

## Digital Communication in Libraries to Promote Inclusive Societies: A Systematic Literature Review

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### Abstract

The digital revolution has reshaped libraries into inclusive and communicative institutions that democratize access to knowledge. This study employs a Systematic Literature Review (SLR) based on PRISMA guidelines to examine publications from 2019–2025 concerning the role of digital communication in promoting inclusive societies through libraries. The findings reveal that digital transformation, especially during and after the COVID-19 pandemic, has strengthened accessibility and service continuity. Academic libraries optimized digital communication through online platforms and virtual services, while assistive technologies enhanced access for users with disabilities. However, challenges remain in governance, ethics, and content transparency within digital ecosystems dominated by private vendors. Theoretically, digital communication in libraries functions as a democratizing mechanism, providing non-elite communities with access to information and participation in knowledge creation. Practically, libraries must balance innovation with ethical governance, participatory curation, and digital literacy development. Thus, digital communication serves both as an operational strategy and as a social instrument for building equitable and inclusive knowledge environments.

**Keywords:** *accessibility, digital communication, inclusive society, libraries, systematic literature review*

### INTRODUCTION

The Digital Revolution is the result of a long and gradual process, driven by a series of innovative experiments and policy changes. This process has taken place at both the national and international levels, involving many parties such as governments, international institutions, industry, research institutions, and scientists [1]. Within this framework, libraries need to be viewed as actors of public communication that apply the principles of inclusive communication. This concept ensures that everyone, regardless of their physical, social, economic, or cultural background, has equal opportunities to access, understand, and participate in the exchange of information [2].

The use of technology in society can give rise to new problems, such as reduced social interaction and less comprehensive communication experiences. Therefore, it is important for society, especially in the world of education, to understand and use technology wisely. This is so that we can take advantage of existing opportunities while overcoming any challenges that may arise [3]. Inclusive education in the digital age presents both challenges and opportunities, especially for students with special needs. The goal is to build a system of positive interaction through various means, ranging from communication and modeling to the application of inclusive

principles [4].

As a center of information, libraries also play a role in the transfer of information. This process relies heavily on effective communication to ensure that the information conveyed is correct and accurate. Therefore, libraries must be able to manage their collections well so that they are easily accessible, usable, and provide value to library users [5]. In general, Information and Communication Technology (ICT) is technology used to manage information and facilitate communication. This is done with the help of computer software and hardware to convert, store, process, send, and receive information. ICT is basically technology that is utilized in every process of obtaining, processing, storing, and delivering information to the wider community [6].

Modern libraries are transforming into inclusive hubs within the digital society, leveraging digital communication—such as social media, websites, and mobile applications—to broaden information access for all segments of the population [7]. In the context of higher education, library digitalization has been shown to support equitable access and digital inclusion, particularly during the shift to remote learning triggered by the COVID-19 pandemic [8]. Other studies also emphasize the critical role of digital literacy as a pillar of inclusivity, where limited access and inadequate digital skills exacerbate social inequality, especially among vulnerable groups such as the elderly and those with lower educational backgrounds [9]. Therefore, through a *Systematic Literature Review* of publications from 2019–2025, this study aims to describe, map, and analyze previous research findings on the role of digital communication in libraries to promote inclusive societies, while identifying effective strategies and key challenges.

## **METHOD**

This study adopts a Systematic Literature Review (SLR) approach to identify, evaluate, and synthesize previous research on digital communication in libraries and its contribution to building inclusive societies. The SLR process follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to ensure the review is conducted in a transparent, structured, and replicable manner.

### **1. Search Strategy**

The literature search was conducted across major academic databases Google Scholar. Search keywords were formulated using Boolean operators as follows:

"digital communication" AND libraries AND "inclusive societies"

The search was limited to:

- a. Publication year: 2019–2025, to capture the most recent developments.
- b. Language: English-language and Indonesia- language articles.
- c. Document type: Peer-reviewed journal articles and full-text conference proceedings.

### **2. Inclusion and Exclusion Criteria**

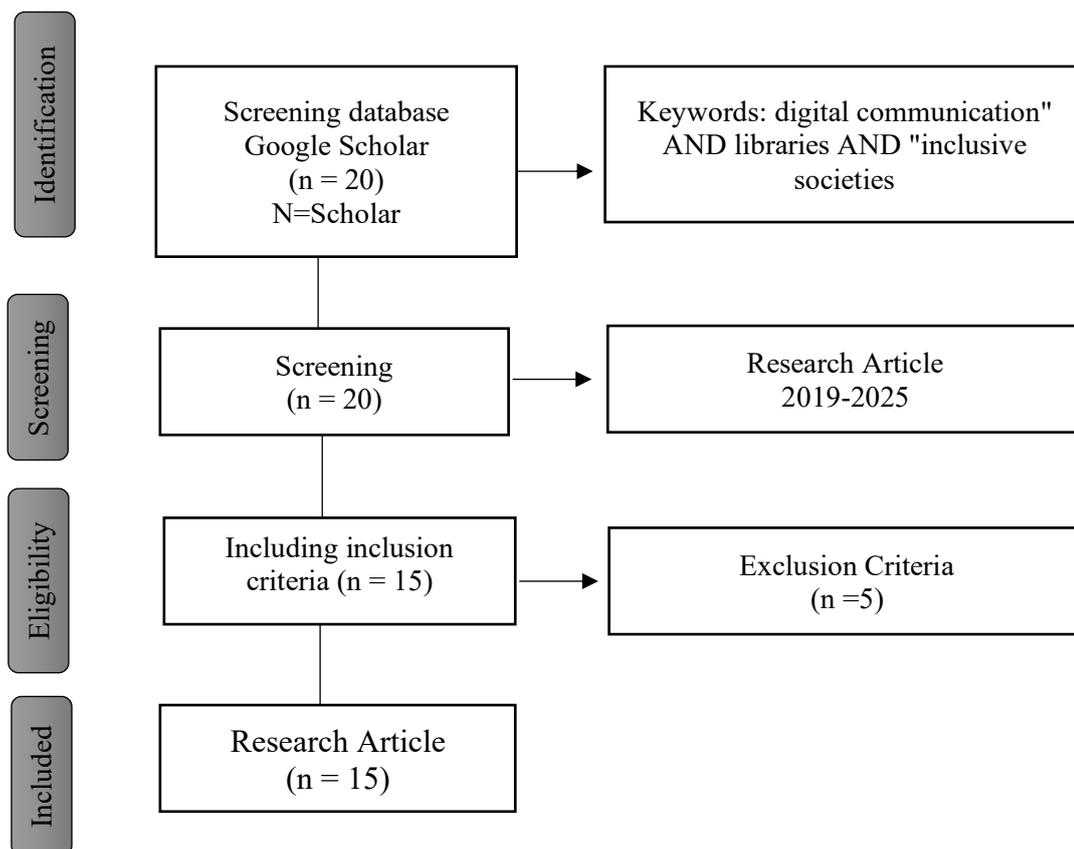
**Table 1. inclusion and exclusion criteria**

Inclusion criteria	Exclusion criteria
Studies explicitly discussing digital communication in libraries	Non-academic articles (e.g., popular reports, blogs, or opinion pieces)
Research linking digital communication with efforts to build inclusive societies	Publications without full-text availability
Publications containing either empirical data or relevant theoretical discussions	Studies addressing digital communication without any relation to inclusivity or equitable access

### 3. Literature Selection Process

The selection process followed the four main PRISMA stages:

- Identification: Gathering all relevant publications from the databases.
- Screening: Removing duplicates and excluding irrelevant articles.
- Eligibility: Reviewing abstracts and full texts to ensure compliance with the inclusion criteria.
- Inclusion: Selecting articles that fully met the requirements for analysis.



**Figure 1. PRISMA Stages**

## RESULTS AND DISCUSSION

### Results

The systematic literature review of studies published between 2019 and 2025, encompassing various library contexts, revealed several key findings:

#### Expansion of Digital Access

Academic libraries across African universities responded to the COVID-19 pandemic by increasing off-campus access to electronic resources, offering virtual reference services, and applying digital platforms such as library websites, social media, and video conferencing tools to maintain service delivery [10].

#### Emerging Assistive Technologies

AI-powered assistive tools—such as text-to-speech systems, navigation aids, and personalized digital assistants—were found to significantly enhance access and autonomy for patrons with disabilities in special libraries, while raising important considerations regarding ethical implementation and privacy [11].

#### Governance Challenges in Digital Content Provision

Public libraries subscribing to digital content distributors face governance problems, including lack of control over content curation, misalignment with institutional policies, and limited transparency regarding distribution mechanisms. Librarians have highlighted the need for collaborative curation policies and more robust moderation strategies [12].

### Discussion

#### Effective Strategies: Digital Adaptation and Assistive Technology

First, the study shows that academic libraries—especially in Africa—optimized digital communication during the COVID-19 pandemic. They expanded access to electronic resources, implemented virtual reference services, and utilized websites, social media, and video conferencing tools to maintain service continuity. This approach aligns with UNESCO's Internet Universality principles, which prioritize open access, multi-stakeholder participation, and the right to information for all [13].

Second, AI-based assistive technologies such as text-to-speech, smart navigation tools, and personal digital assistants significantly improve accessibility and independence for users with disabilities in specialized libraries. These findings are consistent with recent studies showing that assistive technology not only facilitates access but also empowers users equally, despite raising ethical challenges such as privacy and algorithmic bias [14].

Third, Assistive Technology (AT) serves as a bridge between users and their environment by adjusting to their physical, cognitive, auditory, and visual limitations, helping them engage effectively in social settings while enhancing inclusion, independence, and overall well-being [15].

The study concludes that digital transformation in libraries has strengthened accessibility, inclusivity, and service continuity—particularly during and after the COVID-19 pandemic. Academic libraries successfully utilized digital communication tools to ensure information access for all, in line with UNESCO's Internet Universality principles. Moreover, the integration of AI-based Assistive Technology (AT) in specialized libraries has greatly enhanced the autonomy and participation of users with disabilities by bridging the gap between individuals and their

environments. However, these advancements also highlight the need for robust ethical frameworks and responsible governance to address issues such as data privacy, algorithmic bias, and equitable access.

### **Barriers to Inclusivity: Governance and Ethics**

On the other hand, your study highlights that public libraries face governance challenges in the use of subscription-based digital content, including a lack of control over content curation, inconsistencies with institutional policies, and minimal transparency in distribution mechanisms. This is reinforced by research documenting the need for collaborative curation policies and robust content moderation mechanisms [12]. The issue of content curation is particularly critical because libraries must ensure that digital resources reflect academic and cultural diversity, institutional values, and community needs. When content selection is dictated by external vendors, it may prioritize market demand or profit motives rather than educational or public interest. This situation creates a governance gap, where the library's ethical and professional standards—such as inclusivity, intellectual freedom, and neutrality—are difficult to uphold. Moreover, inconsistencies between vendor policies and institutional regulations can generate conflicts over data privacy, licensing, and user rights. For instance, some subscription services restrict simultaneous access or impose region-based limitations that directly contradict the library's objective of universal accessibility.

Transparency in content distribution is another pressing concern. Libraries often receive little information about how algorithms recommend, filter, or restrict digital materials. Such opacity prevents librarians from understanding the biases embedded in digital systems and undermines accountability. Scholars have noted that opaque distribution mechanisms can inadvertently reinforce information inequality, as users may only be exposed to a limited range of perspectives shaped by commercial algorithms. Consequently, libraries must navigate the tension between leveraging technological convenience and safeguarding the ethical dimensions of knowledge dissemination.

This governance dilemma is not unique to one region but reflects a global challenge that demands collaborative solutions. Research has emphasized the need for cooperative curation frameworks that allow libraries, vendors, and stakeholders to jointly define selection criteria, access rights, and evaluation standards. Establishing transparent policies and shared governance mechanisms would enable libraries to retain some degree of autonomy within digital ecosystems dominated by private corporations. Additionally, robust content moderation systems are necessary to ensure that materials hosted on digital platforms comply with legal, ethical, and educational standards while respecting freedom of expression.

Furthermore, capacity building among librarians is crucial. Strengthening digital literacy, negotiation skills, and awareness of intellectual property rights can empower library professionals to advocate for fairer contractual terms and more ethical data practices. Governments and library associations should also play an active role in developing national and regional guidelines for digital content governance, promoting open-access models, and encouraging collaboration among public institutions.

In addition, ethical aspects need to be improved—especially in AI systems—to avoid social harm. Librarians need to implement a human-in-the-loop approach as a mitigation of algorithmic risk and ensure that digital decisions take into account moral context and social justice [16].

The results of the study show that the librarian code of ethics has proven to play an important role in improving the integrity of librarians, which is reflected in their relationship with library users. This integrity is manifested in honesty, consistency between words and actions, responsibility, compliance with regulations and organizational ethics, and commitment to professional development. The implementation of the code of ethics is supported by a number of factors, such as effective leadership, a reward system that encourages performance, a positive organizational culture, and the availability of adequate facilities and infrastructure. However, there are still various obstacles, including limited human resources—especially competent librarians—budget constraints, resistance to change, and difficulties in adapting to technological developments [17].

### **Theoretical and Practical Implications: Digital Communication as a Tool for Democratizing Knowledge**

Theoretically, digital communication in libraries not only functions as a means of distributing information, but also as a mechanism for democratizing knowledge that provides broader access to knowledge for non-elite audiences. This is reinforced by xie et al. (2012), who show that digital library media play a significant role in reaching underserved groups, expanding access to information, and reducing the digital divide through inclusive and responsive online services tailored to community needs [18].

In practical terms, libraries need to balance technological innovation with ethics-based policies, participatory approaches, and internal capacity building:

- a. Digital Infrastructure and Platforms: Libraries need to adopt secure, inclusive, and accessible digital systems.
- b. Inclusive Technology: The application of AI for accessibility must be accompanied by ethical audit mechanisms and human control.
- c. Participatory Curation Policy: Synergizing the roles of librarians and user communities in content selection and distribution.
- d. Community Engagement: Encouraging user participation in designing relevant and sustainable services.

Digital communication tools—such as library websites, social media platforms, and virtual reference services—embody this theoretical foundation by extending the library's communicative reach beyond physical boundaries. They operationalize the democratic ideal of *open access*, enabling diverse user groups to engage with knowledge production and decision-making processes. For example, during the COVID-19 pandemic, libraries' use of digital platforms maintained the continuity of academic discourse and public engagement, thus actualizing the theoretical premise that communication technologies can sustain intellectual life even under crisis conditions.

From a practical standpoint, digital communication serves as both an operational strategy and a social instrument. Practically, it allows libraries to diversify their services, enhance user interaction, and build more inclusive knowledge ecosystems. Through interactive digital platforms, libraries can facilitate two-way communication that values user feedback, promotes collaborative learning, and supports community-driven initiatives. The integration of AI-based tools, digital repositories, and online learning resources further strengthens the library's ability to personalize services and meet the evolving information needs of users.

However, the democratizing potential of digital communication also depends on equitable access and ethical governance. Without sufficient digital literacy, reliable infrastructure, and

institutional support, the benefits of digital communication risk being unevenly distributed, thereby perpetuating digital divides. Therefore, libraries must adopt policies that promote inclusivity—such as multilingual interfaces, accessible web design, and community outreach programs—to ensure that digital communication truly functions as an equalizing force rather than an exclusive privilege.

In practice, librarians play a central role as digital intermediaries who interpret, curate, and ethically manage the flow of information. Their communication competencies—both interpersonal and technological—determine how effectively the library can translate digital tools into participatory knowledge environments. Training programs and continuous professional development in digital communication, media ethics, and user-centered design are thus essential to sustain this transformative function.

## CONCLUSION

This study concludes that digital communication plays a pivotal role in transforming libraries into democratic and inclusive spaces within the digital society. Through systematic analysis, the research demonstrates that libraries have effectively used digital platforms to expand access, support learning continuity, and empower users with diverse needs. The integration of AI-based assistive technologies further enhances autonomy and inclusion for patrons with disabilities. However, these advancements also highlight ethical and governance challenges—particularly regarding privacy, transparency, and content control. Theoretically, digital communication serves as a foundation for the democratization of knowledge, ensuring equal opportunities for information access and participation. Practically, libraries must strengthen ethical frameworks, adopt participatory policies, and enhance librarians' digital communication competencies. By doing so, libraries can sustain their mission as inclusive agents of social transformation in the evolving digital landscape. Future research should explore the long-term impacts of digital inclusivity initiatives, comparative governance models, and cross-cultural applications of participatory digital library services.

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