

Open Access as a New Paradigm of Knowledge Dissemination: The Strategic Role of Libraries

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ABSTRAK

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Open Access has emerged as a transformative paradigm in scholarly communication, challenging traditional models of knowledge dissemination that rely on restricted access and commercial publishing infrastructures. This study examines Open Access as a new paradigm of knowledge dissemination and analyzes the strategic role of libraries in facilitating, mediating, and governing open knowledge ecosystems. Employing a qualitative descriptive-analytical approach with a conceptual framework, the study draws on academic literature, policy documents, and scholarly analyses related to Open Access, library publishing, and open science practices. The findings demonstrate that Open Access reconfigures the roles of libraries from passive information providers into active institutional actors responsible for infrastructure development, knowledge mediation, and scholarly advocacy. However, the study also reveals persistent structural and ethical challenges, including misaligned academic incentive systems, policy fragmentation, and emerging inequalities linked to author-funded publishing models. These constraints limit the capacity of libraries to fully institutionalize Open Access as a dominant mode of scholarly communication. The study concludes that Open Access should be understood not merely as a technical innovation but as an institutional and normative transformation that requires coherent policy support, ethical governance, and recognition of libraries as central actors in knowledge dissemination. Strengthening the strategic position of libraries is therefore essential to ensuring that Open Access contributes meaningfully to equitable and sustainable knowledge production.

INTRODUCTION

The transformation of scholarly communication in the digital era has fundamentally altered how knowledge is produced, disseminated, and accessed. Traditional subscription-based publishing models have increasingly been criticized for

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restricting access to scholarly outputs through high paywalls, thereby reinforcing structural inequalities in knowledge distribution between institutions, regions, and social groups (Frank, Foster, & Pagliari, 2022; Knöchelmann, 2021). In response to these limitations, Open Access has emerged as a new paradigm of knowledge dissemination that seeks to democratize access to scientific and academic knowledge by removing economic and legal barriers to information use (Mullen, 2024; Sugita, 2025).

Open Access is not merely a technical innovation in publishing practices but represents a normative shift in how knowledge is conceptualized as a public good. By enabling unrestricted access to research outputs, Open Access challenges the commodification of knowledge and promotes broader participation in scientific discourse, particularly for researchers, students, and practitioners in resource-constrained contexts (Njagi & Njoroge, 2024; Aliyu et al., 2025). Empirical studies indicate that Open Access publications demonstrate higher visibility and wider knowledge diffusion, reinforcing their potential role in reducing epistemic inequalities at both global and local levels (Nayak et al., 2025).

Despite its transformative promise, the Open Access movement faces significant structural and institutional challenges that complicate its implementation. Misconceptions regarding quality, sustainability, and intellectual property persist among academic communities, while Article Processing Charges (APCs) risk reproducing new forms of exclusion for researchers without institutional funding support (Varsha & Srinivasaragavan, 2025; Frank et al., 2022). These tensions reveal that Open Access alone does not automatically guarantee equitable knowledge dissemination, but requires supportive infrastructures, governance mechanisms, and institutional mediation.

Within this evolving landscape, libraries occupy a strategic position as institutional actors capable of bridging the gap between Open Access ideals and practical implementation. Academic and research libraries have increasingly expanded their roles from collection management to include Open Access advocacy, scholarly communication support, institutional repository management, and library-led publishing initiatives (Hadad, 2024; Duffy, 2024). Librarians, as information professionals, play a critical role in guiding researchers through Open Access policies, copyright considerations, and publication pathways, thereby shaping institutional engagement with open knowledge systems (Mathur, 2024; Arseneau & Dodd, 2025).

However, existing studies on Open Access and libraries tend to focus on operational aspects, such as repository development, publishing services, or awareness campaigns, often treating libraries as technical facilitators rather than strategic agents in the transformation of knowledge ecosystems (Liu & Liu, 2023; Kang, Kim, & Lee, 2024). While these contributions are valuable, they provide limited analytical engagement with the broader socio-political implications of Open Access and the evolving institutional power of libraries within scholarly communication systems.

Furthermore, critical scholarship has questioned the assumption that Open Access inherently democratizes knowledge, pointing to persistent inequalities shaped by global publishing hierarchies, language dominance, and institutional prestige (Knöchelmann, 2021). These critiques underscore the need to examine Open Access not only as a

publishing model but as a contested space where ideals of openness intersect with structural constraints, policy regimes, and institutional interests.

Based on this review, a clear research gap emerges. There remains a lack of conceptual and strategic analysis that explicitly positions libraries as central institutional actors in shaping Open Access as a paradigm of knowledge dissemination, rather than as peripheral service providers. Existing literature has yet to sufficiently interrogate how libraries negotiate normative commitments to openness, institutional responsibilities, and structural inequalities within the Open Access ecosystem (Braumah, 2025; Khan et al., 2025).

This study seeks to address this gap by reconceptualizing Open Access as a paradigmatic shift in knowledge dissemination and examining the strategic role of libraries in mediating, sustaining, and critically shaping this transformation. By integrating perspectives from scholarly communication, library and information science, and critical Open Access studies, the research aims to contribute a deeper conceptual understanding of how libraries can function as key institutional agents in advancing equitable, inclusive, and sustainable knowledge dissemination systems.

METHODOLOGY

This study employs a qualitative descriptive–analytical research design with a conceptual approach to examine Open Access as a paradigm of knowledge dissemination and to analyze the strategic role of libraries within this transformation. The qualitative approach is appropriate given the study’s objective to explore meanings, normative assumptions, and institutional roles rather than to measure causal relationships or statistical patterns. The research is positioned within interpretive and critical traditions in library and information science, focusing on how Open Access is constructed, mediated, and operationalized through library institutions (Braun & Clarke, 2021; Liu & Liu, 2023).

The data sources consist of secondary materials, including peer-reviewed journal articles, policy documents, and scholarly reports related to Open Access, scholarly communication, and library engagement in open knowledge initiatives. The literature was purposively selected from reputable international journals to ensure theoretical relevance and conceptual depth, particularly studies addressing Open Access governance, library publishing services, institutional repositories, and knowledge equity. This documentary-based approach enables a systematic examination of dominant discourses, institutional practices, and normative frameworks shaping Open Access implementation (Hadad, 2024; Duffy, 2024).

Data analysis was conducted using thematic analysis to identify recurring concepts, patterns, and analytical categories related to Open Access paradigms and library roles. Following the phases outlined by Braun and Clarke (2021), the analysis involved familiarization with the data, initial coding, theme development, and interpretive synthesis. This method allows for critical engagement with both explicit arguments and underlying assumptions in the literature. Analytical rigor was ensured through conceptual coherence, transparency of sources, and consistency between research objectives, analytical procedures, and interpretive conclusions (Braun & Clarke, 2021).

RESULTS AND DISCUSSION

Open Access as a Paradigm Shift in Knowledge Dissemination

Open Access represents a fundamental paradigm shift in the system of scholarly communication by redefining how knowledge is accessed, circulated, and valued. Unlike traditional subscription-based publishing models that treat scholarly outputs as commodified goods, Open Access frames knowledge as a public resource intended for broad societal benefit. This shift reflects a normative reorientation in which accessibility, transparency, and reuse are prioritized over exclusivity and market control, thereby challenging long-standing power structures within academic publishing (Mullen, 2024; Sugita, 2025).

From an epistemic perspective, Open Access alters the mechanisms of knowledge diffusion by enabling wider visibility and engagement across disciplinary, institutional, and geographic boundaries. Network-based studies of open-access publications demonstrate that unrestricted access significantly enhances citation reach and cross-institutional knowledge flows, particularly benefiting researchers in developing regions and non-elite institutions (Nayak et al., 2025). This transformation positions Open Access as a critical instrument for addressing global knowledge asymmetries, although its impact remains uneven across contexts.

However, the paradigm shift introduced by Open Access is not free from contradictions. While it removes reader-side barriers, the increasing reliance on Article Processing Charges transfers financial burdens to authors and institutions, potentially reproducing inequalities within academic production itself (Varsha & Srinivasaragavan, 2025; Frank et al., 2022). This tension illustrates that Open Access, as a paradigm, does not automatically guarantee epistemic justice but operates within broader political-economic structures that shape who can produce and disseminate knowledge.

Critically, Open Access also challenges prevailing assumptions about academic prestige and quality. Persistent misconceptions equating openness with lower scholarly standards continue to influence researcher behavior and institutional evaluation systems, despite evidence that Open Access journals can maintain rigorous peer-review processes (Njagi & Njoroge, 2024). These perceptions highlight the cultural and symbolic dimensions of the paradigm shift, which require institutional and professional mediation beyond technical infrastructure.

In this context, Open Access should be understood as a socio-institutional transformation rather than a purely technological innovation. Its effectiveness as a new paradigm of knowledge dissemination depends on governance arrangements, normative commitments, and intermediary actors capable of aligning openness with academic values and social objectives. This condition foregrounds the strategic importance of libraries as institutional agents that translate Open Access principles into sustainable scholarly practices (Hadad, 2024; Liu & Liu, 2023).

The Strategic Role of Libraries in Advancing Open Access Ecosystems

Libraries occupy a strategic position within the Open Access ecosystem due to their institutional mandate to ensure equitable access to information and support scholarly

communication. As academic publishing models evolve, libraries have expanded their roles beyond collection management to include Open Access advocacy, copyright guidance, repository administration, and scholarly publishing support. These functions position libraries as mediators between researchers, institutions, and publishing infrastructures, enabling the operationalization of Open Access principles at the institutional level (Mathur, 2024; Duffy, 2024).

One of the most significant contributions of libraries lies in their capacity to provide infrastructural and advisory support for Open Access publishing. Through institutional repositories, library publishing services, and Open Educational Resource initiatives, libraries facilitate long-term preservation, discoverability, and reuse of scholarly outputs (Hadad, 2024; Neharkar & Golwal, 2025). These services reduce dependency on commercial publishers and strengthen institutional control over knowledge dissemination, reinforcing Open Access as a sustainable practice rather than a marginal alternative.

Libraries also play a critical educational role in reshaping researcher attitudes toward Open Access. Studies indicate that librarians significantly influence scholarly communication practices by addressing misconceptions related to quality, copyright, and intellectual property, while promoting responsible and informed participation in Open Access publishing (Arseneau & Dodd, 2025; Subaveerapandiyan et al., 2023). This pedagogical function underscores the importance of libraries in cultivating an open knowledge culture within academic communities.

Nevertheless, the strategic role of libraries is constrained by institutional capacity, policy alignment, and professional recognition. In many settings, library-led Open Access initiatives remain under-resourced and insufficiently integrated into broader research governance frameworks, limiting their transformative potential (Aliyu et al., 2025). These constraints suggest that the effectiveness of libraries as Open Access actors depends not only on professional commitment but also on supportive institutional and policy environments.

To clarify the multidimensional role of libraries within Open Access ecosystems, Table 1 summarizes key library functions, their strategic contributions, and associated challenges in advancing open knowledge dissemination.

Table 1. Strategic Roles of Libraries in Open Access Ecosystems

Library Function	Strategic Contribution	Key Challenges
Open Access Advocacy	Promotes awareness and cultural acceptance of Open Access	Researcher resistance and misconceptions
Institutional Repositories	Ensures preservation and global visibility of research outputs	Technical capacity and sustainability
Scholarly Communication Support	Guides copyright, licensing, and publication choices	Limited staffing and expertise
Library Publishing Services	Provides non-commercial publishing alternatives	Financial and organizational constraints
Open Education Initiatives	Expands access to learning materials	Policy fragmentation and funding limitations

The table illustrates that libraries function as infrastructural, educational, and governance actors within Open Access systems. Their strategic role extends beyond service provision toward shaping the normative and institutional foundations of open knowledge dissemination. Strengthening this role requires policy recognition, sustainable funding, and integration of library expertise into institutional research strategies (Braithwaite, 2025; Khan et al., 2025).

Structural, Ethical, and Policy Challenges in Library-Led Open Access Implementation

Despite their strategic positioning, libraries face significant structural constraints in leading Open Access initiatives effectively. One of the most persistent challenges is the misalignment between Open Access objectives and institutional incentive systems that continue to privilege publication in high-impact, subscription-based journals. This structural contradiction places libraries in a mediating role without sufficient authority to influence academic reward mechanisms, thereby limiting their capacity to normalize Open Access as a dominant scholarly practice (Hadad, 2024; Knöchelmann, 2021).

From an ethical standpoint, Open Access implementation raises unresolved questions regarding equity, responsibility, and inclusion. While Open Access aims to democratize access to knowledge, the prevalence of author-pays models risks excluding researchers from underfunded institutions and the Global South, effectively shifting inequalities from readers to producers of knowledge (Frank et al., 2022; Aliyu et al., 2025). Libraries are often expected to mitigate these inequities through advocacy and institutional support, yet their ability to do so remains contingent on budgetary autonomy and policy backing.

Policy fragmentation further complicates library-led Open Access strategies. In many contexts, Open Access policies are articulated at national or institutional levels without clear operational guidelines, resulting in inconsistent implementation across libraries and disciplines (Liu & Liu, 2023). This lack of coherence weakens libraries' strategic leverage and reinforces a project-based approach to Open Access rather than a systemic transformation of scholarly communication.

Additionally, the expanding role of libraries in Open Access governance introduces new professional and organizational challenges. Librarians are increasingly required to develop competencies in copyright law, data management, publishing workflows, and research evaluation, often without corresponding investments in training and professional recognition (Mathur, 2024; Arseneau & Dodd, 2025). This mismatch risks overburdening library institutions while underestimating the expertise required to sustain Open Access infrastructures responsibly.

Consequently, the challenges faced by libraries in advancing Open Access are not merely technical but deeply structural and normative. Addressing these issues requires a reconfiguration of research governance that explicitly recognizes libraries as key policy actors in knowledge dissemination, rather than auxiliary service units. Without such recognition, Open Access risks remaining a partial reform rather than a transformative paradigm (Braithwaite, 2025; Khan et al., 2025).

CONCLUSION

This study demonstrates that Open Access constitutes a fundamental paradigm shift in knowledge dissemination, redefining access, circulation, and ownership of scholarly knowledge. However, its transformative potential cannot be realized solely through technological openness; it depends on institutional arrangements, cultural change, and governance structures that support equitable and sustainable knowledge production.

Libraries emerge as strategic actors in this transformation, functioning as infrastructural providers, educators, and mediators within Open Access ecosystems. Their role extends beyond facilitating access to actively shaping scholarly communication practices and advancing the normative foundations of open knowledge.

Nevertheless, the effectiveness of libraries in this role is constrained by structural incentives, ethical tensions, and fragmented policy frameworks. Strengthening library-led Open Access initiatives therefore requires integrated policy support, alignment with research evaluation systems, and recognition of libraries as central institutions in the governance of knowledge dissemination.

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