How modern platforms are reshaping library services?

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Abstract: *The contemporary library is no longer defined solely by its physical collection but increasingly by the platforms through which it delivers services, manages resources, and engages with its community. This article examines the multifaceted impact of modern platforms on library services, arguing that the shift from integrated library systems to comprehensive library services platforms, the rise of artificial intelligence in discovery and reference, the evolution of digital lending infrastructures, and the strategic use of social media constitute a fundamental reconfiguration of library work. Drawing on recent professional literature and survey data, the discussion considers both the transformative potential of these technologies and the persistent challenges of cost, equity, privacy, and professional identity that accompany their adoption. The central contention is that platforms are not neutral containers for library services but active agents in shaping what libraries can do, how librarians work, and how patrons experience the institution.*
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The past decade has witnessed a profound reconfiguration of the technological foundations upon which library services rest. Where the integrated library system once stood as the singular computational backbone of the institution, managing primarily print holdings and circulation transactions, today's library operates through an ecology of interconnected platforms that span resource management, discovery, digital lending, patron communication, and increasingly, artificial intelligence. This proliferation has not merely added tools to the librarian's repertoire; it has altered the fundamental logic of library service delivery. The platform, in its contemporary manifestation, is less a passive instrument than an active structure that enables certain kinds of services while constraining others, shapes the labor of library staff, and mediates the patron's encounter with the institution. Understanding how modern platforms are reshaping library services requires attention to both the technical capacities they afford and the institutional, economic, and ethical questions they provoke.

The most foundational shift has occurred in the systems that libraries use to manage their collections and operations. The traditional integrated library system was designed for a world in which physical materials dominated, and its architecture reflected that priority: cataloging, circulation, acquisitions, and serials control were managed as discrete modules within a largely print-oriented framework. The emergence of the library services platform represents a structural response to the hybrid reality of contemporary collections. Unlike its predecessor, the library services platform is built on a multi-tenant, software-as-a-service architecture with a unified knowledge base that manages both physical and electronic resources within a single environment. This architectural choice is not merely technical; it reflects a recognition that the distinction between owned and licensed content has become operationally untenable for most libraries. The platform approach enables libraries to expose their services through application programming interfaces, allowing integration with institutional systems for authentication, learning management, and financial administration. Yet the transition to these platforms has not been uniform, and many libraries continue to operate within fragmented

environments where legacy systems coexist uneasily with newer cloud-based services. The persistence of fragmentation matters because it shapes what libraries can know about their own operations and what they can offer to their users.

Alongside the evolution of management platforms, the systems through which patrons discover library resources have undergone their own transformation. The online public access catalog, once the primary interface between patron and collection, has been progressively displaced by discovery services that aggregate metadata from multiple sources and attempt to provide a more unified search experience. More recently, artificial intelligence has begun to reshape this discovery layer in ways that move beyond the retrieval of records containing matching keywords. Semantic search, as discussed in professional forums convened by the International Federation of Library Associations and Institutions, offers the capacity to identify materials with related meanings and concepts rather than merely matching surface-level terms. For specialized fields where terminology is heterogeneous and evolving, this capacity represents a meaningful advance over traditional retrieval. The integration of AI chat systems into reference services similarly extends the temporal and spatial reach of librarian expertise, with some institutions deploying chatbots capable of handling routine inquiries around the clock. A systematic review of conversational AI agents in libraries found that adoption spans academic, public, and special libraries, with benefits including enhanced accessibility and improved user satisfaction, though the same review identified ethical and privacy concerns, inadequate infrastructure, and limited staff training as persistent constraints. The evidence suggests that AI in libraries is neither the wholesale replacement of professional judgment that some fear nor the seamless augmentation that enthusiasts promise, but rather a contested terrain on which the meaning of library service is being renegotiated.

The platform most visible to patrons is arguably the digital lending environment, and here the reshaping of library services is entangled with questions of political economy that extend well beyond technical capability. Commercial providers such as OverDrive, through its Libby application, have achieved near-ubiquitous adoption among public libraries in the United States, offering end-to-end environments for the selection, licensing, and delivery of e-books and audiobooks. The convenience and polish of these platforms have driven substantial adoption, yet they have also generated persistent dissatisfaction. Libraries express concern about high costs and restrictive licensing terms that are often dictated by publishers rather than vendors, and about the branding problem inherent in a model where the patron's relationship with the library is mediated through a vendor's application. Once a patron has installed the Libby app, subsequent searches and selections occur within the vendor's ecosystem, potentially bypassing the library's broader collection and other services. This concern has animated the development of open-source alternatives. SimplyE, developed by the New York Public Library beginning in 2015, was designed to collapse the borrowing process into three clicks while prioritizing availability over popularity in search results, thereby shortening wait queues and increasing the use of less-demanded materials. The platform has been adopted by libraries and consortia, with support services provided by LYRASIS, and its circulation manager is designed to work with multiple content distribution platforms, enabling libraries to acquire materials from diverse sources and present them through a single interface. The significance of this alternative lies less in its market share, which remains modest, than in what it demonstrates: that the architecture of digital lending is a site of institutional agency, and that the choice of platform is a choice about whose priorities will structure the patron's experience.

Beyond the systems designed specifically for library operations, the platforms of social media have become integral to how libraries communicate with and engage their communities. A study of 372 posts from 33 library and librarian-creator accounts on TikTok and Instagram identified distinct

archetypes of content strategy, finding that the most common approach was the "digital bulletin board," followed by the "librarian-as-creator" and "institutional personality" models. The analysis suggests that effective social media practice for libraries involves a layered strategy that combines creator-led content for discovery, micro-learning for direct value delivery, and community spaces for sustained connection. What is notable here is not simply that libraries use social media - they have done so for well over a decade - but that the platform logic of short-form video and algorithmic circulation is beginning to shape professional practice in ways that blur the boundary between institutional communication and individual librarian performance. The "librarian-as-creator" archetype, which aligned strongly across multiple dimensions of the analytical framework, suggests that the platform's demand for authentic, personality-driven content is reshaping how library services are represented and, potentially, how librarians understand their public roles. This is a different order of platform effect than the implementation of a new management system; it operates at the level of professional identity and public perception.

The cumulative effect of these platform shifts is perhaps most visible in the changing character of library work itself. The modern librarian, as described in recent professional literature, is less a custodian of physical materials than an information specialist who helps users navigate complex digital environments, teaches digital literacy, and manages collections that exist primarily as licensed access rather than owned objects. The automation of routine tasks through AI and platform integration holds the promise of freeing staff for higher-value work in instruction, curation, and community engagement. Yet this promise is conditional. Survey data from Clarivate's Pulse of the Library 2026 program, which analyzed 1,876 responses from academic, public, and national libraries worldwide, found that while confidence in AI concepts is gradually building, 67 percent of public libraries reported no defined strategic position on AI and 37 percent had no structured decision-making process at all. The same survey found that enhancing staff productivity was the top primary objective for public libraries implementing AI tools, suggesting that the dominant frame for adoption remains efficiency rather than transformation. This gap between the rhetorical promise of platform innovation and the institutional capacity to realize it thoughtfully is one of the central tensions in the contemporary library landscape. Platforms do not implement themselves, and their effects depend crucially on the strategic vision, resources, and professional judgment of the institutions that adopt them.

The question of equity runs through every dimension of this platform transformation. AI-driven accessibility features - text-to-speech, speech-to-text, image recognition for visually impaired users, and customized interfaces - offer genuine potential to extend library services to underserved populations. Predictive analytics for collection development could enable libraries to allocate scarce resources more responsively to demonstrated demand. Yet the same literature that documents these possibilities also warns of infrastructural constraints, unequal technology access, and the risk that technological progress may exacerbate rather than ameliorate existing disparities. The financial dimension is particularly acute. Digital transformation requires sustained investment in infrastructure, software, and skilled staff, and many libraries, especially in developing regions, lack the resources to upgrade their systems. Even in comparatively well-resourced contexts, the commercial terms of digital lending and the licensing costs of AI-powered discovery tools strain budgets already stretched by competing demands. The platform, in other words, is not a neutral deliverer of services; it is a site where questions of distributive justice are made concrete.

Privacy and trust constitute a parallel set of concerns that the platform paradigm brings into sharp relief. The integration of AI into library systems raises the specter of data poisoning, inference attacks, and algorithmic manipulation, threats that undermine the foundational library principles of

intellectual freedom and patron confidentiality. The IFLA discussion of AI in libraries emphasized that trust must remain at the center of every innovation, advocating for retrieval-augmented generation approaches in which AI systems draw only on verified and trusted sources such as library collections and curated databases rather than generating responses from the open internet. This insistence on grounding AI outputs in authoritative content is not merely a technical preference; it expresses a professional ethic that distinguishes the library's use of AI from the commercial platform's. Whether libraries can sustain this distinction as they adopt increasingly sophisticated tools from vendors whose business models depend on data accumulation remains an open question. The existing policy frameworks, such as the General Data Protection Regulation and the EU AI Act, offer general guidance on fairness and transparency, but no library-specific governance standards have emerged. Libraries are thus compelled to develop their own ethical frameworks while navigating a vendor landscape that may not share their values.

The trajectory of platform development in libraries also invites reflection on the relationship between integration and fragmentation. The library services platform promised to unify the management of print and electronic resources, and to some extent it has delivered on that promise. Yet the contemporary library technology environment remains characterized by a proliferation of specialized systems for discovery, digital lending, social media management, AI-powered reference, and analytics, each with its own interface, data model, and vendor relationship. The vision of a cohesive environment that integrates these functions has been articulated for years, but the practical reality for most libraries is a patchwork. This fragmentation has costs: it complicates staff workflows, obscures the patron's experience of the library as a coherent service, and makes comprehensive assessment difficult. The next phase of platform evolution may involve not the addition of more specialized tools but the development of integration layers that allow disparate systems to function as a more unified whole. Whether such integration will be achieved through vendor consolidation, open standards, or institutional collaboration remains to be seen.

What emerges from this survey is a picture of library platforms as both enabling and disciplining structures. They enable services that would be impossible within a purely print-based paradigm: semantic discovery across vast digital collections, round-the-clock reference support, seamless access to e-books from anywhere, and engagement with communities through the media they actually use. But they also discipline library practice in ways that are not always visible. They shape what counts as a "user," what constitutes "access," and whose priorities structure the patron's encounter with the institution. The commercial digital lending platform that prioritizes popular titles over the library's curated selection, the AI chatbot that answers questions but cannot read the hesitation in a patron's voice, the social media algorithm that rewards performative personality over substantive instruction - these are not failures of platform design so much as expressions of the logics embedded in the platforms themselves. The task for libraries is not to reject these platforms but to engage with them critically, to negotiate terms that protect institutional values, and to build or support alternatives where the market does not serve the public interest. The open-source digital lending initiatives and the insistence on retrieval-augmented, collection-grounded AI represent instances of this critical engagement, and they suggest that the platform future of libraries is not predetermined.

In conclusion, the reshaping of library services by modern platforms is a process marked by genuine achievement and unresolved tension. The technical capacities now available to libraries - unified resource management, intelligent discovery, flexible digital lending, and multimodal community engagement - represent a substantial expansion of what libraries can do for their users. Yet these capacities arrive entangled with questions of cost, equity, privacy, and professional identity that cannot be resolved by technical means alone. The evidence from recent surveys and professional

literature suggests that libraries are at varying stages of platform adoption and strategic planning, with many institutions still grappling with foundational questions about governance and capacity even as the technological horizon continues to shift. The most thoughtful responses to this situation will not be those that embrace each new platform uncritically or those that resist change in defense of tradition, but those that ask, persistently and in each specific instance, what kind of library service the platform makes possible and what kind it forecloses. The platform, ultimately, is a means. The end remains what it has always been: connecting people with the knowledge and culture they need, in ways that are equitable, trustworthy, and humane. Whether the platforms of the coming decade serve that end or subvert it will depend less on the sophistication of their algorithms than on the clarity and courage of the librarians who choose, configure, and critique them.

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