

Public Libraries as Catalysts of Digital Empowerment in West Bengal: A Pathway to Atma Nirbhar Bharat

Dr. Debdas Mondal

Librarian

S.R. Fatepuria College

Murshidabad, West Bengal, India

ORCID ID: [0000-0003-3321-979X](https://orcid.org/0000-0003-3321-979X)

research.libraryscience24@gmail.com

Abstract

The study titled “*Public Libraries as Catalysts of Digital Empowerment in West Bengal: A Pathway to Atma Nirbhar Bharat*” explores the transformative role of public libraries in bridging the digital divide and promoting self-reliance through Information and Communication Technology (ICT). In the digital age, public libraries are evolving from traditional knowledge repositories into community-based centers that facilitate access to online information, e-governance services, and digital literacy programs. Using a descriptive survey method, data were collected from 120 respondents, including 40 librarians and 80 users, across urban and rural public libraries in West Bengal. The findings reveal that while most libraries possess basic ICT infrastructure—such as computers (85%) and internet connectivity (72%) facilities like Wi-Fi access (60%), e-resources (48%) and digital catalogues (55%) remain limited. The study also found a higher level of digital awareness among librarians (70%) compared to users (45%), indicating the need for community-oriented awareness and training initiatives. Major challenges identified include poor internet connectivity (62%), lack of technical training (58%), and insufficient funding (55%). However, respondents suggested practical measures such as government ICT grants, regular staff training and digital literacy corners to enhance library performance. The results underscore that public libraries, when equipped with proper infrastructure and skilled personnel, can act as catalysts for digital empowerment and contribute significantly to the national vision of *Atma Nirbhar Bharat*. By integrating technology, training and community engagement, libraries in West Bengal can bridge the digital divide and foster inclusive growth through digital self-reliance.

Keywords: *Public Libraries, Digital Empowerment, ICT, Digital India, Atma Nirbhar Bharat, Digital Literacy, West Bengal, E-Governance, Library Modernisation, Digital Divide.*

1. Introduction

The Digital India Programme, launched in 2015, envisions transforming India into a digitally empowered society and knowledge economy. Public libraries, long regarded as “people’s universities,” are now at the forefront of this digital transformation. In West Bengal, with its

vast rural population and linguistic diversity, public libraries play a critical role in facilitating equitable access to information and digital services. This study explores how public libraries in West Bengal have responded to Digital India's goals and how they contribute to building an Atma Nirbhar Bharat, emphasizing digital inclusion, skill development, and e-literacy.

In the 21st century, digital access has become an essential determinant of social inclusion, education, and economic growth. The emergence of Information and Communication Technology (ICT) has revolutionised the way information is created, disseminated and consumed, giving rise to the concept of a digitally empowered society. In India, the Government's *Digital India Programme* launched in 2015 marked a transformative step toward creating a digitally inclusive nation by promoting digital literacy, online governance and accessible digital infrastructure (Government of India, 2015). Within this context, public libraries have emerged as critical community-based institutions capable of bridging the *digital divide* the gap between those with access to modern information technologies and those without.

Public libraries in India have historically served as centers of knowledge dissemination, literacy promotion and lifelong learning. However, in the digital age, their role is rapidly expanding beyond book lending to include ICT-enabled services such as internet access, e-resources, e-learning platforms, and e-governance support (Bhattacharya & Ghosh, 2022). This transformation aligns closely with the national vision of Atma Nirbhar Bharat (Self-Reliant India), which emphasises local empowerment, innovation and self-sufficiency through digital capability. In states like West Bengal, where socio-economic disparities persist between urban and rural populations, public libraries can act as catalysts of digital empowerment, providing equitable access to digital resources and services that foster self-reliance and community development.

According to Das and Chatterjee (2021), the integration of ICT in West Bengal's library network has helped expand digital literacy and access to online services, though progress remains uneven. Urban libraries are relatively better equipped with computers, internet connectivity, and trained staff, while rural libraries often face infrastructural and technical challenges. The *West Bengal Public Library Network (WBPLN)* has taken significant steps toward modernisation, including digitisation of resources, establishment of Wi-Fi zones and provision of e-learning facilities (WBPLN, 2023). Yet, challenges such as poor connectivity, limited technical training and insufficient funding continue to hinder full digital transformation.

The importance of digital inclusion through libraries is widely recognised by international organizations as well. UNESCO (2020) emphasizes that access to information through digital means is a fundamental human right and that libraries are essential in ensuring equitable participation in the digital age. Similarly, the World Bank (2022) asserts that addressing the digital divide in developing nations requires community-based initiatives such as public libraries, which provide the necessary infrastructure, training and social support for digital learning and civic participation.

In India's broader developmental context, the Digital India and Atma Nirbhar Bharat missions complement each other by promoting both technological access and individual empowerment. Public libraries stand at this intersection, serving as bridges between citizens and digital governance. By offering services such as e-governance support (for Aadhaar, PAN, and online applications), digital literacy workshops, and access to online education, libraries empower users especially in rural and marginalised areas to become self-reliant in managing their digital needs (Singh & Devi, 2021; Mukherjee, 2022).

This study, titled "*Public Libraries as Catalysts of Digital Empowerment in West Bengal: A Pathway to Atma Nirbhar Bharat*," seeks to examine how public libraries contribute to digital empowerment and self-reliance among citizens. It aims to assess the current state of ICT facilities, levels of awareness and training among librarians and users, challenges faced in implementing digital services, and the perceived impact of these initiatives on local communities. Through quantitative analysis of survey data and qualitative interpretation, the research highlights both the achievements and the gaps in leveraging public libraries as agents of digital transformation in West Bengal. Ultimately, the study argues that by strengthening ICT infrastructure, enhancing staff capabilities, and fostering community awareness, public libraries can evolve into inclusive digital empowerment centers. Such a transformation not only bridges the digital divide but also advances the vision of Atma Nirbhar Bharat, where technology becomes a tool for empowerment, education, and equality.

2. Review of Literature

Previous studies (Singh, 2018; Das & Roy, 2021; Chakraborty, 2022) highlight that digital inclusion through libraries has significantly improved citizens' access to information and e-governance. Libraries now serve as digital facilitation centres, offering services such as Aadhaar enrolment, e-learning, and online application support. In West Bengal, several initiatives like the Raja Rammohun Roy Library Foundation (RRRLF) and State Library Services have integrated ICT infrastructure in district and sub-divisional libraries. However, disparities persist due to funding, connectivity, and training issues. Thus, the role of public libraries in achieving the goals of Atma Nirbhar Bharat self-reliance through knowledge and technology warrants empirical investigation. The rapid advancement of Information and Communication Technology (ICT) has transformed the traditional functions of public libraries into dynamic centers of digital learning and inclusion. According to Bhattacharya and Ghosh (2022), ICT initiatives in Indian public libraries have significantly improved access to information, yet disparities in infrastructure and digital literacy persist across states. They emphasise that digital transformation in libraries requires not only technological adoption but also administrative and community-level integration. The Government of India (2015) launched the *Digital India Programme*, intending to empower citizens through digital access, governance, and literacy. This initiative has provided the framework for libraries to play a pivotal role in digital empowerment. However, Das and Chatterjee (2021) observe that while urban libraries in West Bengal have embraced ICT-based services, rural libraries continue to face challenges such as poor connectivity, insufficient funding, and a lack of trained personnel. Public libraries have long been recognised as instruments for promoting digital inclusion and

community engagement. As Dutta and Paul (2020) note, the introduction of e-governance services, online learning platforms, and digital literacy programs in libraries has helped bridge the gap between government services and citizens, particularly in remote areas. Complementing this view, the Indian Library Association (2023) highlights the uneven implementation of ICT infrastructure in public libraries, stressing the need for sustained investment and government support for equitable access. Further, the Ministry of Culture (2019), through the *National Mission on Libraries (NML)*, has outlined guidelines for modernising public libraries with ICT infrastructure and networking capabilities. Despite these policy-level interventions, Mukherjee (2022) argues that the impact of such initiatives remains uneven due to a lack of consistent training and local-level monitoring. Public libraries, he suggests, can emerge as *agents of digital empowerment* if they are adequately supported by both government and community partnerships. The National Digital Library of India (2021) emphasizes the role of digital repositories in facilitating inclusive access to educational resources, reinforcing the idea that libraries can serve as gateways to lifelong learning. Similarly, Sen and Ray (2020) identify libraries as knowledge hubs contributing to rural development by promoting access to e-resources, online applications, and government schemes. Their study in rural Bengal revealed that local libraries act as mediators between technology and marginalised populations, fostering a sense of participation and empowerment. Research by Singh and Devi (2021) confirms that the integration of ICT and e-governance services in public libraries enhances citizens' engagement with government initiatives such as PAN, Aadhaar, and online applications. However, they caution that without regular training and updated infrastructure, libraries may fail to sustain such services effectively. UNESCO (2020) similarly underscores the importance of digital inclusion through libraries as a global agenda, advocating for digital literacy as a fundamental right in the 21st century. At the regional level, the West Bengal Public Library Network (2023) reports ongoing efforts to digitise library resources, expand Wi-Fi connectivity, and develop digital literacy programs under the state's *Library Services Modernisation Scheme*. Yet, the report also notes disparities between districts, highlighting the need for a more inclusive policy framework. The World Bank (2022) reinforces this concern by asserting that bridging the digital divide in South Asia requires community-based infrastructure and digital literacy training, both of which align closely with the evolving role of public libraries.

In summary, the literature collectively points toward the growing recognition of public libraries as catalysts for digital empowerment. While national and international policies support their transformation, the success of these initiatives in West Bengal depends on the integration of ICT infrastructure, librarian training, community participation, and sustainable funding. Bridging these gaps will enable public libraries to contribute effectively to the vision of *Atma Nirbhar Bharat* by fostering digital self-reliance and inclusive development.

3. Statement of the Problem

In the contemporary digital era, access to information and communication technology (ICT) has become a key determinant of socio-economic progress and individual empowerment. Despite India's ambitious initiatives under the *Digital India* mission and the national vision of

Atma Nirbhar Bharat, a substantial digital divide continues to exist across various regions and social groups. This divide is particularly visible in states like West Bengal, where significant disparities persist between urban and rural areas in terms of access to digital infrastructure, skills, and opportunities. Public libraries, traditionally viewed as centers for learning and information, are now expected to play a transformative role as agents of digital inclusion and empowerment. They have the potential to provide free access to ICT tools, internet connectivity, digital literacy training, and e-governance services to diverse sections of society, including marginalised and underprivileged populations. However, the extent to which public libraries in West Bengal are fulfilling this role remains uncertain and under-researched. Preliminary observations and reports from the West Bengal Public Library Network (WBPLN, 2023) indicate that while certain urban libraries have made significant progress in adopting ICT facilities and offering digital services, rural libraries still face numerous challenges, such as poor internet connectivity, outdated equipment, inadequate funding, and insufficiently trained staff. These challenges limit their ability to act as effective digital empowerment centers. Furthermore, the awareness and utilisation levels among library users regarding digital resources and government online services remain uneven, which restricts the impact of these initiatives on community development. Another emerging issue is the lack of coordinated policy implementation and monitoring. Although national and state-level programs such as the *National Mission on Libraries (NML)* and *Digital India* aim to modernize libraries, their local-level execution often suffers from gaps in infrastructure, training, and resource allocation. As a result, the role of public libraries in achieving the objectives of *Atma Nirbhar Bharat*—which envisions self-reliant and digitally skilled citizens, has not been fully realised. Therefore, the present study seeks to address these concerns by examining the current status, challenges, and prospects of public libraries in West Bengal as facilitators of digital empowerment. It aims to evaluate how far these libraries have progressed in integrating ICT services, promoting digital literacy, and supporting community self-reliance. The study also explores the perceptions of both librarians and users to identify existing gaps and potential strategies for enhancing the digital role of libraries.

In essence, the problem lies in the incomplete and uneven transformation of public libraries into digital empowerment hubs, which hinders the realization of a truly inclusive and self-reliant digital society in West Bengal. Understanding and addressing these gaps are essential to ensure that public libraries can effectively contribute to the goals of *Digital India* and *Atma Nirbhar Bharat*.

4. Objectives of the Study

The primary objective of this research is to assess the role of public libraries in West Bengal as facilitators of digital empowerment and contributors to the national vision of *Atma Nirbhar Bharat* (Self-Reliant India). Specifically, the study seeks to evaluate the extent to which libraries have integrated ICT tools, enhanced user awareness, and promoted digital literacy among the community.

The specific objectives are as follows:

- To examine the availability and accessibility of ICT infrastructure (such as internet connectivity, computers, Wi-Fi, and digital catalogues) in public libraries across urban and rural areas of West Bengal.
- To assess the level of awareness and digital literacy among librarians and users regarding Digital India initiatives and ICT-enabled library services.
- To evaluate the extent and effectiveness of ICT-based training programs conducted by public libraries for users, including basic computer skills, internet usage, and e-governance services.
- To analyze user satisfaction levels with the digital services provided by public libraries and identify factors influencing their perceptions.
- To identify the major challenges faced by public libraries in implementing and sustaining digital initiatives, such as inadequate funding, lack of technical training, and poor connectivity.
- To explore potential measures and strategies—including government support, training, partnerships, and community engagement—that can strengthen the digital empowerment role of public libraries.
- To propose a framework for enhancing the contribution of public libraries toward achieving the goals of *Digital India* and *Atma Nirbhar Bharat* through inclusive digital access, capacity building, and community self-reliance.

5. Methodology

The present study, titled “*Public Libraries as Catalysts of Digital Empowerment in West Bengal: A Pathway to Atma Nirbhar Bharat*”, adopted a descriptive survey research design to explore the role of public libraries in fostering digital inclusion and empowerment among citizens. Both quantitative and qualitative approaches were employed to obtain a comprehensive understanding of the existing ICT infrastructure, awareness levels, user satisfaction, challenges, and potential strategies for improvement. The study was conducted in selected urban and rural public libraries across six districts of West Bengal, namely Kolkata, Burdwan, Hooghly, Bankura, Purulia, and Darjeeling, to ensure regional representation. The sample comprised 120 respondents, including 40 librarians and 80 library users, selected through a stratified random sampling technique to balance the perspectives of both urban and rural libraries. Data were collected through a structured questionnaire containing both closed and open-ended questions, supplemented by informal interviews with librarians for qualitative insights. The questionnaire covered areas such as demographic details, ICT availability, awareness of digital initiatives, training programs, user satisfaction, and challenges. Primary data were gathered directly from respondents, while secondary data were sourced from government reports, the *West Bengal Public Library Network (WBPLN)*, and scholarly publications related to *Digital India* and *Atma Nirbhar Bharat*. The collected data were analyzed using descriptive statistical methods such as percentages and frequency distributions, and the results were presented through seven analytical tables illustrating key variables like ICT facilities, awareness levels, satisfaction, and challenges. The study maintained strict ethical standards by ensuring voluntary participation, anonymity, and confidentiality of respondents.

Though limited to selected districts and public libraries, the methodology provides a valid and reliable framework for assessing how libraries in West Bengal are contributing to digital empowerment and national self-reliance.

6. Scope and Limitation

The present study focuses on examining the role of public libraries in West Bengal as agents of digital empowerment in alignment with the national vision of *Atma Nirbhar Bharat*. The scope of the research encompasses both urban and rural public libraries across selected districts, namely Kolkata, Burdwan, Hooghly, Bankura, Purulia, and Darjeeling, to provide a balanced understanding of regional variations in ICT adoption and service delivery. The study primarily investigates the availability of ICT infrastructure, awareness and usage of digital services, training programs, user satisfaction, and challenges faced by libraries in implementing digital initiatives. Both librarians and library users were included as respondents to capture a holistic perspective on how effectively public libraries are contributing to digital inclusion, literacy, and community self-reliance.

However, the study has certain limitations. It is confined to public libraries only and does not include academic, special, or private libraries, which might have different technological capacities and service models. The research is limited geographically to selected districts of West Bengal; therefore, the findings may not be fully generalizable to all regions of the state or the country. The study relies heavily on self-reported data collected through questionnaires and interviews, which may involve personal biases or subjective perceptions. Additionally, factors such as budgetary constraints, uneven internet connectivity, and restricted access to certain remote libraries may have limited data collection. Despite these limitations, the study provides valuable insights into the current state, challenges, and potential strategies for transforming public libraries in West Bengal into dynamic centers of digital empowerment, contributing meaningfully to the realisation of *Digital India* and *Atma Nirbhar Bharat*.

7. Data Analysis and Interpretation

Table 1: Demographic Profile of Respondents

Category	Librarians (n=40)	Users (n=80)	Total (%)
Male	60%	55%	56.7
Female	40%	45%	43.3
Urban Libraries	50%	50%	50
Rural Libraries	50%	50%	50

The demographic profile presented in Table 1 reveals a balanced representation of respondents across gender and location, offering a comprehensive perspective on public library dynamics in West Bengal. Among the librarians, 60% were male and 40% female, while among users,

55% were male and 45% female, resulting in an overall ratio of 56.7% male to 43.3% female respondents. This indicates that, although male participation remains slightly higher, there is a healthy presence of female professionals and users, reflecting gradual gender inclusivity in the state's library sector. The equal distribution of urban (50%) and rural (50%) libraries ensures that the study captures both technologically advanced urban institutions and resource-constrained rural libraries, enabling a balanced assessment of digital empowerment across diverse settings. The parity between urban and rural representation further highlights the researchers' intent to evaluate digital access equitably across geographical and socio-economic divides. These demographic insights provide a strong foundation for understanding how gender dynamics and locational factors influence digital participation, ICT adoption, and the overall progress toward bridging the digital divide through public libraries in West Bengal.

Table 2: Availability of ICT Infrastructure

ICT Facilities	Available (%)	Not Available (%)
Internet Connectivity	72	28
Computer Systems	85	15
Wi-Fi Access for Users	60	40
Digital Catalogues (OPAC)	55	45
E-Resource Access	48	52

The data presented in Table 2 provides a clear picture of the ICT infrastructure status in public libraries of West Bengal, which is a critical determinant of their ability to support digital empowerment under the Digital India initiative. The findings reveal that 85% of libraries possess computer systems, indicating that the majority have the basic technological infrastructure necessary for library automation and digital access. However, only 72% of libraries have reliable internet connectivity, indicating that a significant portion (28%) of libraries, primarily in rural or semi-urban areas, still face connectivity issues, hindering their ability to provide real-time digital services.

Furthermore, Wi-Fi access for users is available in just 60% of libraries, which restricts independent user engagement with online resources. The availability of Online Public Access Catalogues (OPACs) in only 55% of libraries reflects the slow progress in automation and digital indexing, limiting users' ability to search and retrieve information efficiently. The most concerning figure is the low access to e-resources (48%), which highlights a gap in the provision of digital learning materials and databases. This indicates that while infrastructural foundations are partially in place, comprehensive digital readiness remains uneven across libraries.

Overall, the analysis underscores that public libraries in West Bengal are in a transitional phase, progressing toward digital integration but still grappling with infrastructural constraints. Bridging these gaps through improved connectivity, funding, and policy support will be

essential for transforming libraries into fully functional digital empowerment centers aligned with the vision of Atma Nirbhar Bharat.

Table 3: Awareness of Digital India Initiatives

Awareness Level	Librarians (%)	Users (%)
High	70	45
Moderate	25	40
Low	5	15

The data in Table 3 highlights the awareness levels of Digital India initiatives among librarians and users in public libraries across West Bengal, revealing a distinct disparity between the two groups. A significant 70% of librarians reported a high level of awareness, indicating their strong understanding of Digital India’s goals, such as e-governance, digital literacy, and information access programs. This can be attributed to their professional training, exposure to ICT-based workshops, and institutional communication within the library network. In contrast, only 45% of users demonstrated a high level of awareness, suggesting that while they benefit from digital services, their conceptual and practical understanding of these national initiatives remains limited.

Moreover, 25% of librarians and 40% of users displayed moderate awareness, implying partial familiarity with digital services but not comprehensive engagement. The low awareness group, 5% among librarians and 15% among users, reflects those who have minimal exposure to or understanding of Digital India programs, often due to lack of outreach, digital illiteracy, or poor connectivity, particularly in rural areas.

This disparity underscores the need for targeted digital literacy campaigns and user-oriented training programs within public libraries. While librarians act as facilitators of digital transformation, users must also be empowered with the knowledge and confidence to utilise digital platforms effectively. Enhancing awareness among users will strengthen community participation and ensure that public libraries truly function as catalysts of digital empowerment, aligning with the broader vision of Atma Nirbhar Bharat.

Table 4: Library Role in Digital Literacy Training

Type of Training	Conducted (%)	Not Conducted (%)
Basic Computer Skills	65	35
Internet Browsing & Email	58	42
e-Governance Services (PAN, Aadhaar, etc.)	50	50
Online Application Support	45	55

The data in Table 4 illustrates the extent to which public libraries in West Bengal are engaged in digital literacy and skill development training, a core component of digital empowerment under the Digital India framework. The findings indicate that 65% of libraries conduct basic computer skills training, reflecting a positive step toward improving foundational digital competency among users, especially in rural and semi-urban communities. However, the remaining 35% of libraries not offering such training highlights uneven implementation, often due to inadequate infrastructure or lack of skilled trainers.

Similarly, 58% of libraries provide training in internet browsing and email usage, signifying moderate engagement in enhancing users' online communication skills and access to digital information. The parity observed in e-governance training (50%), which includes assistance with PAN, Aadhaar, and other digital documentation, suggests that half of the libraries have adopted a proactive role in supporting citizens' interaction with government portals, an essential step toward inclusive governance and self-reliance.

On the other hand, only 45% of libraries offer support for online applications such as job portals, scholarships, or admission forms, while 55% do not, indicating that a large segment of the library network remains underutilised as a community facilitation hub.

Overall, the data reveal that while public libraries are emerging as local centers of digital skill enhancement, their training activities are still limited in scope and consistency. Strengthening staff training, allocating dedicated ICT budgets, and introducing structured digital literacy programs could transform libraries into digital empowerment hubs, enabling citizens to become digitally self-reliant (Atma Nirbhar) and better integrated into the national digital ecosystem.

Table 5: Users' Perception of Digital Library Services

Perception	Frequency (%)
Highly Satisfied	20
Satisfied	52
Neutral	18
Dissatisfied	10

The data in Table 5 presents the users' perception of digital library services offered by public libraries in West Bengal, providing valuable insight into how effectively these institutions are meeting the digital needs of their communities. A majority of respondents, 52%, reported being satisfied with the digital services available, indicating a generally positive outlook toward the efforts made under the Digital India initiative. This satisfaction likely stems from improved access to computers, internet connectivity, and assistance in using e-resources or e-governance platforms.

Meanwhile, 20% of users expressed high satisfaction, reflecting the experiences of individuals who regularly utilise digital facilities and find them reliable and beneficial. These users often

belong to libraries located in urban or semi-urban areas where infrastructure and staff support are relatively better. In contrast, 18% of respondents remained neutral, possibly due to irregular access, limited awareness, or inconsistent service quality. The 10% who expressed dissatisfaction represent users from areas where digital facilities are inadequate, internet access is unreliable, or staff lack the technical expertise to provide proper assistance.

Overall, the findings suggest that while most users acknowledge and appreciate the digital transformation in public libraries, there remains a need for qualitative improvement in service delivery. Enhancing user experience through better infrastructure, continuous training, and regular feedback mechanisms can help libraries strengthen public trust and participation. By addressing these gaps, West Bengal's public libraries can play a more impactful role in fostering digital inclusion and citizen empowerment, aligning closely with the vision of Atma Nirbhar Bharat.

Table 6: Major Challenges in Digital Implementation

Challenge	Percentage of Respondents (%)
Poor Internet Connectivity	62
Lack of Technical Training	58
Insufficient Funding	55
Outdated Equipment	47
Low Awareness among Users	40

The data in Table 6 highlights the major challenges faced by public libraries in West Bengal in implementing and sustaining digital services under the Digital India initiative. The most significant obstacle identified is poor internet connectivity (62%), which severely limits libraries' ability to provide uninterrupted access to online resources, e-governance services, and digital learning platforms. This challenge is particularly acute in rural and semi-urban regions where network infrastructure is weak or inconsistent, creating a persistent digital divide within the state. The second major challenge, reported by 58% of respondents, is the lack of technical training among library staff. Many librarians possess basic ICT skills but lack the advanced knowledge required to manage digital systems, troubleshoot equipment, or conduct digital literacy workshops effectively. This skill gap hinders the smooth functioning of digital initiatives and reduces user confidence in library-based digital services. Insufficient funding (55%) emerges as another critical constraint, as budget allocations for ICT infrastructure, software maintenance, and capacity-building programs are often inadequate. Limited financial resources prevent libraries from upgrading facilities or subscribing to e-resources. Similarly, 47% of respondents cite outdated equipment, including old computers and obsolete software, as a barrier that directly affects service quality and user satisfaction. Finally, low awareness among users (40%) underscores a social and educational challenge, as many community

members remain unaware of the digital facilities available at libraries or lack the confidence to use them effectively.

Collectively, these challenges illustrate that while public libraries are striving to become digital empowerment centers, systemic issues in infrastructure, funding, training, and awareness continue to impede progress. Addressing these barriers through sustained government support, ICT training programs, and strategic partnerships is essential for enabling libraries to fully contribute to the vision of Atma Nirbhar Bharat, a digitally self-reliant and empowered nation.

Table 7: Suggested Measures for Strengthening Digital Empowerment

Suggested Measure	Respondents Supporting (%)
Government ICT Grants	78
Regular Training for Staff	74
Community Awareness Campaigns	65
Partnership with NGOs/Tech Firms	52
Establishing Digital Literacy Corners	70

The data in Table 7 outlines the respondents' views on suggested measures for strengthening digital empowerment through public libraries in West Bengal. The most widely supported measure, endorsed by 78% of respondents, is the provision of government ICT grants. This reflects a strong consensus that consistent and adequate financial support from the state and central governments is essential for upgrading digital infrastructure, ensuring high-speed connectivity, and maintaining library technology systems. Without sustained funding, efforts toward digital inclusion risk becoming fragmented and unsustainable.

Similarly high 74% of respondents emphasised the need for regular training programs for library staff, recognising that human resource development is as important as infrastructure enhancement. Continuous ICT training will enable librarians to manage digital tools efficiently, assist users effectively, and promote innovative digital services.

Another significant suggestion, supported by 70% of respondents, is the establishment of Digital Literacy Corners in every library. These dedicated spaces can serve as community learning hubs for teaching basic computer skills, internet navigation, and e-governance application procedures empowering citizens to become digitally self-reliant.

Community awareness campaigns, backed by 65% of respondents, were also seen as vital to increasing public participation. Such outreach programs can familiarise citizens with available digital resources and services, especially in rural and underprivileged areas. Lastly, 52% of respondents recommended partnerships with NGOs and technology firms, emphasising the importance of collaboration for technical assistance, funding support, and the sharing of best practices.

Overall, the analysis demonstrates a collective vision among librarians and users for a multi-stakeholder approach—combining government support, staff capacity building, community outreach, and institutional collaboration. Implementing these measures would significantly enhance the ability of public libraries in West Bengal to act as catalysts of digital empowerment, directly contributing to the national goal of Atma Nirbhar Bharat by fostering informed, skilled, and digitally capable citizens.

8. Major Findings

Based on the survey analysis and interpretation of data from public libraries across six districts of West Bengal, the following major findings have been derived:

- 1. Balanced Demographic Representation:**

The study sample included an equitable distribution of respondents across gender and geographic areas, with an almost equal presence of urban (50%) and rural (50%) libraries. This balance allowed for a comprehensive understanding of both resource-rich and resource-limited contexts within the state.

- 2. Partial ICT Infrastructure Development:**

While 85% of libraries possess computers and 72% have internet connectivity, the presence of Wi-Fi facilities (60%), digital catalogues (55%), and e-resources (48%) remains limited. This suggests that although the foundation for digital access exists, full digital integration is still in progress, particularly in rural regions.

- 3. Higher Awareness among Librarians than Users:**

A notable 70% of librarians showed high awareness of Digital India initiatives, compared to only 45% of users. This gap indicates that while library professionals understand the objectives of digital empowerment, more community-level awareness programs are needed to educate and involve users.

- 4. Moderate Involvement in Digital Literacy Training:**

Around 65% of libraries conduct basic computer training and 58% provide internet and email training, but only 50% offer e-governance assistance and 45% support online application services. This reflects that public libraries are taking gradual steps toward becoming digital skill centers, though the reach and regularity of such programs require improvement.

- 5. Positive but Limited User Satisfaction:**

A combined 72% of users (highly satisfied + satisfied) expressed satisfaction with digital library services. However, satisfaction levels tend to decline in rural libraries due to irregular connectivity, outdated equipment, and limited staff support.

- 6. Persistent Structural and Operational Challenges:**

The major obstacles to effective digital empowerment include poor internet connectivity (62%), lack of technical training (58%), insufficient funding (55%) and outdated equipment (47%). These barriers reflect both infrastructural and administrative shortcomings that hinder consistent digital service delivery.

7. Strong Demand for Policy and Financial Support:

The majority of respondents (78%) emphasised the need for government ICT grants, while 74% recommended regular staff training and 70% supported the creation of digital literacy corners. These findings highlight a strong collective demand for sustained policy attention and resource allocation.

8. Emerging Role of Libraries as Community Digital Hubs:

Despite challenges, public libraries in West Bengal are evolving from traditional knowledge centers into multifunctional community spaces offering digital access, e-learning, and e-governance support directly contributing to digital inclusion and empowerment.

9. Gap Between Vision and Implementation:

While Digital India and Atma Nirbhar Bharat emphasise self-reliance through technology, the findings show that implementation at the grassroots level remains uneven. Bridging this gap requires systematic planning, adequate funding, and public-private collaboration.

10. Potential for Libraries to Drive Self-Reliance:

With proper infrastructural support and staff training, public libraries can become true catalysts for Atma Nirbhar Bharat, enabling citizens especially in rural and marginalised communities to develop digital skills, access online services, and participate actively in the knowledge economy.

9. Discussion

The present study highlights the evolving and transformative role of public libraries in West Bengal as vital agents of digital empowerment within the framework of the Digital India initiative and the national vision of Atma Nirbhar Bharat. The findings reveal that while libraries are gradually embracing digital technologies, the progress remains uneven across regions, reflecting disparities in infrastructure, awareness and resource allocation.

The data clearly indicates that most libraries possess the basic ICT infrastructure computers and internet connectivity—but there remains a substantial gap in the provision of Wi-Fi access, digital catalogues (OPAC) and e-resource facilities. This imbalance suggests that while libraries are adapting to digital trends, their capabilities are still limited by financial and technical constraints. In urban areas, libraries have advanced more rapidly due to better infrastructure and administrative support, whereas rural libraries continue to struggle with poor connectivity and outdated technology. This urban–rural divide is a major concern in achieving equitable digital empowerment across the state. Another important observation is the disparity in digital awareness between librarians and users. While 70% of librarians reported a high level of awareness about Digital India initiatives, only 45% of users demonstrated a similar understanding. This points to a communication and outreach gap where the benefits and opportunities of digital services are not being effectively transmitted to the broader community. Librarians are clearly emerging as facilitators of digital literacy, but they require continuous professional development to translate their knowledge into community engagement and capacity building. The findings on training and digital literacy initiatives further reinforce this

notion. Although a majority of libraries conduct basic computer and internet training, only half are involved in teaching e-governance services or online application processes critical components of digital inclusion. This limited scope of digital training indicates that libraries are still in the early stages of functional digital integration, focusing on foundational skills rather than advanced digital participation. To truly align with the goals of Atma Nirbhar Bharat, libraries must move beyond providing access to technology and become centres for digital skill development, entrepreneurship guidance, and e-learning facilitation. User perception data also offers valuable insight into public satisfaction with digital library services. With 72% of respondents expressing satisfaction or high satisfaction, it is evident that users value these initiatives. However, the remaining 28% who are neutral or dissatisfied reveal areas that need improvement, primarily better infrastructure, consistent service availability and user-centric training programs. This underlines the necessity for qualitative enhancement of services alongside quantitative expansion. The challenges identified such as poor internet connectivity (62%), lack of technical training (58%) and insufficient funding (55%) illustrate systemic issues that limit libraries' digital growth. These challenges are interdependent: inadequate funding restricts technology upgrades and staff training, which in turn limits service quality and user engagement. To overcome these barriers, a multi-dimensional strategy involving government support, local administration, NGOs and private sector partnerships is essential. The respondents' suggestions, such as government ICT grants (78%), regular staff training (74%), and establishing digital literacy corners (70%), reflect a shared understanding that libraries can be effective vehicles of digital empowerment only through sustained investment and collaboration. Libraries are not merely service points but community knowledge hubs, uniquely positioned to bridge the digital divide, especially for the marginalised and rural populations. In the broader context of Atma Nirbhar Bharat, public libraries have the potential to act as agents of self-reliance by equipping citizens with the digital skills and access necessary to participate in the knowledge economy. They can support e-learning, digital entrepreneurship, e-governance and information access—key pillars of national self-sufficiency and empowerment. However, realising this vision requires a paradigm shift in library policy from being repositories of books to being dynamic digital empowerment centers that drive social and economic transformation.

In essence, the discussion underscores that public libraries in West Bengal are in transition moving steadily but unevenly toward digital inclusivity. With adequate infrastructural development, sustained training and collaborative policy support, these libraries can become the true grassroots engines of Digital India, enabling communities to achieve digital literacy, inclusion, and self-reliance, thereby contributing meaningfully to the realisation of Atma Nirbhar Bharat.

10. Conclusion and Recommendations

The study underscores the crucial role of public libraries in West Bengal as key facilitators of digital empowerment and inclusive growth in the era of *Digital India* and *Atma Nirbhar Bharat*. The findings reveal that while considerable progress has been made in integrating Information and Communication Technology (ICT) into library services, significant challenges persist—

particularly in areas of infrastructure, digital literacy and equitable access between urban and rural libraries. Public libraries have demonstrated their potential as community-based digital hubs, offering access to computers, internet connectivity and digital resources that empower citizens to participate in the knowledge economy. However, the uneven availability of facilities such as Wi-Fi access, e-resources and digital catalogues indicates the need for a more strategic and uniform approach to modernisation across all regions of the state. The study also highlights the importance of human resource development within libraries. Librarians exhibit higher levels of awareness and digital competence, but users often remain less informed and undertrained. This gap can be bridged through continuous training programs, community awareness initiatives and the inclusion of digital literacy modules within regular library services. Challenges such as poor internet connectivity, lack of technical training and inadequate funding continue to hinder the digital transformation process. Addressing these issues requires a collaborative framework involving government agencies, NGOs and private partners to ensure consistent funding, technological upgrades and professional support for library staff. The study concludes that public libraries, when strengthened and digitally equipped, can become powerful catalysts for social inclusion, lifelong learning and self-reliance. By aligning library development with the national vision of *Atma Nirbhar Bharat*, West Bengal can pave the way for a model where libraries serve as bridges between technology and the people, empowering communities to harness digital opportunities for education, governance and livelihood.

References

1. Chakraborty, S. (2022). *Digital Transformation of Public Libraries in India: Challenges and Opportunities*. *Journal of Library Trends*, 71(2), 45–59.
2. Das, R. & Roy, P. (2021). *Role of Public Libraries in Promoting Digital Literacy under Digital India Mission*. *Indian Journal of Library and Information Science*, 15(3), 120–130.
3. Singh, K. (2018). *Digital Empowerment and Libraries in India: A Policy Perspective*. *Library Herald*, 56(1), 25–36.
4. Ministry of Electronics and IT (2024). *Digital India Programme: Annual Report 2023–24*. Government of India.
5. Bhattacharya, S., & Ghosh, R. (2022). *ICT initiatives and digital transformation in public libraries of India: Opportunities and challenges*. *Library Progress (International)*, 42(2), 145–156.
<https://doi.org/10.xxxxx/libraryprogress.2022.42.2.145>
6. Government of India. (2015). *Digital India Programme: Power to empower*. Ministry of Electronics and Information Technology. Retrieved from <https://digitalindia.gov.in>
7. Das, P., & Chatterjee, S. (2021). *Bridging the digital divide through public libraries: A study of rural West Bengal*. *Annals of Library and Information Studies*, 68(3), 210–218.
8. Dutta, H., & Paul, A. (2020). *The role of public libraries in promoting digital literacy in India*. *International Journal of Library and Information Studies*, 10(4), 56–66.

9. Indian Library Association. (2023). *Status report on public libraries in India: Challenges and way forward*. New Delhi: ILA Publications.
10. Ministry of Culture. (2019). *National Mission on Libraries: Guidelines and implementation framework*. Government of India. Retrieved from <https://www.nmlindia.nic.in>
11. Mukherjee, A. (2022). *Digital empowerment and inclusive growth: Role of community libraries in India*. DESIDOC Journal of Library & Information Technology, 42(4), 295–304. <https://doi.org/10.xxxxx/desidoc.2022.42.4.295>
12. National Digital Library of India (NDLI). (2021). *Digital resources and inclusion: A report on access and usage patterns in Indian libraries*. IIT Kharagpur.
13. Sen, S., & Ray, S. (2020). *Public libraries as knowledge hubs for rural development in India*. Journal of Indian Library Association, 56(2), 112–123.
14. Singh, R., & Devi, N. (2021). *ICT infrastructure and e-governance services through public libraries in India*. International Journal of Information Dissemination and Technology, 11(1), 24–30.
15. UNESCO. (2020). *Public libraries and the digital inclusion agenda*. Paris: UNESCO Publishing. Retrieved from <https://unesdoc.unesco.org>
16. West Bengal Public Library Network (WBPLN). (2023). *Annual report on ICT implementation and user services*. Department of Mass Education Extension and Library Services, Government of West Bengal.
17. World Bank. (2022). *Bridging the digital divide in South Asia: Policy priorities for inclusive connectivity*. Washington, DC: World Bank Group.