

Digital Humanities and Librarianship

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Digital Humanities (DH) is an emerging academic discipline that helps to provide solutions to problems of humanities and social sciences through computational techniques. It is the result of the convergence of digital technologies with social sciences and humanities. The libraries now have the responsibilities of planning, designing, and developing digital content, digital preservation, and digital archives to preserve the historical humanities and archaeological resources. Libraries have played a crucial role in the development of DH.¹ It is inspiring that library professionals are now wanted to engage with digital humanities actively.² DH is one of the key research areas of the library profession and can integrate with library technologies and methods such as knowledge organization, knowledge management, search and retrieval design, user education, metadata, semantic mapping, ontology, thesaurus construction, digital curation, discovery services, etc. which finds application in DH. Libraries support the digital humanities more explicitly in digital scholarly publishing, digital libraries, digital collections, text mining, and digital pedagogy.³

India has vast potential applications of DH with its diverse culture, customs, languages, and opportunities for libraries to contribute their value in this area. It opens up more job positions for library professionals. Researchers working with digital methods across a range of disciplines provide access to cultural heritage collections. Text and data mining, digital mapping, text coding, computational text analysis, social networking analysis, and spatial humanities are vital tools and methods of DH. Libraries are strategically embedding digital humanities support into the daily services of the library.

This special issue on digital humanities and Librarianship covers the fourteen research and review papers written by experts, professionals, and researchers from the different domains dealing with digital humanities and allied areas. DH is still in the nascent stage and is represented in various forms in teaching-learning practices at the university levels in India. However, it was amazing to see the overwhelming response from the authors for this special issue as a large number of research papers, case studies, and review papers were received. Out of the manuscripts we received and based on different rounds of anonymous reviews, fourteen manuscripts were selected with novelty in their technical content, research areas or a new interpretation of existing knowledge. We received far more manuscripts than we could publish in this special issue; therefore, we had to return those that were not likely to be directly relevant to the scope of the Special Issue or had not been recommended by the Reviewer(s). This is not a reflection of the scientific merit of the papers, so those can be submitted to other specialised journals or issues for consideration as well, please.

The first paper, “components of digital humanities in Indian LIS curricula,” conceptually analyses the courses of the central universities and proposes the course module for the DH for LIS schools by exploring the available courses syllabi and course descriptions. India’s cultural expressions are manifested through both conventional and contemporary means. Various DH programs were designed to address digital technology developments, implications, and inflexions on historical and contemporary culture and society in natural sciences, social sciences, arts, humanities, and technology. However, DH courses in the social sciences, arts, and humanities are not found. Digital competency, as per the NEP and DH course curricula, is needed along with the LIS program for digital humanities and librarianship, digital scholarship, and data science. The course model on DH in LIS covered the following courses.

- Core courses
- Foundation of knowledge
- Human information
- Digital humanities and librarianship
- Programming techniques and scripting
- Methods and methodologies in DH
- Digitisation of cultural heritage
- Elective
- Data science in DH in relation to LIS
- AL and ML in DH

- Information visualisation in GIS
- Text analysis (NLP) and text mining
- DH practicum
- Social network analysis
- Advanced programming techniques
- AR & VR technology
- Human-computer Interaction (HCI)
- Data analysis Python/R

The second paper on machine learning applications in digital humanities explored the potentials of ML tools and techniques to organize knowledge objects pertaining to various aspects of the LGBTQIA+ domain. It aimed to develop a semi-automated subject indexing system using an open-source machine learning framework (Annif) and deploy the Hoosiers, a domain-specific vocabulary system. It measured the efficiencies of the automated indexing framework. The authors investigated the potential for widespread adoption of a REST/API call-based approach to rapidly index a substantial number of records related to the LGBTQIA+ domain. The results found that one of the common approaches to evaluating the ML backends is by using the retrieval metrics, which provides a quantitative measure of the system's performance. Therefore, this paper is a preliminary account of the experimentation with open-source AI/ML tools.

The third paper surveyed the metadata element sets, including types of art objects, common art object categories, and the number of metadata elements used. It used online content analysis and observation methods to examine the common and unique metadata elements of galleries, libraries, archives, and museums (GLAMs) digital art objects. This paper explores how metadata elements are used to describe the different art collections in five national museums in India. The results highlight the need for standardization in metadata practices to improve the discoverability and accessibility of cultural objects. It shows how crucial metadata is in facilitating access to cultural objects. The paper also highlights the significant role of the Cultural Heritage Institutions (CHIs) in preserving and connecting people to their history and cultural heritage. It will be useful and interesting to the professionals working on digitising and preserving objects and helps GLAMs create the metadata guidelines and strategies for their digital collections.

The fourth paper analyses the trends and growth and mapped the interdisciplinary literature published on DH using the bibliometric analysis methods. Web of Science core collection has been used to retrieve the literature published from 2008-2022 (15 years) to examine the interdisciplinary DH research. Various bibliometric analysis techniques were applied, and it was found that DH is a multidisciplinary subject to which researchers from diverse subject specialities are actively contributing. Further, the paper suggested that future research is needed on the exploration of the intersection between DH and library science, including studies on best supporting and sustaining digital scholarship in research libraries, implications of digital technologies for preserving and interpreting historical materials and developing a digital platform to support research, and an assessment of the global dimension of DH, looking at how DH research is being conducted in different countries and how it reflects and shapes the cultural and intellectual diversity of the world.

The fifth and sixth papers identifies gamification/web-based games as an application of DH in libraries. It is an opportunity for library professionals to showcase their role in digital humanities by implementing the web-based games available on digital literacy. Now these days, gamification is a well-known concept, and it has been playing a significant role in user education and promoting the user services of libraries. It can attract people's attention, interest them in a specific activity, and affect their behaviours. The bibliometric study was undertaken with ten years' data from the Web of Science and analyses the most relevant sources, authors, globally cited documents, affiliations, country scientific output, three field plots, word growth, keyword plus, and co-occurrence network. Another research paper identifies web-based games that assist users in developing their digital literacy skills, including Gaming Against Plagiarism (GAP), reference sources, and citation awareness. Gamification is a new function appearing in the librarianship landscape. It has undoubtedly gained popularity during the pandemic.

The seventh paper is a case study which presents the extensibility of DH on Twitter Archives and interprets Twitter usage by analysing the posts on DH through text mining. Twitter is a social networking site that offers an opportunity for quality information sharing and collaborative participation in the digital humanities community. This case study provides insight into the DH research and academic professional usage of Twitter. The interdisciplinary approach can be seen in the hashtags used for trending topics in DH. It also identifies the availability of the DH community on Twitter, and further, it proposes text mining with the word frequency occurrence in tweets and limited to English language tweets that can be analysed for more precise research.

The eighth paper proposes the Book Purchase Model for Academic Libraries, which can be used as a DH tool in professional practices. In order to carry out this study, data from articles published under the University of Calicut from Scopus was collected. The authors of the paper have created the book purchasing algorithm for an academic library using the Digital Humanities tool that functions in accordance with the institution's core research subjects and evolving research areas. This model can be used to increase the effectiveness of book purchases. It will assist librarians in their acquisition processes, and the institutions will be able to support the research community.

The ninth paper of this special issue combines digital humanities concepts, tools, and applications. It gives an overview of the potentiality of digital humanities research by going through how libraries can utilise digital humanities applications to build suitable digital content on art.

The tenth paper in the library and information science context explores the scope and origin of the new domain DH in libraries. It has given the mode of formation of the subject DH from different viewpoints, including an intellectual and disciplinary map, relational architecture, and library and information science. Further, the author has highlighted the role of library professionals in developing DH, including possible activities.

The eleventh paper reviews and analyses the literature published on DH and libraries in recent years. The theory and concepts of digital humanities are examined as a field of study. It highlights the history and growth, and current situation of DH and libraries. The paper also provides the analysed number of published literature, document type, and major subject areas of the DH. Further, the paper also identified a research gap in digital humanities and libraries, and found that the DH has influenced academic librarians, archivists, and IT developers.

The twelfth paper describes the DH and libraries from the intellectual property rights perspective, including the IPR issues associated with it. Libraries are responsible for curating and cataloguing knowledge, and digital humanities have posed new intellectual property rights challenges to librarians, especially while dealing with copyright issues in sourcing manuscripts, digitising, curating, and indexing them. It discusses some of the recent developments in the field of intellectual property rights, especially those IP rights that apply to library services in the area of digital humanities (the basics of all copyright laws, patent laws, and trademark laws).

The thirteenth paper has brought the different dimensions of DH as an independent academic discipline in the Indian context. It found that DH in India is still in a nascent stage and cannot claim to be a separate academic discipline. It is unjustified to opine in favour of digital humanities as an independent academic discipline, and it is merged with information science and social sciences. The paper has highlighted events, including seminars, webinars, conferences conducted in India, literature published on DH in India, programs and courses offered in India, and departments, centres, organisations, and associations involved in the DH education and research activities. Further, the paper describes the role of libraries and library professionals in the case of DH becoming a discipline.

The fourteenth paper examines how Open Data can be used as a tool for DH to generate meaningful insights into India's cultural, historical and geographical features. It explored the potentials of open data in DH projects and government initiatives to improve access to DH resources and collaborations. The results show that there has been a growing trend in India towards the use of open data in the field of DH. DH in India is rapidly expanding, with universities and research institutions offering courses and programs related to or directly to DH. The paper also highlights the digital pedagogies of institutions, universities, government support, and other programs supporting the DH. Overall, Digital Humanities in India is making a significant contribution to the study and preservation of the country's cultural heritage and is helping to promote interdisciplinary research and collaborations between the humanities, technology, and the social sciences.

The articles published in this special issue on 'Digital Humanities and Librarianship' would add value to the existing knowledge base of the digital humanities in the broadest sense. It would help libraries, professionals, decision-makers, practitioners, researchers, and various universities and institutions understand digital humanities' significant contributions to libraries and other allied areas.

Bringing this issue was only possible with the active submissions of the authors and the hard work of honorable reviewers. As an institute, IIT Delhi also deserves deeper acknowledgements as its resources, including software have been used to review, validate and enrich content. I want to express my heartfelt thanks to the team of academicians at Central Library, IIT Delhi, who worked very hard to support this activity and see this special issue, the light of the day, on time. Finally, I wish to express my sincere gratitude to the Director, DESIDOC, and also to the Editorial Board and Editorial Team members of DJLIT, especially Mr. Yogesh Modi for reposing faith in me and guiding me to discharge my duties as the Guest Editor of this special issue. Since this is one of the first such compendiums from India on this topic in such format, as a book or as a special issue; I therefore believe that it would be a great source of information in the domain and may help the discipline prosper further in the days to come.

Needless to say, the content's responsibility rests with the content contributors.

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