



INTERDISCIPLINARY APPROACHES IN ARTS, HUMANITIES AND SOCIAL SCIENCES: A STUDY OF DIGITAL HUMANITIES INITIATIVES IN INDIAN HIGHER EDUCATION

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ABSTRACT

Interdisciplinary approaches have become central to contemporary knowledge production in the arts, humanities and social sciences, especially in response to complex socio-cultural and technological transformations. Digital Humanities (DH) exemplifies this trend by integrating methods, tools and epistemologies from computer science, information science and traditional humanities disciplines. In the Indian context, DH has emerged slowly but visibly, shaped by local institutional histories, infrastructural constraints and contested understandings of what counts as “digital” and “humanities.” This paper examines DH initiatives in Indian higher education as a case of interdisciplinarity in practice, focusing on how these projects reconfigure research, pedagogy, and academic labour in the arts, humanities, and social sciences. Drawing on a qualitative review of scholarly literature, policy documents and case studies of selected Indian DH projects such as Shodhganga and Project Madurai, the study analyses the conceptual foundations, perceived benefits, and key challenges of interdisciplinary DH work. The paper adopts a desk-based qualitative research design, using thematic analysis to organise insights around three core dimensions: epistemic integration, institutional structures and labour practices. Findings suggest that DH in India enhances the explanatory power and social relevance of humanities research through methodological pluralism and collaborative practices, but fragile institutional ecosystems simultaneously constrain it, uneven recognition of digital labour and persistent disciplinary hierarchies. The paper argues that a more reflexive, critically interdisciplinary DH praxis—one that foregrounds questions of power, labour, language and access—is essential if Indian higher education is to harness the full potential of interdisciplinarity in the arts, humanities and social sciences.

INTRODUCTION

The last few decades have witnessed an “interdisciplinary turn” in the arts, humanities and social sciences, driven by the recognition that complex social realities cannot be adequately understood through isolated disciplinary lenses. Interdisciplinarity is now widely promoted by funding agencies, policy documents and universities as a desirable mode of inquiry that promises holistic understanding, innovative problem-solving and greater societal relevance. Within this broad movement, the emergence of Digital Humanities (DH) has become one of the most visible and contested manifestations of interdisciplinarity in the humanities. DH brings together literary studies, history, cultural studies, linguistics, library science, computer science and design to explore how digital tools and methods transform humanities research and teaching.

In India, enthusiasm for inter- and transdisciplinary education has intersected with efforts to re-imagine traditional humanities curricula and pedagogies. Indian higher education institutions are experimenting with DH courses, research projects and digital archives, even as they grapple with infrastructural constraints, disciplinary turf politics and uneven digital literacies. Projects like Shodhganga, Project Madurai and a range of institution-based DH initiatives demonstrate how digital technologies are being used to archive, annotate and interpret Indian textual and cultural heritage in ways that cut across conventional departmental boundaries. At the same time, questions about the visibility, valuation and compensation of digital labour, especially that performed by students and early-career scholars, complicate the narrative of DH as a straightforward success story.

Against this background, the present paper addresses the following broad research questions:

1. How do Indian DH initiatives exemplify interdisciplinary approaches in the arts, humanities and social sciences?
2. What epistemic, institutional and labour-related benefits and challenges arise from such interdisciplinary DH work in Indian higher education?
3. What implications do these dynamics have for the future of interdisciplinarity in the arts, humanities and social sciences more generally?

By focusing on DH in India as a concrete site where interdisciplinarity is negotiated, the paper seeks to move beyond abstract advocacy for “interdisciplinary studies” and instead examine how interdisciplinary practices are actually structured, contested and lived within specific institutional contexts. The study is particularly relevant for scholars, administrators, and policymakers engaged in curriculum design, research planning, and capacity building in the arts, humanities, and social sciences in India and the Global South.



REVIEW OF LITERATURE

Conceptualising Interdisciplinarity in the Social Sciences and Humanities

Interdisciplinarity is often defined as an approach to knowledge production that involves the integration—rather than mere juxtaposition—of concepts, theories and methods from multiple disciplines to address complex problems. In the social sciences, interdisciplinarity recognises that social phenomena are multidimensional and that single-discipline analyses tend to isolate structural, cultural, or agency-based dimensions, oversimplifying reality. The literature distinguishes interdisciplinarity from multidisciplinarity, where disciplines work in parallel without deep integration, and from transdisciplinarity, which seeks to transcend disciplinary boundaries altogether.

Interdisciplinarity is argued to strengthen analytical depth, improve explanatory power and promote holistic understanding by enabling researchers to synthesise diverse perspectives. Theoretical frameworks such as systems theory, complexity theory and actor-network theory have often been used to support interdisciplinary approaches, emphasising interconnectedness and interaction across scales and domains. Methodological pluralism, particularly the use of mixed methods and cross-disciplinary collaborations, emerges in this literature as both a core feature and a key challenge of interdisciplinary work.

In the humanities, debates about interdisciplinarity have often been framed through shifts from “comparative” to “interdisciplinary” arts and cultural studies. Comparative approaches tended to respect disciplinary boundaries while examining patterns and differences across cultural forms, whereas critical interdisciplinary approaches seek to transgress boundaries, deconstruct established categories and open up new objects and modes of inquiry. This shift has been associated with intellectual movements in cultural studies, gender studies, postcolonial studies and visual culture, which routinely draw on sociology, anthropology, history and philosophy alongside literary and artistic analysis.

Benefits and Challenges of Interdisciplinary Research

The literature on interdisciplinary research identifies multiple benefits. Interdisciplinary teams can create learning environments conducive to open exchange, critical dialogue and mutual respect across disciplinary cultures. Such collaboration is said to enrich researchers’ experiences, broaden their understanding of common problems, and foster skills such as communication, negotiation, and reflexivity. In educational contexts, interdisciplinary teaching is linked to deeper knowledge assimilation, the development of metacognitive skills, and improved critical thinking among students. Some studies suggest that students exposed to interdisciplinary learning perform as well as or better than those in more traditional programs and may be better prepared for complex real-world careers.

However, the literature also documents significant obstacles. Difficulties often hinder interdisciplinary research in integrating diverse epistemologies, terminologies and methodological standards. Institutional structures such as departmental silos, promotion criteria and funding mechanisms tend to privilege disciplinary specialisation, making it challenging to sustain interdisciplinary initiatives. Faculty workload, scheduling, assessment practices and governance arrangements may not be aligned with the demands of interdisciplinary teaching and research. Additionally, interpersonal and power dynamics within interdisciplinary teams can reproduce hierarchies between disciplines (for instance, between STEM fields and the humanities) and between senior and junior researchers.

Despite these challenges, many scholars argue that the long-term benefits of interdisciplinary exchange—especially in addressing complex societal problems and connecting science and scholarship more closely with society—outweigh the downsides. Interdisciplinary research is thus increasingly framed as both an ethical and pragmatic imperative in contemporary knowledge economies.

Digital Humanities as Interdisciplinary Praxis

Digital Humanities has emerged globally as a quintessentially interdisciplinary domain situated at the intersection of humanities, social sciences, computer science and information science. DH involves the use of digital tools and methods—such as text mining, network analysis, GIS mapping, digital archiving and visualisation—to pose new questions, generate new kinds of evidence and present humanities research in novel forms. It also entails collaboration between humanists, librarians, software developers, designers and data scientists, often in project-based settings.

DH scholarship has highlighted both the opportunities and the tensions associated with this interdisciplinary terrain. On one hand, digital tools enable the analysis of large corpora, the preservation and dissemination of fragile cultural materials and the creation of interactive platforms that invite broader publics into humanities scholarship. On the other hand, critics point to the risk of technological determinism, the marginalisation of critical theory, and the reproduction of existing power structures, including Eurocentric canons and Anglophone dominance, within digital projects. There is also growing attention to the politics of infrastructure and labour—questions of who builds, maintains and benefits from DH platforms, and how this work is recognised or obscured.



Digital Humanities in the Indian Context

Emerging literature on DH in India underscores the specificity of its institutional, cultural and technological context. One study of “DH journeys” in Indian higher education institutions notes that DH in India is shaped by two key trends: the enthusiasm for interdisciplinary studies among both STEM and non-STEM actors, and efforts to reconfigure traditional academic structures through new curricula and collaborations. The authors highlight how location-specific politics, resource constraints and differing understandings of DH lead to heterogeneous implementations across institutions.

Another study focusing on digital labour in Indian DH projects identifies a range of actors—students, scholars, librarians and technical staff—whose contributions to tasks such as digitisation, encoding, metadata creation and platform maintenance are often under-acknowledged. By examining case studies such as Shodhganga, Project Madurai, and student-led initiatives such as “Panchatantra Reloaded,” the study shows how DH projects rely on multi-skilled labour that combines humanities expertise with technical proficiency. Yet, institutional reward systems frequently fail to reflect this hybridity.

Reports by European and global networks have emphasised that the social sciences and humanities can play a leading role in interdisciplinary research, particularly when they interrogate the assumptions and consequences of digitalisation itself. Such perspectives are particularly relevant for India, where questions of language, caste, gender, region and access intersect with digital infrastructures in complex ways. DH projects that engage with Indian languages, oral traditions, and marginalised communities thus have the potential not only to demonstrate interdisciplinarity but also to challenge Western-centric models of DH.

RESEARCH METHODOLOGY

Research Design

This study adopts a qualitative, desk-based research design suitable for conceptual and theoretical analysis of interdisciplinarity in DH within Indian higher education. Desk-based research allows for in-depth examination of existing scholarly literature, policy documents and publicly available project reports or websites, thereby facilitating a synthesis of dispersed knowledge on the topic. The approach is appropriate for the present study because DH in India is still emerging and fragmented, and comprehensive quantitative data about programs and projects are not yet systematically available.

The research design is interpretive and exploratory. It does not seek to test hypotheses but rather to identify patterns, themes and tensions that characterise interdisciplinary DH practices in Indian universities and related institutions. The focus is on understanding how interdisciplinarity is conceptualised, implemented and experienced, rather than on measuring outcomes in a strictly positivist sense.

Data Sources and Selection

Three types of sources were included in the study:

- Conceptual and theoretical literature on interdisciplinarity in the social sciences and humanities. These sources provide definitions, frameworks and debates that inform the analysis of DH as an interdisciplinary domain.
- Methodological and policy-oriented literature on interdisciplinary research design and institutional arrangements. These sources provide insights into the enabling and constraining conditions for interdisciplinary work in universities and research organisations.
- Empirical and reflective studies on DH in India and related case studies of digital projects. These include journal articles, conference papers, and project documentation focusing on Indian DH curricula, initiatives and digital labour.

Within the third category, particular attention was given to case studies explicitly situated in Indian higher education, including analyses of DH courses and the role of Indian universities in shaping DH, as well as project-based studies of Shodhganga, Project Madurai, and selected student- or institution-led DH initiatives. These cases were chosen because they exemplify different institutional locations (governmental, institutional, student-led) and highlight diverse forms of interdisciplinary collaboration and labour.

Data Analysis

Data analysis followed a thematic approach. After an initial close reading of the selected sources, key ideas and recurring patterns were coded under preliminary categories such as “definitions of interdisciplinarity,” “epistemic integration,” “benefits of interdisciplinary DH,” “institutional structures,” “labour and recognition”, and “Indian contextual specificities.” These initial categories were refined iteratively as more sources were added and as relationships among themes became clearer.

The analysis emphasised three interrelated dimensions:

1. Epistemic dimension – how DH projects combine theories, methods and objects from different disciplines, and how this affects knowledge production.
2. Institutional dimension – how organisational structures, curricula, funding and governance arrangements enable or constrain interdisciplinary DH.
3. Labour dimension – how human labour (academic, technical, student, library) is organised, recognised and rewarded within DH initiatives.



By organising findings along these dimensions, the study aims to provide a structured yet flexible framework for understanding DH as an interdisciplinary praxis in the Indian context.

Limitations

As a desk-based qualitative study, the research is limited by the availability and scope of existing literature and documentation. Not all DH initiatives in India are formally documented or published in academic journals, which may result in an emphasis on more visible or better-resourced projects. The absence of primary fieldwork data means that certain experiential aspects of interdisciplinary collaboration, especially from student and early-career perspectives, are inferred from published reflections rather than directly observed. Despite these limitations, the study offers a useful conceptual and empirical synthesis that can inform future, more granular investigations.

DATA ANALYSIS AND DISCUSSIONS

Epistemic Integration in Indian Digital Humanities

The literature suggests that Indian DH initiatives reflect multiple forms of epistemic integration. Some projects use digital tools primarily for preservation and access—for example, digitising theses, manuscripts or literary texts—while others experiment with computational analysis, visualisation or interactive platforms that reconfigure how humanities questions are posed. Shodhganga, a digital repository of Indian electronic theses and dissertations, illustrates an intersection of library science, information technology, and diverse disciplinary research outputs. While its primary function is archival, it implicitly supports interdisciplinary inquiry by making a broad corpus of humanities and social science research discoverable and reusable in digital form.

Project Madurai, which focuses on digitising classical Tamil literature, demonstrates how DH can bridge literary studies, philology, linguistics and computer science. The project involves tasks such as encoding texts, developing digital fonts, creating searchable databases and designing user interfaces—each requiring distinct but interdependent expertise. Such integration allows researchers to analyse patterns across large textual corpora, compare variants, and develop new forms of commentary that would be difficult to achieve using purely analogue methods.

Student-led projects like “Panchatantra Reloaded” and institution-based initiatives that combine semiotics, digital archiving, and the curation of emerging artists illustrate how DH can integrate visual culture studies, media studies, anthropology, and design practices. These projects often re-imagine canonical materials for new audiences through multimedia formats, thereby challenging conventional distinctions between “research,” “pedagogy,” and “public engagement.” In such contexts, interdisciplinarity is not an abstract ideal but a pragmatic necessity: without combining humanistic interpretation with technical implementation and design thinking, the projects would simply not exist.

Institutional Ecosystems and Interdisciplinary DH

Both opportunities and constraints mark the institutional conditions within which Indian DH initiatives operate. On the positive side, the general policy climate in India has become more supportive of interdisciplinary education, with universities encouraged to design flexible curricula and collaborative programs that bridge arts, humanities, social sciences and STEM fields. DH is often framed as a strategic area that can modernise humanities education, enhance students’ employability and align with national agendas around digitalisation and knowledge economies.

However, the literature also highlights substantial barriers. Many Indian universities still operate with strong departmental silos, rigid curricular structures and assessment regimes that prioritise traditional disciplinary content. Faculty members interested in DH may face challenges related to teaching loads, a lack of institutional recognition for interdisciplinary work, and limited funding for infrastructure such as servers, software licences, and dedicated lab spaces. Administrative procedures for cross-listing courses, co-teaching and joint supervision can be cumbersome, discouraging sustained interdisciplinary collaboration.

Furthermore, differences in academic calendars, incentive structures and resource allocation across departments (for example, between computer science and humanities departments) can create asymmetries in DH projects. Humanities scholars may feel dependent on technically skilled colleagues or staff whose priorities are shaped by other institutional demands, while technical teams may not see DH work as central to their own career paths. These tensions echo broader global concerns about the need to build robust “interdisciplinary ecosystems” rather than isolated, project-specific collaborations.

Labour, Skills and Recognition

One of the most distinctive contributions of recent work on Indian DH is its focus on digital labour. Studies show that DH projects rely on layered, multi-skilled labour performed by faculty, librarians, students, research assistants and technical staff who often juggle multiple roles—for instance, content selection, digitisation, encoding, metadata creation, quality control, interface design and community outreach. This labour combines domain knowledge in languages, literature and cultural studies with competencies in coding, data management and project coordination.

Yet, despite its centrality, this labour is frequently invisible in formal recognition systems. Students and junior scholars may contribute substantially to building digital corpora or platforms without receiving appropriate credit for authorship, career



advancement, or remuneration. Librarians and IT staff, who are crucial to sustaining DH infrastructure, may not be formally integrated into research teams, leading to fragmented responsibilities and unclear ownership. These dynamics risk reproducing traditional hierarchies within academia, even as DH is celebrated for its collaborative and innovative ethos.

The labour question intersects with issues of language, access and marginality. Projects that work with Indian languages, Dalit literature, regional archives or community-based heritage often depend on localised expertise and community trust that are not easily quantifiable in conventional metrics of research productivity. If such labour is not adequately valued, interdisciplinary DH risks becoming another site where already marginalised voices are instrumentalised without structural transformation.

Benefits and Transformative Potentials

Despite these challenges, the analysis indicates several significant benefits of interdisciplinary DH in Indian higher education. First, DH initiatives enhance the visibility and accessibility of Indian humanities and social science scholarship. Digitisation and open-access platforms extend the reach of these rare manuscripts and regional literatures to wider scholarly and public audiences, thereby supporting cumulative research and democratic access to knowledge.

Second, DH fosters new forms of pedagogy and student engagement. Interdisciplinary DH courses and projects encourage students to work in teams, combine theoretical and practical tasks, and reflect on the social implications of digital technologies. This mode of learning can strengthen critical thinking, creativity and problem-solving skills, which are increasingly valued in academic and non-academic careers. For students in arts, humanities and social sciences, DH can provide opportunities to acquire transferable digital skills without abandoning humanistic inquiry.

Third, DH creates spaces for rethinking canons, categories and geographies of knowledge. By digitising and curating materials in Indian languages, including oral narratives and visual cultures, DH projects can challenge Western-centric and Anglophone biases in global humanities scholarship. Interdisciplinary collaborations between humanities scholars, activists, archivists and technologists can generate more inclusive and context-sensitive representations of India's diverse cultural heritage.

Persistent Challenges and Critical Interdisciplinarity

At the same time, the study underscores that interdisciplinarity in DH is not inherently progressive. Without critical reflection, DH projects may replicate existing hierarchies, such as privileging certain languages, regions or social groups, reinforcing technocratic approaches at the expense of theory, or invisibilising certain kinds of labour. The rhetoric of innovation and “digital transformation” can overshadow questions about who benefits from DH, whose voices are foregrounded, and how data practices relate to broader structures of power.

Scholars of critical interdisciplinarity argue that genuinely transformative interdisciplinary work must not only integrate methods but also interrogate the normative assumptions of each participating discipline and of the broader socio-technical environment. In the Indian DH context, this implies sustained attention to issues such as caste, gender, language politics, regional inequalities, data governance and the political economy of digital infrastructures. It also calls for reflexive practices such as transparent authorship, participatory design with communities and ethical guidelines for digitisation and dissemination.

The analysis thus suggests that the future of interdisciplinary DH in India depends on whether institutions and practitioners move from a primarily instrumental view of interdisciplinarity—where disciplines are combined to achieve pre-defined functional goals—to a more critical and reflexive orientation that recognises interdisciplinarity as a site of ongoing negotiation, contestation and ethical responsibility.

RESULTS AND FINDINGS

Based on the thematic analysis, the main findings of this study can be summarised into three clusters: epistemic, institutional, and labour-related.

Epistemic Findings

Digital Humanities in Indian higher education demonstrates substantive epistemic integration by combining theories, methods, and data from the humanities, social sciences, computer science, and information science. Projects such as Shodhganga and Project Madurai exemplify how digital platforms can transform the scale and mode of humanities inquiry by enabling the accumulation, searchability and analytical processing of large corpora.

Interdisciplinary DH enhances the explanatory power and relevance of humanities research by enabling new research questions (for example, corpus-wide patterns, networked relationships, geospatial distributions) and by connecting textual analysis with visual, auditory and interactive modalities. This supports more holistic understandings of cultural phenomena that align with broader arguments for interdisciplinarity in the social sciences and humanities.



At the same time, epistemic integration remains uneven. Many projects still use digital technologies primarily for digitisation and access rather than for transformative analytical practices, partly due to resource constraints and gaps in technical training. There is a need to strengthen critical theoretical engagement alongside technical innovation to avoid reducing DH to tool-driven practices.

Institutional Findings

The policy and discursive environment in India is increasingly supportive of inter- and transdisciplinary education, creating openings for DH in curriculum design and research planning. Interdisciplinary DH is often framed as a way to modernise humanities education and prepare students for complex, digitally mediated futures.

However, existing institutional structures—such as departmental silos, rigid course frameworks, limited funding mechanisms and traditional promotion criteria—pose significant challenges to sustained interdisciplinary DH work. Coordination across departments, co-teaching arrangements and cross-listed courses remains difficult to implement, limiting the scalability of DH programs.

Interdisciplinary ecosystems for DH are still fragile. Many initiatives rely on individual champions, short-term project funding or informal collaborations rather than on robust institutional commitments, making them vulnerable to leadership changes and resource fluctuations.

Labour-Related Findings

Indian DH projects are heavily dependent on multi-layered digital labour performed by students, early-career researchers, librarians and technical staff, which combines humanities expertise with technical competencies. This labour is central to the functioning and success of DH initiatives but is often under-recognised in formal academic reward systems.

There is a persistent mismatch between the collaborative, project-based nature of DH work and conventional metrics of individual research output used for hiring, promotion and evaluation in Indian universities. This mismatch can discourage faculty and students from investing time and energy in interdisciplinary DH projects beyond the minimum required.

Labour inequalities intersect with broader social and linguistic hierarchies. Projects focusing on marginalised languages, communities or regions may face additional barriers, including limited funding, lower visibility and lack of institutional prestige, despite their critical contribution to decolonising and democratising humanities research.

Overall Assessment

Overall, the findings suggest that digital humanities initiatives in Indian higher education serve as both exemplars and tests of interdisciplinary approaches across the arts, humanities, and social sciences. They showcase the potential of interdisciplinarity to generate innovative research, pedagogy and public engagement, while also revealing the structural, epistemic and ethical challenges that must be addressed to realise this potential. The case of Indian DH thus offers broader lessons about the conditions under which interdisciplinarity can move from policy rhetoric to transformative practice.

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