes, such as the increasing focus on privacy, accessibility, and the open sharing of knowledge, have resulted in new research trends and practice areas within LIS. Understanding these trends is essential for both practitioners and researchers, as it enables them to stay informed and prepared for the future of the discipline.

Google Trends, a free tool provided by Google, offers valuable insights into the relative popularity of specific search queries over time. By analyzing data from Google Trends, it is possible to gain an understanding of the topics that

An Analysis of Trending Topics in Library and Information Science Using Google Trends

are gaining traction within a particular field. This paper leverages Google Trends to identify and analyze the trending topics within LIS, offering a comprehensive overview of the subjects that are currently capturing the attention of researchers, professionals, and the general public.

2. LITERATURE REVIEW

In recent years, the field of Library and Information Science has undergone significant transformation, primarily driven by technological innovations and changing societal needs. A growing body of literature has explored various core concepts as well as emerging trends and topics within LIS. A systematic literature review (SLR) was conducted to gather relevant studies on identification of popular terms in a particular field of interest and gaps of the study and research to be done to bridge the gaps. Some of the most prominent research includes:

- Educators and policymakers use Google Trends to analyze interest in educational topics and programs. For instance, studies have examined searches for online learning resources, particularly during the COVID-19 lockdowns (Cavicchiolo et al., 2022).
- Trending topics in LIS are often shaped by technological innovation, societal needs, and global challenges.
 Studies highlight areas such as digital libraries, artificial intelligence, open access publishing, and information privacy as key areas of interest (Tenopir et al., 2019).
- Understanding trending topics is essential for guiding LIS practice and research. For practitioners, it offers
 insights into user needs, enabling libraries to develop services and programs that align with current
 interests. For researchers, it highlights emerging areas of study, fostering innovation and collaboration
 across disciplines (Wilson, 2020).
- Identifying trends can help LIS educators update curricula to prepare students for evolving professional roles. The integration of digital skills, data analysis, and ethical considerations in LIS programs reflects the changing landscape of the field (Hirsh, 2021).
- Studies using Google Trends in LIS have explored diverse areas, such as user behavior in digital libraries (Yang et al., 2020), trends in academic publishing (Piwowar et al., 2019), and public interest in open access (Van Noorden, 2013).
- Researchers caution against over-reliance on Google Trends data due to limitations such as regional biases, the lack of demographic information, and variations in search query interpretation (Mavragani et al., 2018).

Trending topics is essential for guiding LIS practice and research. For practitioners, it offers insights into user needs, enabling libraries to develop services and programs that align with current interests. For researchers, it highlights emerging areas of study, fostering innovation and collaboration across disciplines. There is a need for a study that integrates both regional and temporal analysis of LIS trends and over a longer time frame which offer valuable insights for LIS professionals and researchers. By applying free tool like Google Trends to analyze search queries related to LIS, this paper aims to fill this gap and provide a more data-driven approach to identifying emerging trends in the field and allows researchers to track shift in popularity, compare multiple topics and explore geographical patterns.

3. COVERAGE

- a. **Timeframe:** The analysis covers a period of five years (2018-2023) to capture long-term trends and recent developments.
- b. **Geographical Scope:** The analysis focuses on global trends, with specific attention to regions with significant LIS activity, such as North America, Europe, and Asia.

4. METHODOLOGY

a. Data Collection:

To identify popular search terms in the field of Library and Information Science this study has focused on scholarly articles from databases such as Google Scholar, Scopus, PubMed, JSTOR, and IEEE Xplore. A comprehensive list of relevant keywords and phrases was curated, including:

- Core LIS concepts: libraries, information science, librarianship, information literacy
- **Technological trends:** artificial intelligence, machine learning, big data, data science, virtual reality, augmented reality, Internet of Things
- Emerging trends: open access, digital humanities, citizen science, maker spaces, information ethics

b. Analysis

The analysis covers a period of five years (2018-2023) to capture long-term trends and recent developments and focuses on global trends.

- **Trend Analysis:** Google Trends provides a visual representation of search interest over time, allowing for identification of peak periods, trends, and seasonal variations.
- Related Queries: Analysis of related queries reveals associated topics and subtopics that are gaining popularity.
- **Regional Interest:** Comparison of regional interest highlights geographical differences in trending topics and user preferences.

To identify the current trending topics in Library and Information Science, we employed Google Trends, an online tool that allows users to track the popularity of search terms over time. Google Trends aggregates search data from users worldwide, offering a relative index of search interest. The data is normalized on a scale from 0 to 100, with 100 representing the peak popularity for a given search term during a specified time frame.

For this analysis, we selected a broad range of terms related to LIS, including topics like "digital libraries,""open access,""artificial intelligence in libraries,""information retrieval,""data privacy in libraries," and "big data in information science." We then compared the relative popularity of these terms over the past five years to identify trends and patterns.

By analyzing these factors, the study aimed to highlight the most popular and rapidly emerging areas within LIS.

An Analysis of Trending Topics in Library and Information Science Using Google Trends

5. RESULTS AND DISCUSSION:

The analysis of Google Trends data revealed several key insights into the current state of Library and Information Science:

- Digital Libraries: The search term "digital libraries" consistently ranked high in popularity over the past five years. Interest peaked significantly around 2020, likely due to the global pandemic, which accelerated the shift to online resources and digital content delivery. The popularity of this topic suggests ongoing interest in the development and management of digital repositories, particularly in academic and public libraries.
- Artificial Intelligence in Libraries: The search for terms like "AI in libraries" and "artificial intelligence information retrieval" has been steadily rising, indicating growing interest in the integration of AI technologies in library services. AI applications in LIS are expanding beyond traditional information retrieval to include areas such as predictive analytics, chatbots, and automated metadata generation.
- **Open Access:** The term "open access" has experienced fluctuating interest over the years, with notable spikes in popularity following major policy announcements and conferences focused on open access initiatives. This trend highlights the increasing importance of open access publishing in academic research, with libraries playing a central role in facilitating access to scholarly content.
- Information Privacy and Security: Terms like "information privacy" and "data security in libraries" have seen a significant rise in interest, especially following high-profile data breaches and growing concerns about online privacy. This reflects a heightened awareness of the importance of securing personal and institutional data, as well as the role of libraries in safeguarding user privacy.
- Big Data in LIS: The search term "big data in libraries" has steadily gained traction, particularly in the context of data management, analysis, and discovery. This trend reflects the growing need for libraries to manage large volumes of data, both in terms of user-generated content and institutional datasets.
- The Changing Role of Librarians: The term "librarianship" showed a steady level of interest indicating a consistent demand for traditional library services but growing emphasis on evolving roles like digital skills, data curation, and information literacy.



Worldwide. Past 5 years. Web Search.



Arup Dhara







Fig 3: Google trends report of search term "Open Access"

An Analysis of Trending Topics in Library and Information Science Using Google Trends



Fig 4: Google trends report of search term "Information Privacy and Security"

Interest over time		Google Trends
• Big Data in LIS		
100		
75		
50	Note	
25		
17 Nov 20	21	May 2023





Fig 6: Google trends report of search term "The Changing Role of Librarians"

CONCLUSION

The results of this study, based on Google Trends data, offer valuable insights into the current and emerging trends within the field of Library and Information Science. Key topics such as digital libraries, artificial intelligence, open access, information privacy, and big data are driving significant interest and research in LIS. As technology continues to evolve, these trends will likely continue to shape the future of LIS, prompting further innovation in information management, access, and preservation.

LIS professionals must stay informed about these trends to adapt their services to the changing needs of their communities. Moreover, researchers in the field should explore these topics further to address the challenges and opportunities they present. Future research could involve a deeper analysis of specific subfields, regional variations in trends, and the impact of these topics on LIS education and practice.

By leveraging tools like Google Trends, the LIS community can gain valuable insights into the evolving landscape of information science and stay ahead of emerging developments in the field.

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