LIBRARIES AS INTERDISCIPLINARY HUBS FOR SOCIAL SCIENCES RESEARCH IN THE DIGITAL AGE - A REVIEW OF ROLES, SERVICES, AND EMERGING PRACTICE IN ACADEMIC AND RESEARCH LIBRARIES

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Abstract :

Academic and research libraries are undergoing a sustained transformation from repositories of print collections into interdisciplinary infrastructures that actively enable social science inquiry. This paper examines how libraries function as convening hubs that connect social scientists with data science, digital humanities, geographic information systems (GIS), and computational methods, while providing research data management (RDM), digital scholarship, and open access services. Drawing on the current scholarly and professional literature, the paper synthesizes the drivers of this transformation, the service models libraries have adopted, and the persistent challenges of staffing, funding, and disciplinary culture that shape their effectiveness. Tables summarize core service categories and compare traditional versus digital-age library roles; figures illustrate the distribution of research methods used to study library RDM services and a conceptual model of the library as an interdisciplinary hub. The paper concludes that libraries are best understood not as passive support units but as co-producers of social science knowledge in the digital era, and it outlines directions for future practice and research.

Keywords : academic libraries; interdisciplinary research; social sciences; digital scholarship; research data management; digital humanities; open access

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Introduction :

The social sciences have always depended on institutions capable of gathering, organizing, and making accessible the raw material of inquiry census records, survey archives, government documents, oral histories, and the secondary literature that situates new findings within a field. Historically, the academic library performed this function primarily through print collections and reference expertise organized around disciplinary boundaries. The emergence of large-scale digital datasets, computational text and network

analysis, geographic information systems, and open science mandates has changed both what social scientists need from a library and how libraries can meet those needs.

This shift has repositioned the library from a passive custodian of resources to an active, interdisciplinary hub: a physical and digital space where social scientists, computer scientists, statisticians, humanists, and information professionals collaborate on shared infrastructure data repositories, computational labs, visualization tools, and consultation services. Several strands of the literature converge on this reframing. Library leaders describe repurposing physical and digital space specifically to facilitate interdisciplinary and multi-professional research, moving away from siloed subject-liaison models toward functional teams organized around data management, digital scholarship, and research impact.

This paper synthesizes that literature to answer three questions. First, what roles do libraries now play in supporting social science research in the digital age? Second, what service models and organizational structures have libraries adopted to function as interdisciplinary hubs? Third, what challenges and opportunities define the road ahead? The paper is organized as a narrative review: Section 2 outlines the conceptual background and methodology; Section 3 examines the library's evolving roles; Section 4 presents service models and data; Section 5 discusses challenges; and Section 6 concludes with implications for practice and future research.

Conceptual Background and Methodology :

This paper adopts a narrative literature review approach. Sources were identified through targeted searches of the recent professional and scholarly literature on academic libraries, digital scholarship, research data management, and interdisciplinary collaboration in the social sciences, supplemented by professional-association survey programs such as the Association of College and Research Libraries (ACRL) Academic Library Trends and Statistics Survey. Rather than attempting an exhaustive systematic review, the paper synthesizes recurring themes across recent case studies, conceptual articles, and one systematic review of research data management (RDM) services to build a coherent picture of the library's interdisciplinary hub function.

1. Defining the Interdisciplinary Hub :

For the purposes of this paper, an interdisciplinary hub is defined as a shared organizational and physical/digital space that (a) provides infrastructure data, tools, and expertise usable across multiple disciplines; (b) actively brokers connections between researchers who would not otherwise collaborate; and (c) sustains this function through dedicated staff roles rather than incidental contact. Libraries are well positioned to serve this function because they already sit outside individual academic departments, hold institution-wide budgets and infrastructure, and have a long-standing professional mandate to organize and provide access to knowledge across domains.

Evolving Roles of Libraries in the Digital Age :

Academic libraries occupy a distinctive position on campus: they are simultaneously physical and digital gateways, repositories, teaching centres, and research hubs for their parent institutions. This multiplicity of roles has expanded considerably as digital methods have become central to social science practice.

1. From Collection Custodian to Digital Scholarship Incubator :

Libraries were among the earliest adopters and providers of internet-based content, including digital archives, research databases, and electronic journals. Their continuing investment in open access infrastructure and institutional repositories has made previously inaccessible or fragmented data and scholarship available to interdisciplinary audiences. Beyond content provision, libraries increasingly offer access to specialized quantitative software such as SPSS and Stata, qualitative and mixed-methods tools such as NVivo and Dedoose, and visualization platforms such as Tableau resources that are essential for interdisciplinary digital scholarship but are often too costly or specialized for individual departments to provide independently.

2. From Subject Silos to Functional, Cross-Disciplinary Teams :

A recurring theme in the professional literature is the tension between traditional subject-liaison models in which librarians are assigned to a single discipline such as sociology, economics, or public health and newer functional models that consolidate expertise in areas such as data management, digital humanities, open access, and research impact. Functional teams increase the visibility of library competence and strengthen connections to central university services such as research computing and institutional review boards, but they can weaken the library's traditional relationship with individual departments. Many libraries now operate hybrid structures that retain subject liaisons while adding functional specialists who serve as interdisciplinary connective tissue across the institution.

3. From Reading Room to Collaborative and Maker Space :

Physical library space has been reimagined around collaborative learning, makerspaces, digital media labs, and quiet zones for deep work, reflecting the recognition that today's researchers require environments that are flexible and resource-rich rather than purely archival. These renovated spaces frequently host interdisciplinary programming workshops, data clinics, and cross-department symposia that would be difficult to convene within a single academic department.

Figure 2. The Academic Library as an Interdisciplinary Hub Connecting Social Science and Allied Disciplines

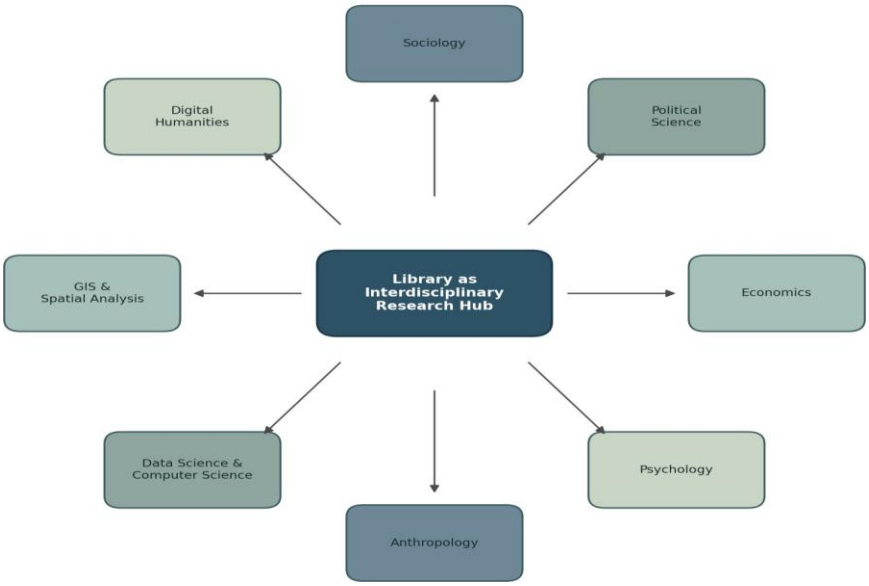


Figure 2. A conceptual model of the academic library as an interdisciplinary hub connecting the social sciences with allied disciplines and methods.

Service Models and Evidence from the Literature :

Libraries operationalize their hub function through a defined, if still-evolving, portfolio of services. Table 1 contrasts the traditional library role with the expanded digital-age role along several functional dimensions, drawing on themes identified across the reviewed literature.

Traditional versus Digital-Age Library Roles

Dimension	Traditional Role	Digital-Age Interdisciplinary Role
Core Asset	Print collections; physical archives	Datasets, repositories, computational tools, and licensed digital content
Primary Service	Reference and circulation	Consultation on data management plans, text/network analysis, and visualization
Staffing Model	Subject-based liaisons by discipline	Functional specialists (data, digital humanities, open access) alongside liaisons
Space	Reading rooms and stacks	Makerspaces, digital scholarship labs, collaborative studios
Scholarly Output Supported	Monographs, journal articles	Datasets, code repositories, interactive visualizations, open-access preprints
Collaboration Pattern	Discipline-siloed, department-based	Cross-department, cross-institution, and public-facing partnerships

Table 1. Traditional versus digital-age roles of academic libraries in supporting social science research.

Core Interdisciplinary Services Offered by Libraries :

Across the reviewed case studies and conceptual literature, a recurring set of

service categories appears. Table 2 summarizes these categories, the disciplines they typically connect, and representative activities.

Service Category	Disciplines Typically Connected	Representative Activities
Research Data Management (RDM)	All social sciences; statistics; computer science	Data management plan consultation; storage and preservation guidance; data repository curation
Digital Scholarship / Digital Humanities Centres	History, sociology, literature, computer science, linguistics	Text mining, computational analysis, digital exhibits, mapping projects
GIS and Spatial Data Services	Geography, urban planning, public health, sociology	Spatial data acquisition, mapping consultations, spatial statistics support
Institutional Repositories & Open Access	All disciplines	Depositing preprints, datasets, and theses; tracking research impact
Data and Statistical Software Support	Economics, psychology, political science	Training and support for SPSS, Stata, R, NVivo, Tableau
Community and Public Engagement	Social sciences, education, public history	Community archives, citizen-scholarship portals, participatory projects

Table 2. Core interdisciplinary services offered by academic libraries and the disciplines they connect.

Evidence on Research Data Management Services :

A recent systematic review of the literature on library RDM services identified 89 relevant studies published between 2012 and 2024, spanning the full research data life cycle from data management planning through preservation and reuse. As Figure 1 shows, the majority of these studies used qualitative methods (55.1 percent), followed by quantitative methods (30.3 percent) and mixed methods (14.6 percent). This methodological pattern suggests that the field has relied heavily on case studies, interviews, and practitioner reflection to document RDM practice, with comparatively less large-scale quantitative benchmarking a gap that also points to an opportunity for future interdisciplinary research combining library science with social science research methods.

Figure 1. Research Methods Used in Studies of Library Research Data Management (RDM) Services, 2012–2024

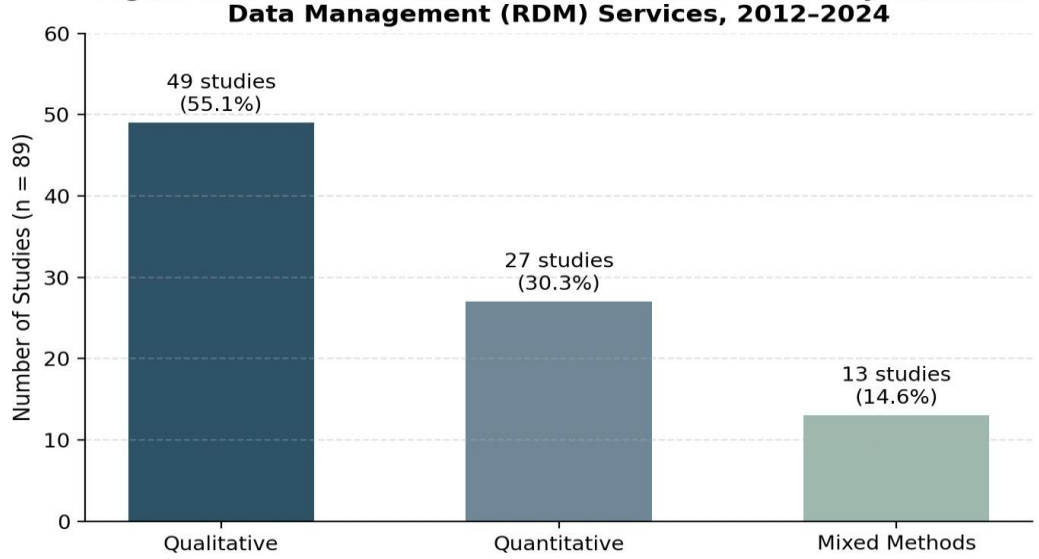


Figure 1. Distribution of research methods in 89 studies of library research data management services, 2012–2024. Data derived from Ho (2026), Journal of the Association for Information Science and Technology.

RDM services themselves range from basic offerings reference consultations on data management plans and curated guides to datasets and repositories to advanced services such as active data curation, metadata support, and long-term preservation partnerships. Because RDM cuts across virtually every empirical social science discipline, it is one of the clearest examples of a library function that is inherently interdisciplinary: a single RDM consultation may draw on statistics, information science, ethics, and domain-specific research design simultaneously.

Digital Scholarship Centres as Incubators :

Several universities have established dedicated digital scholarship or digital humanities centres within their libraries, positioning the library as a beta-test environment for new forms of interdisciplinary inquiry. These centres typically provide access to text-mining tools, large digitized text corpora, and technical expertise, drawing together scholars from digital humanities, computer science, linguistics, and statistics. The convergence of libraries, archives, and museums around digital humanities methods has similarly been shown to broaden and deepen interdisciplinary specialization, with research increasingly integrating knowledge and technologies from multiple fields to address shared cultural and academic questions.

Challenges and Opportunities :

1. Structural and Cultural Barriers :

Interdisciplinary collaboration between social and data sciences faces obstacles that extend beyond any single library's control. Interviews with researchers working at the intersection of social science and data science point to educational gaps, communication barriers between disciplines, and academic gatekeeping through publication and departmental structures that tend to reward disciplinary rather than interdisciplinary work. Participants in this research emphasized the importance of "interpreters" individuals able to translate across disciplinary languages a role that librarians with functional expertise are well suited to play, but which requires sustained institutional investment to scale.

2. Staffing, Funding, and Measurement :

National survey programs such as the ACRL Academic Library Trends and Statistics Survey continue to document disparities in staffing and funding across institutions, even as libraries expand their digital-scholarship and interdisciplinary service portfolios. Because much RDM and digital-scholarship activity is relatively new, libraries often struggle to benchmark their services against peers or to demonstrate return on investment in terms familiar to university administrators, a gap that survey and benchmarking initiatives are only beginning to close.

3. Opportunities :

- Expanding functional, cross-disciplinary staff roles (data services, digital scholarship, GIS) alongside traditional subject liaisons.

- Formalizing library involvement in interdisciplinary grant proposalsand data management planning from the earliest stages of a project.
- Investing in public-facing digital scholarship infrastructure (community archives, citizen-scholarship portals) that extends the library's hub function beyond campus.
- Strengthening quantitative benchmarking of library RDM and digital-scholarship services to complement the largely qualitative evidence base identified in Figure 1.
- Using AI-related trend data now being collected through national survey instruments to anticipate new interdisciplinary service demands.

Conclusion :

The literature reviewed here converges on a consistent picture: academic libraries are no longer peripheral support units for social science research but active, structurally significant interdisciplinary hubs. Through research data management services, digital scholarship centers, open-access infrastructure, and reconfigured physical space, libraries broker connections between social scientists and the computational, spatial, and humanistic methods that increasingly define digital-age inquiry. This transformation is uneven — shaped by staffing models, funding disparities, and long-standing disciplinary gatekeeping — but the direction of travel is clear. Future work should prioritize quantitative and comparative research on library-supported interdisciplinary collaboration, building on the largely qualitative evidence base documented in this review, and should examine how emerging technologies such as artificial intelligence reshape the library's hub function going forward.

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