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Information and Communication Technology Infrastructure in State and District Level Public Libraries in Kerala

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ABSTRACT

This study examines the availability and status of information and communication technology (ICT) infrastructure in Kerala's state and district-level public libraries. Using a survey method, data were collected through questionnaires administered to the heads and librarians of the State Central Library and district-level public libraries across Kerala. The study examines both hardware and software adoption in these libraries. It assesses the adequacy of ICT resources in accordance with the guidelines of the International Federation of Library Associations and Institutions (IFLA). Findings reveal that out of eleven public libraries, only six possess ICT infrastructure and maintain an official website. At the same time, none have a formal policy for the development or implementation of ICT infrastructure. The analysis, guided by IFLA standards, indicates a considerable shortage of computers available for public internet access. The study highlights critical gaps in ICT infrastructure and provides insights that can support policy formulation and strategic planning for ICT development in Kerala's public libraries.

Keywords: Information and Communication Technology, Internet access, Public Libraries, IFLA guidelines, Kerala.

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1. INTRODUCTION

Digital technologies have become a cornerstone in providing library and information services in public libraries. In the digital era, continuous adaptation and development of information and communication technology (ICT) infrastructure play a key role in providing universal access to and meaningful use of information for all people (Krass et al., 2022). Public libraries are now envisioned to contribute to the achievement of the Sustainable Development Goals, fostering information dissemination, literacy, civic participation, and providing access to cultural heritage. Public libraries in a digital environment should be able to procure and give digital access to content, information, collections, and services to the user community. This becomes possible only if public libraries provide services to users both in-person and remotely through digital technologies. IFLA-UNESCO Public Library Manifesto, 2022 states, "services must be physically or digitally accessible to all community members. This requires well-equipped and well-situated library buildings, suitable reading and study facilities, relevant technologies, and sufficient opening hours that are convenient for users. It equally implies outreach services for those unable to visit the library" (Krass et al., 2022).In such a situation, the availability of computers for internet access to the entire population in a state or district, through public libraries, becomes inevitable. Policy guidelines for ICT infrastructure development and implementation are now necessary

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rather than a luxury. ICT infrastructure development offers public libraries an opportunity for a smarter transformation, enabling them to provide more accessible and inclusive information services (Bello & Adepegba, 2023). Public libraries can effectively meet the digital needs of their communities by making informed investments in the development of ICT infrastructure, providing internet access, and offering staff training. This will enable public libraries to engage their users in personal creative development, education, socio-economic development, and civic engagement, all of which are necessary for inclusive national development (Bertot, 2016).

Kerala is a southern state in India, situated on the coast of the Arabian Sea, bordered by Karnataka and Tamil Nadu. It is a state with 100% literacy and a population of 33,387,677 *(*Kerala summary, 2023). The public library system in Kerala operates under the Kerala Public Libraries (Kerala Granthasala Sanghom) Act, 1989 (Ajitha Kumari & Francis, 2015). Kerala has 14 districts, and only 12 of these districts have prominent libraries that can be considered district libraries based on their functions and services. Only the State Central Library in Kerala is run directly by the government. The rest of the libraries function independently with distinct names. This study assesses the availability of ICT infrastructure, hardware and software adoption, and computers for internet access in state and district public libraries in Kerala. The study assesses the adequacy of computers available for internet access in public libraries in Kerala in accordance with IFLA guidelines. The study also compares the number of computers available for internet access in each library with their membership strength and the computers-to-membership ratio.

2. REVIEW OF LITERATURE

A review of related literature was conducted to identify significant studies examining digital infrastructure and internet access provision in public libraries in India and abroad.

Prabhjeet Kaur and Walia (2015) reported that the ICT infrastructure in government-owned public libraries in Delhi is inadequate for delivering effective digital services to their users. Their study revealed that only a few libraries provided computer terminals for internet access. Similarly, Ajitha Kumari and Francis (2015) found that the Kerala State Central Library is well-equipped with modern ICT tools that efficiently manage library operations and services. Hernández-Pérez et al. (2020) discussed how digital technologies contribute to social transformation and enhance community engagement. Their case study emphasised the crucial role of public libraries in fostering social connections through technology-based innovation activities.

In a related study, Goek and Larra (2021) found that users in rural areas with unreliable cellular data coverage often rely heavily on the ICT infrastructure provided by public libraries. Shikoh and Haridasan (2021) further identified that a lack of ICT infrastructure, financial limitations, and staff shortages were major factors hindering the automation process in public libraries. Similarly, Jamoh et al. (2021) found that among the three libraries studied, only one was equipped with internet facilities, a dedicated room, and voice recognition software for users with disabilities, indicating that accessibility provisions remain inadequate. More recently, Manjula and Naik (2023) reported that only 82 computers were available across 18 of the 84 rural public libraries surveyed. Their findings highlighted that ICT infrastructure in these libraries remains insufficient to meet users' growing digital information needs.

Hider et al. (2024) discussed the availability of ICT infrastructure in rural libraries in Australia. Their study identified that demand for ICT-based digital services, dedicated areas for computer access and digital literacy training has increased over the last few years. They observed that public libraries in rural areas with outdated technology, inadequate and ageing ICT infrastructure are becoming 'digital islands' in communities. A study conducted by Adarkwa et al. (2024) observed that the ICT infrastructure at the Ashanti Regional Library in Kumasi, Ghana, is inadequate. The authors identified a potential gap in essential ICT infrastructure and challenges faced while adopting ICT tools in the

library. A recent study conducted by Chowdhury & Khan (2025) identified that inadequate infrastructure, a lack of technology integration, vacant staff positions, and minimal funding hinder the needs and expectations of public library users in the Murshidabad district of West Bengal. Sharma (2025) examined the status of ICT adoption, ICT integration, and national policy frameworks in public libraries in India. The author identified critical gaps in ICT infrastructure, staffing, and policy implementation across various levels of public libraries.

3. OBJECTIVES OF THE STUDY

The present study aims to identify the ICT infrastructure and computers available for internet access in Kerala's state central library and district-level public libraries. The objectives are as follows:

- To assess the ICT infrastructure available in the State Central Library and district-level public libraries in Kerala.
- To evaluate the adequacy of computers available for internet access in the State Central Library and district-level public libraries in Kerala based on IFLA guidelines.
- To find out the status of ICT infrastructure development and implementation policy in public libraries in Kerala.

4. RESEARCH METHODOLOGY

A survey method using a questionnaire was used to collect data from the heads of state and district-level public libraries in Kerala. The questionnaire was designed to collect information regarding the availability of ICT infrastructure, hardware, and software adopted in public libraries in Kerala. The heads of these libraries were also interviewed to assess the ICT infrastructure development and implementation policy available for public libraries in Kerala. The sample selected for the study includes all the state and district-level public libraries in Kerala**.** The study utilises the IFLA Public Library Guidelines (2010) to assess the adequacy of computers available for internet access in relation to IFLA standards, in comparison to the population and the existing computer shortage. The study also evaluates the membership in comparison to the computers available for internet access. Table 1 presents the number of state and district public libraries in Kerala. The State Central Library, Kerala, and ten district libraries responded to the study, yielding a response rate of 84.61%.

Table 1: Number of Public Libraries Covered in the Study and Their Response Rate

Type of Libraries	Total Number of Public Libraries	Response Received from the Libraries	Response Rate
State Central Library, Kerala	01	01	100
District Libraries	12	10	83.33
Total	**13**	**11**	**84.61**

Source: Author's own work.

5. DATA ANALYSIS AND INTERPRETATION

Data collected from librarians in public libraries in Kerala were analysed and discussed in the subsequent sections. Interpretation based on IFLA public library guidelines (2010) is also presented below:

5.1 ICT Infrastructure in Public Libraries of Kerala

Public libraries have now extended to provide computers for internet access, e-resources, and other digital services. Kerala has a long tradition of strong public library networks, supported by active

community participation and government initiatives. With the state's high literacy rate and growing emphasis on digital inclusion, the availability of sufficient ICT infrastructure is a necessity. However, the level of ICT infrastructure available in these libraries varies widely, depending on factors such as location, funding, and management. Table 2 lists the names of the public libraries that responded to the study, their locations, years of establishment, availability of digital infrastructure, and their website URLs, and is arranged in order of their year of establishment.

Table 2: Availability of ICT Infrastructure in Public Libraries of Kerala

Name of the Library	Year of est.	Availability of ICT Infrastructure	Separate Space for Internet access	Availability of Website/URL
State Central Library (SCL), Kerala	1829	Yes	No	https://statelibrary.kerala.gov.in/
Ernakulam Public Library (EPL), Ernakulam	1870	Yes	Yes	https://www.ernakulampublic library.com
Trichur Public Library (TPL), Thrissur	1873	Yes	Yes	http://trichurpubliclibrary.org
Kottayam Public Library (KPL), Kottayam	1882	Yes	Yes	https://www.kottayampublic library.org
State Public Library & Research Centre (SPLK), Kozhikode	1927	Yes	No	https://publiclibrarykozhikode.com
Cannore Public Library (CPL), Kannur	1929	No	No	No website
Paravur Public Library (PPL), Alapuzha	1947	No	No	No website
Municipal Library (MLP), Pathanamthitta	1962	Yes	No	No website
Quilon Public Library and Research Centre (QPL), Kollam	1973	Yes	Yes	No website
Malapuram Public Library (MPL), Malapuram	1976	Yes	No	No website
Palakkad District Public Library (PDPL), Palakkad	2013	Yes	Yes	http://www.palakkaddistrictlibrary.com

Source: Author's own work.

Table 2 shows that the State Central Library, Kerala, the apex of the state's public library system, was established in 1829. It was formerly known as the Trivandrum Public Library and is the oldest public library in India. It was declared a state central library in 1958, per the library legislation, the Kerala Public Libraries (Kerala Granthasala Sanghom) Act, 1989. There is only one state central library and 12 district libraries in Kerala. State Public Library & Research Centre, Kozhikode is a district library. Table 2 indicates that public libraries in three districts were established in 1800, four in the 1900s and one in 2013. Most public libraries in Kerala were established long before India's independence and made significant contributions to the country's struggle for independence. Analysis indicates a slow pace for establishing public libraries after independence in Kerala. All libraries, except Cannore Public Library and Paravur Public Library, have ICT infrastructure. Six libraries have their own independent library websites. Only five district libraries provide a separate space for internet access.

Analysis shows that only a minority of public libraries provide dedicated space for internet access. An interview with librarians revealed that there is no ICT infrastructure development and implementation policy in place for public libraries in Kerala. There is also no mention of ICT-related policies in Kerala's library legislation.

5.2 Hardware Infrastructure in Public Libraries of Kerala

The availability of sufficient digital infrastructure is the most important factor in promoting the application of ICT in providing library and information services. ICT-enabled library services become efficient with better ICT infrastructure. Table 3 presents the availability of computers, digital peripherals, security systems, multimedia devices, and Wi-Fi in the State Central Library and the district libraries of Kerala.

Table 3: Physical Infrastructure Available in Public Libraries of Kerala

Name of the library	Computers	Laptops	Tablets	Printers	Scanners	Photocopier	Cameras	CD/DVD Player	Server	Barcode Scanner	Barcode Printer	RFID Equipment	CCTV camera	Projector	Wi- FI
SCL	61	15	4	8	3	4	1	0	6	8	1	12	32	1	N
SPLK	40	2	0	4	3	1	0	0	1	4	0	0	16	1	Y
EPL	14	1	2	3	1	2	0	0	2	0	0	4	25	1	Y
KPL	12	2	0	6	3	4	1	0	1	0	0	0	16	1	Y
PDPL	11	1	1	3	1	1	0	0	1	1	0	0	6	1	Y
TPL	7	0	0	5	2	2	0	1	1	3	1	0	8	1	N
QPL	5	6	0	1	0	1	0	0	0	0	0	0	0	0	Y
MPL	1	0	0	1	0	1	0	0	0	0	0	0	0	1	N
MLP	1	0	0	1	0	0	0	0	0	0	0	0	0	0	N
CPL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	N
PPL	0	0	0	0	0	1	0	0	0	0	0	0	0	0	N

Source: Author's own work. Codes **Y: Yes; N: No**

Table 3 shows that all public libraries except Cannore Public Library and Paravur Public Library have computers. State Central Library, Kerala, has 61 computers, followed by State Public Library & Research Centre, Kozhikode, with 40 computers. The rest of the libraries have fewer than 15 computers. Only three libraries have tablets. Six libraries have laptops, with the State Central Library in Kerala having the largest number, 15 laptops. Nine public libraries have a printer, and six have a scanner. A photocopier is available in all libraries except the Municipal Library in Pathanamthitta and the Cannore Public Library. Two public libraries, namely the State Central Library, Kerala, and the Kottayam Public Library, have digital cameras. A CD/DVD player is available only in the Trichur Public Library. Technologies such as barcode scanners are available in only four public libraries; among them, only two libraries have a barcode printer. RFID technology enhances automation and is currently installed in the State Central Library, Kerala (12 units), and the Ernakulam Public Library (4 units). Six public libraries have Servers and have installed CCTV surveillance systems with 32 cameras in the State Central Library, Kerala. Seven libraries have one projector each. Only five libraries provide Wi-Fi access for users.

Analysis shows that computers are available in most libraries; printers and scanners are moderately available. Analysis shows that the Central Library in Kerala provides internet access through Wi-Fi to staff but not to users. Analysis shows a grave disparity among public libraries in terms of ICT

infrastructure. Technologies such as barcode scanners and RFID are absent in most libraries. Analysis shows that public libraries take security seriously, and most libraries have more than ten CCTV cameras.

5.3 Software Adoption in Public Libraries of Kerala

Software forms the foundation of the integration of ICT in library operations. The extent of software application adoption indicates the level of modernisation in public libraries. Software automates core functions, including cataloguing, circulation, acquisitions, and member services. An analysis of software usage across selected public libraries in Kerala reveals the extent of digital adoption and automation efforts (Table 4).

Table 4: Software Adoption in State Central Library and District Libraries of Kerala

Name of the Library	Word Processing Software	Photoshop	Antivirus	Library Management Software	Digital Library Software	Formats for differently abled	Net Server
SCL	MS Office Libre Office	Adobe	K7	Koha	Nitya Digital Library Software	Daisy	Windows, Ubuntu
EPL	MS Office	Nil	Kaspersky	Koha	DSpace	Nil	Linux Windows
KPL	MS Office	Nil	Windows Defender	Koha	Nil	Nil	Windows
MPL	MS Office	Nil	Windows Defender	Nil	Nil	Nil	Nil
MLP	MS Office	Nil	Windows Defender	Nil	Nil	Nil	Nil
PDPL	MS Office	Nil	eScan	Self	Nil	Nil	Windows
QPL	MS Office	Nil	Windows Defender	Nil	Nil	Nil	Nil -
SPLK	MS Office	Corel DRAW	Windows Defender	Koha	Nil	Nil	Windows
TPL	MS Office	Nil	Windows Defender	MYSQL	Nil	Nil	SQL Server
CPL	Nil	Nil	Nil	Nil	Nil	Nil	Nil
PPL	Nil	Nil	Nil	Nil	Nil	Nil	Nil

Source: Author's own work.

From Table 4, it is clear that State Central Library Kerala has installed MS Office and LibreOffice for word processing, Adobe for Photoshop, K7 for antivirus, Koha for library automation, Nitya Digital Library Software for maintaining the digital library and digitisation, Daisy format for the differently abled, and Windows as well as Ubuntu for maintaining the Server. Table 4 shows that all the district libraries, except Cannore Public Library, Kannur, and Paravur Public Library, Alapuzha, use MS Office. State Public Library & Research Centre, Kozhikode, has installed CorelDRAW for Photoshop. Ernakulam Public Library, Ernakulam, has installed Kaspersky and eScan for antivirus protection, while Palakkad District Public Library, Palakkad, has installed Kaspersky. The rest of the libraries use the available Windows Defender and Windows for protection against computer viruses. Ernakulam Public Library, Kottayam Public Library, and State Public Library & Research Centre, Kozhikode have installed Koha for library automation. The Trichur Public Library and Thrissur use MySQL for library automation, whereas the Palakkad District Public Library has developed an independent package for its own library automation. Ernakulam Public Library has installed DSpace to maintain a digital library. Ernakulam Public Library

utilises both Linux and Windows to manage its network server. Kottayam Public Library, Palakkad District Public Library, and State Public Library & Research Centre, Kozhikode use windows to maintain the network server. Trichur Public Library, Thrissur, uses SQL Server. None of the libraries has software for digitisation or specialised software for the blind and hearing-impaired. Kannur and Paravur Public Library, Alapuzha, do not use computers and have no software installed. Analysis clearly shows that most libraries have not installed the necessary software for Photoshop, digital library management, and specialised software for individuals with disabilities.

5.4 Availability of Computers for Internet Access as Per IFLA Standards

Public libraries should provide computers with internet access to users by earmarking a separate area for internet browsing, allowing access to electronic information resources provided by the library and those available on the Internet. IFLA Public Library Service Guidelines (2010) state that a standard of one computer access point per 5000 people should be provided in public libraries. The number of computers with internet access required, as per IFLA guidelines, and the ratio of available computers to the required ratio, help identify whether the computers available are sufficient for serving the entire district population in which the library is situated. Table 5 presents the number of computers available for internet access, the required number of computers according to the IFLA standard, the ratio of available computers to the required number, the shortage of computers, and the percentage of shortage in public libraries in Kerala.

Table 5: Availability of Computers for Internet Access as per IFLA Guidelines in Public Libraries in Kerala

Name of the Libraries	*Population in Each District in the year 2025	Computers available for Internet Access	No. of computers required for Internet access as per IFLA Standards	Computers available to the Required Ratio	Shortage of computers	Percentage of shortage
SCL	34698876[SP]	0	6940	0	6940	100
	3429192[DP]		686		686	100
CPL	2620643	0	524	0.0000	524	100
EPL	3409416	5	682	0.0073	677	99.27
KPL	2050966	5	410	0.0122	405	98.78
MLP	1243752	0	249	0.0000	249	100
MPL	4272090	0	854	0.0000	854	100
PDPL	2918678	2	584	0.0034	582	99.66
PPL	2210134	0	442	0.0000	442	100
QPL	2737364	5	547	0.0091	542	99.09
SPLK	3205733	0	641	0.0000	641	100
TPL	3241990	2	648	0.0031	646	99.69

Source: Author's own work. **Codes:** SP: State Population; DP: District Population, *projected population based on the 2011 census of India.

It is evident from Table 5 that the State Central Library, Kerala, requires 660 computers for internet access in accordance with IFLA standards; however, it currently has a shortage of 660 computers, as the library does not provide computers for internet access. Compared to the IFLA standard, Malapuram district has the highest population, and Malapuram Public Library has the highest shortage of 823 computers. Pathanamthitta district has the lowest population, and the Municipal Library in

Pathanamthitta has the lowest shortage of 239 computers. Neither Libraries provide computers for internet access. Among libraries providing computers with internet access, Ernakulam Public Library has the highest shortage of 656 computers, and Kottayam Public Library has the lowest shortage of 395 computers compared to the IFLA standard. The ratio of computers available to the required ratio is highest for Kottayam Public Library (0.0127) and is lowest for Trichur Public Library (0.0032).

Analysis shows that the ratio of computers available to the required ratio across all libraries is significantly below 0.01, which is alarmingly low, indicating that less than 1% of the required infrastructure is in place in most of the district. This clearly shows that the number of computers available for internet access in Kerala district libraries is insufficient to satisfy the information needs of the population in the respective districts. Analysis highlights a significant digital infrastructure gap in Kerala's public library system.

5.5 Availability of Computers for Internet Access in Public Libraries of Kerala

Library membership reflects the role and importance of public libraries in a particular community. Overall, ICT infrastructure and computers available for internet access should be proportional to user needs and sufficient to serve its members. Public libraries often consider the total number of members when allocating spaces for computers with internet access for users. Even though state central libraries and district libraries are required to provide infrastructure for internet access to the entire population of a district, the availability of computers to membership ratio indicates how well public libraries are equipped to provide internet access to their members. Table 6 compares the number of computers available in each library, membership strength, and the ratio of computers to membership.

Table 6: Availability of Computers for Internet Access in Public Libraries of Kerala

Name of the Libraries	Library Membership	Computers available	Computers available to membership ratio
SCL	124843	0	0
QPL	70000	5	0.00007
CPL	15800	0	0
TPL	15000	2	0.00013
EPL	11800	5	0.00042
PPL	11000	0	0
PDPL	9792	2	0.0002
MPL	7500	0	0
KPL	5000	5	0.001
SPLK	3500	0	0
MLP	2500	0	0

Source: Author's own work.

Table 6 clearly shows that the State Central Library, Kerala, with the largest membership of 124843, does not provide computers for internet access. With the second-highest membership, the Quilon Public Library and Research Centre in Kollam has only five computers, resulting in the lowest computer-to-membership ratio of 0.00007. Kottayam Public Library, Kottayam, has a membership of 5,000 and 5 computers for Internet access, boasting the best computer-to-member ratio available at 0.001. Ernakulam Public Library and Trichur Public Library have computers with membership ratios of 0.00042 and 0.00013, respectively.

There are no IFLA guidelines for analysing the number of computers available for internet access concerning membership. Previous analysis showed that the availability of computers for internet access among the population is low. Therefore, further analysis has been conducted in this study to reveal that the availability of computers for internet access among library members is very low in public libraries in Kerala. Analysis shows that the ratio of computers available for internet access to the membership ratio is less than 0.01 for all libraries. Analysis reveals a significant disparity between the number of members and the computers available for internet access. It indicates a lack of proportionate growth in ICT infrastructure in relation to the number of library members. This will significantly contribute to widening the digital divide among users who depend on public libraries for internet access.

6. FINDINGS AND DISCUSSION

A study found that nine out of eleven public libraries in Kerala have digital infrastructure, and six of these libraries have their own websites. Only five district libraries provide a separate space with computers for internet access for users. Most public libraries have computers. Scanners and printers are available in most libraries. Digital technologies, such as a barcode scanner, are available in only four public libraries. RFID technology is found only in the State Central Library, Kerala, and the Ernakulam Public Library. The study revealed a significant disparity in the digital technologies available in district libraries. Most libraries use MS Office for word processing and Windows for the network Server. Three libraries use Koha for automation. Only the State Central Library, Kerala, has implemented digitisation software and software for the differently abled. Analysis using IFLA standards reveals a significant shortage of computers for internet access in public libraries. The ratio of computers available for internet access to the required ratio across all libraries is significantly below 0.01, indicating that the available infrastructure is less than 1% of the required infrastructure in most of the district. This indicates a lack of proportional increase in computers with internet access among members. Analysis revealed that the availability of computers for internet access is significantly low compared to the population of the districts and the number of members in each library.

The Government of Kerala and the Kerala State Library Council should consider developing a policy-level framework to improve ICT infrastructure in public libraries and increase the availability of computers for internet access as soon as possible, given the total shortage of 6249 computers in district libraries, as per IFLA standards. The Kerala State Library Council should increase the number of computers available for internet access in proportion to the membership in these libraries. Public libraries should have a separate space with computers for internet access and Wi-Fi hotspots. This space should serve as a gateway to e-books, electronic resources for recreation, e-journals, and open educational resources. This will help users from remote areas without internet connectivity access library sources and services. They should also develop a comprehensive, fully functional website to support access to the e-resource collection. Public library staff should be trained to manage and maintain digital tools. These capacity-building initiatives will also act as a motivation factor for implementing emerging digital tools in libraries.

State Central Library and district libraries in Kerala will be able to attract more users to the library only if they have the latest digital technology tools and innovative library services based on them. Public libraries can enhance their ICT infrastructure and digital services with financial support from central and state governments. They should develop a pooled procurement models to fund inclusive ICT infrastructure development for public libraries in Kerala. The state government should develop an ICT infrastructure development and implementation policy and incorporate it into the library legislation existing in the state. Such policy reform should focus on integrating ICT infrastructure in public libraries to provide library and information services, as well as free internet access. It should also include a framework for monitoring the development of digital infrastructure and digital access to information resources and services.

7. CONCLUSION

The present study identifies a severe underdevelopment of the ICT infrastructure in the public library system at the state and district levels. Public libraries are now responsible for providing

digital information resources, education based on digital resources, and an agency for promoting digital literacy; hence, they should develop a sustainable model for transforming and redesigning services in the digital environment. The road map towards this should consider equitable ICT infrastructure development and address the information needs of marginalised communities. Public libraries can only be reinvented as digital hubs if they embrace digital infrastructure development focused on building an inclusive knowledge society. This will enable public libraries in Kerala to satisfy the objectives of self-education, empowerment, social connection, and meaningful participation in democracy (Bello & Adepegba, 2023). The State Central Library, acting as the apex body in collaboration with the district level, should take a leadership role in adopting emerging technologies, focusing on networking and resource sharing as a means to develop the public library system comprehensively. Public libraries in Kerala should identify a more comprehensive and equitable approach to ensure that libraries are fully equipped to serve the community in the digital environment.

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