

Bridging the Digital Divide through Public Library Services:

The Kano State Library Experience (2017–2023)

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Abstract

The rapid expansion of Information and Communication Technologies (ICTs) has transformed access to information, education, and public services, yet the digital divide continues to limit equitable participation in the digital society, particularly in developing countries. Public libraries have consequently evolved beyond their traditional role as repositories of information to become community-based digital learning centres that promote digital inclusion through access to technology, digital literacy, and lifelong learning opportunities. Despite this expanded mandate, there remains limited documentation of practical ICT and digital inclusion initiatives implemented by Nigerian public libraries. This paper addresses this gap by documenting the Kano State Library's experience in promoting digital inclusion between 2017 and 2023. The study adopted a qualitative practice-based case study design based on documentary evidences and reflective professional observation. Data were obtained from annual reports, departmental files, programme reports, administrative records, policy documents, committee reports, photographs, media publications, and other institutional records, complemented by the author's direct involvement in the planning, implementation, supervision, and evaluation of the initiatives. The data were analysed using reflective thematic presentation and interpreted through the lens of Digital Inclusion Theory. The findings indicate that the Kano State Library implemented a comprehensive digital inclusion strategy centred on four interrelated dimensions: expanding access to ICT infrastructure and Internet services, improving affordability through free digital services, strengthening users' digital competencies through structured ICT training programmes, and promoting meaningful use of digital technologies for education, online learning, computer-based test preparation, and community engagement. The paper concludes that public libraries possess significant potential to reduce digital exclusion when supported by sustained investment in ICT infrastructure, digital literacy programmes, strategic partnerships, and enabling government policies. The study contributes practical evidence on the evolving role of public libraries in advancing digital inclusion and provides lessons for policymakers, library administrators, and information professionals seeking to strengthen community-based digital services in Nigeria and other developing countries.

Keywords: Public libraries; digital inclusion; Kano State Library; Nigeria.

Introduction

Public libraries have traditionally served as gateways to information, education, and lifelong learning. In the digital era, however, their role has expanded beyond providing printed materials to facilitating equitable access to information and communication technologies (ICTs), digital resources, and digital literacy programmes. This transformation reflects the rapid technological changes that have reshaped contemporary society and positioned public libraries as important institutions for promoting digital inclusion and community development.

The twenty-first century has witnessed unprecedented advances in information and communication technologies (ICTs). ICTs comprise a broad range of technological tools and

resources used to create, process, store, retrieve, manage, and exchange information, including computers, the Internet, mobile devices, and other digital communication platforms (Bhat et al., 2024). These technologies have fundamentally changed how people communicate, access information, learn, work, conduct business, and participate in civic and democratic life. As a result, ICT has become an indispensable driver of socio-economic development, improving productivity, enhancing global connectivity, and expanding access to education, healthcare, markets, and government services through digital technologies (Bhat et al., 2024). Emerging technological innovations are expected to further transform how individuals interact, access essential services, and participate in society (Community of Democracies, Working Group on Democracy and Technology [WGD&T], 2024).

Despite these significant benefits, the opportunities created by ICTs are not distributed equally. UNESCO (2023) observes that many individuals continue to face barriers arising from inadequate infrastructure, the high cost of digital devices and internet services, limited digital literacy, and persistent socio-economic inequalities. Beyond issues of access, the increasing use of digital technologies has also introduced new concerns relating to cybersecurity, misinformation, privacy violations, and the exploitation of digital platforms by individuals, organised groups, and state actors. Furthermore, the widespread integration of digital technologies into everyday life has created new responsibilities for institutions such as families, schools, and libraries to equip citizens with the knowledge and skills required to use technology safely, ethically, and effectively.

The rapid adoption of Information and Communication Technologies (ICTs) has transformed access to information, education, public services, and economic opportunities. However, the persistent digital divide continues to limit equitable access to these benefits, particularly in developing countries, where technological, economic, and social inequalities exclude many individuals from meaningful participation in the digital society (Nirman, 2025; ITU, 2024). In response to these challenges, public libraries have evolved beyond their traditional role as repositories of information to become community hubs that promote digital inclusion, lifelong learning, and informed citizenship by providing access to computers, internet services, digital resources, and digital literacy programmes. Despite facing constraints such as inadequate infrastructure, unreliable electricity, limited funding, and varying levels of digital literacy, public libraries in developing countries continue to play a vital role in expanding access to digital technologies and reducing information inequalities.

Between 2017 and 2023, the Kano State Library implemented a range of ICT and digital literacy initiatives, including basic computer training, internet literacy programmes, computer-based test (CBT) preparation for tertiary institution applicants, and ICT support for students enrolled in online degree programmes. These initiatives enhanced users' digital competencies,

broadened educational opportunities, and reinforced the library's role as a community digital learning centre. Given the limited documentation of practical ICT implementation in Nigerian public libraries, this practice-based paper examines the Kano State Library experience, highlighting the strategies employed, achievements recorded, challenges encountered, and lessons learned. Therefore, the main objective of the paper is to examine the ICT and digital inclusion initiatives implemented by the Kano State Library between 2017 and 2023 in bridging the digital divide through public library service.

The paper aim to contribute to the growing body of knowledge on the role of public libraries in promoting digital inclusion, educational advancement, and sustainable community development in Nigeria. Moreover, the paper provides a well-documented account of professional practice from which other library administrators, policymakers, researchers, and practitioners may draw lessons for strengthening ICT and digital literacy services in public libraries.

Statement of the Problem

Despite the growing recognition of Information and Communication Technologies (ICTs) as essential tools for education, socio-economic development, and digital inclusion, access to and effective use of these technologies remain uneven, particularly in developing countries. Public libraries are increasingly expected to bridge this digital divide by providing ICT facilities, internet access, and digital literacy programmes. However, many public libraries in Nigeria continue to face challenges such as inadequate infrastructure, limited funding, insufficient technological resources, and low levels of digital literacy among users, which constrain their ability to deliver effective digital services.

Although the role of public libraries in promoting digital inclusion has attracted increasing scholarly attention, there is limited documentation of practical ICT and digital literacy initiatives implemented by public libraries in Nigeria. Consequently, valuable institutional experiences and lessons that could inform policy and professional practice remain largely undocumented. This paper addresses this gap by documenting the ICT and digital literacy initiatives undertaken by the Kano State Library between 2017 and 2023, with a view to highlighting the strategies adopted, achievements recorded, challenges encountered, and lessons learned for strengthening digital inclusion through public library services.

Literature Review

Theoretical and Conceptual Framework

This paper is anchored on Digital Inclusion Theory, which provides an appropriate framework for understanding the evolving role of public libraries in promoting equitable access to information and communication technologies. Digital Inclusion Theory maintains that meaningful participation in the digital society requires more than physical access to computers and the Internet.

Rather, individuals need affordable access to digital technologies, opportunities to acquire relevant digital skills, supportive learning environments, and the ability to use technology meaningfully to improve their educational, economic, and social well-being (Nguyen, 2022).

The theory identifies four interrelated dimensions of digital inclusion: access, skills, meaningful use, and participation. Access involves the availability of digital devices, internet connectivity, and technological infrastructure. Skills refer to the competencies required to use digital technologies effectively. Meaningful use focuses on applying digital technologies to achieve personal and educational goals, while participation emphasises the ability of individuals to engage actively in the digital economy and information society.

Public libraries are uniquely positioned to advance these dimensions because they provide free or affordable access to ICT facilities, organise digital literacy programmes, support online learning, and create opportunities for lifelong learning. Consequently, public libraries have become important institutions for reducing digital inequalities, particularly in developing countries where many citizens face barriers to accessing technology (Lawan, Njoku & Isma'il, 2025).

The experiences of the Kano State Library between 2017 and 2023 demonstrate the practical application of Digital Inclusion Theory. Through acquisition and deployment of computers, computer appreciation programmes, internet literacy training, JAMB Computer-Based Test (CBT) preparation, and support for online university education, the library promoted digital access, strengthened users' digital competencies, and expanded educational opportunities for members of the community. The theory therefore provides a useful lens for understanding how public libraries can contribute to bridging the digital divide and fostering inclusive community development.

Nigerian Public Libraries

Public libraries are universally recognised as democratic institutions established to provide free and equitable access to information, knowledge, and lifelong learning opportunities for all members of society. Their primary purpose is to provide information resources, educational materials, and recreational services in diverse formats to meet the informational, educational, cultural, and developmental needs of individuals and communities. Unlike academic or special libraries, public libraries are open to every member of the community regardless of age, gender, educational attainment, economic status, religion, language, or physical ability, thereby promoting social inclusion and equal access to knowledge (Okafor, 2020; Okojie & Okiy, 2019). By ensuring unrestricted access to reliable information and supporting lifelong learning, public libraries contribute significantly to literacy development, informed citizenship, and community empowerment.

The role of public libraries has evolved considerably in response to rapid technological advancement and the emergence of the digital society. Traditionally regarded as repositories of printed materials, contemporary public libraries have become dynamic centres for knowledge creation, digital learning, innovation, and community engagement. In addition to providing books and reference services, they now offer access to computers, Internet connectivity, electronic information resources, digital archives, online databases, makerspaces, and digital literacy programmes (Lawan, Njoku & Isma'il, 2025). These developments have repositioned public libraries as important institutions for promoting digital inclusion, supporting research and innovation, facilitating access to e-government services, and equipping citizens with the digital competencies required to participate effectively in the knowledge economy (Okojie & Okiy, 2019). Internationally, libraries such as the British Library and the New York Public Library have demonstrated how digital transformation can expand access to collections and services beyond physical buildings through comprehensive digital platforms and remote access services.

In Nigeria, public libraries have increasingly embraced ICT-enabled services in response to the growing demand for digital information, online education, and technology-based learning. Many state library boards have introduced computer training programmes, Internet services, electronic resources, and digital literacy initiatives aimed at expanding access to information and reducing digital exclusion. These efforts reflect the changing expectations of library users and the recognition that public libraries are strategic institutions for promoting digital inclusion, lifelong learning, and sustainable community development. The IFLA–UNESCO Public Library Manifesto (2022) reinforces this role by recognising public libraries as essential institutions for ensuring equitable access to information, digital technologies, informed citizenship, and lifelong learning.

Despite these developments, Nigerian public libraries continue to face significant challenges that limit their capacity to provide effective digital services. Chronic underfunding, inadequate ICT infrastructure, unreliable electricity supply, poor Internet connectivity, obsolete equipment, insufficient digital resources, and a shortage of skilled personnel remain persistent obstacles to service delivery (Aina, 2014; Okafor, 2020; Okojie & Okiy, 2019). Many libraries also experience low levels of digital literacy among users, making it difficult for communities to utilise available electronic resources effectively. These constraints are particularly evident in many public libraries across developing regions, where inadequate technological infrastructure and limited investment continue to hinder the adoption of innovative digital services (Ejedafiru, 2010; Onyenachi, 2018; Lawan, Njoku, & Isma'il, 2025). Consequently, while public libraries are increasingly recognised as catalysts for digital inclusion, their ability to fulfil this expanded mandate depends largely on sustained investment in ICT infrastructure, staff capacity development, reliable Internet connectivity, and supportive government policies.

Notwithstanding these challenges, Nigerian public libraries possess enormous potential to bridge the digital divide by providing equitable access to ICT facilities, digital information resources, and digital literacy programmes. Their presence within local communities positions them to serve as community digital learning centres where citizens can acquire essential digital skills, access online educational opportunities, obtain government information, and participate more effectively in the digital economy and knowledge society. It is within this context that the Kano State Library implemented a series of ICT and digital literacy initiatives between 2017 and 2023 to expand digital access and strengthen users' technological competencies. The Kano State Library experience therefore provides a practical illustration of how public libraries can respond to the challenges of digital exclusion and contribute meaningfully to community development through innovative ICT-based services.

Kano State Library: Institutional Background

The Kano State Library is one of the oldest and most established public library systems in Northern Nigeria. Its origin dates back to 1968, following the creation of states in Nigeria, when the collections of the former Northern Regional Library in Kaduna were redistributed among the newly created states. The Kano State Library commenced operations with an initial collection of approximately 9,000 volumes and 2,000 government publications, laying the foundation for organised public library services in the state. In 1969, the library became a department under the Kano State Ministry of Education, reflecting the government's commitment to promoting literacy, education, and access to information.

The legal foundation for the library was strengthened with the enactment of the Kano State Library Board Law, which originated from legislation passed by the Kano State House of Assembly in March 1982 and was subsequently amended in 1991. This legislation established the institutional framework for the administration and expansion of public library services across the state. Since its establishment, successive state governments have supported the library through investments in infrastructure, information resources, and service development, enabling it to expand its reach and relevance within the educational and social sectors.

Murtala Muhammed Library serves as its headquarters, located at the state capital. It coordinates an extensive public library network comprising twenty-four (24) divisional libraries distributed across the state's local government areas, while additional branch libraries have been developed to further extend library services to underserved communities. The library also hosts an American Corner, established in partnership with the United States Mission in Nigeria, which provides access to digital information resources, educational programmes, cultural exchanges, and technology-based learning opportunities. This facility has further strengthened the library's

capacity to promote digital literacy, access to global information resources, and international educational engagement.

Beyond its traditional mandate of providing books and information services, the Kano State Library has increasingly repositioned itself as a centre for digital learning and community development. In response to the growing demand for ICT skills and digital inclusion, the library expanded its services between 2017 and 2023 through the acquisition and deployment of hundreds of computers, introduction of computer appreciation programmes, Internet literacy training, computer-based test (CBT) preparation for prospective tertiary institution students, and ICT support services for learners enrolled in online academic programmes. These initiatives reflect the broader transformation of Nigerian public libraries from conventional repositories of information into community-based digital learning centres that support lifelong learning, digital inclusion, and socio-economic development (Kano State Library Board Annual Report, 2020, 2021, 2022).

The Digital Divide: Causes, Effects and Strategies for Bridging the Gap

The digital divide refers to the unequal access to, use of, and ability to benefit from Information and Communication Technologies (ICTs) among individuals, communities, and nations. Beyond disparities in physical access to digital devices and Internet connectivity, the concept also encompasses differences in digital skills, affordability, quality of access, and the capacity to use digital technologies effectively for education, employment, civic engagement, and socio-economic development (Nguyen, 2022; Awati & Hanna, 2024; Schweitzer, 2025). Although remarkable advances have been made in global digital connectivity, significant inequalities persist, particularly in developing regions such as Africa. According to the International Telecommunication Union (ITU, 2024), approximately one-third of the world's population remains offline, with the majority residing in low-income countries where limited infrastructure and socio-economic constraints continue to hinder meaningful participation in the digital economy.

The causes of the digital divide are multidimensional, involving technological, economic, educational, geographical, social, and policy-related factors. In many African countries, inadequate broadband infrastructure, unreliable electricity supply, high costs of Internet services and digital devices, low household incomes, and insufficient investment in ICT development remain major barriers to digital access. These challenges are further compounded by disparities in educational attainment, limited digital literacy, gender inequalities, language barriers, and the concentration of ICT infrastructure in urban centres, leaving rural and underserved communities with limited opportunities to benefit from digital technologies (North Carolina Department of Information Technology, n.d.; Nguyen, 2022; World Bank, 2023). In Nigeria, despite substantial growth in mobile telephony and Internet usage, considerable disparities persist between urban and

rural areas, across regions, and among different socio-economic groups. Limited ICT infrastructure, inconsistent power supply, affordability challenges, and inadequate digital skills continue to constrain the country's progress towards an inclusive digital society (Okocha, & Edafewotu, 2022).

The effects of the digital divide extend beyond limited access to technology and significantly influence social, economic, educational, and democratic development. Individuals and communities without adequate digital access are often excluded from online learning, electronic government services, digital healthcare, employment opportunities, financial technologies, and participation in the knowledge economy. The divide also widens educational inequalities, limits access to reliable information, reduces employment prospects, and restricts citizens' ability to engage in civic and democratic processes through digital platforms. Consequently, digital exclusion reinforces existing socio-economic disparities and undermines efforts to achieve inclusive growth and the Sustainable Development Goals (SDGs), particularly those relating to quality education, reduced inequalities, decent work, innovation, and strong institutions (Nirmani, 2025; Okocha, & Edafewotu, 2022).

Addressing the digital divide requires coordinated efforts from governments, educational institutions, development partners, the private sector, and community-based organizations. Priority interventions include expanding broadband infrastructure, improving electricity supply, reducing the cost of Internet services and digital devices, strengthening digital literacy programmes, promoting inclusive ICT policies, and investing in community-based digital access centres (Van Dijk, 2020; World Bank, 2024). Within this context, public libraries have emerged as strategic institutions for promoting digital inclusion. By providing free access to computers and Internet services, delivering digital and information literacy programmes and creating inclusive learning environments, public libraries help bridge digital inequalities and empower citizens with the knowledge and skills required for meaningful participation in the digital society (Bertot, Real & Jaeger, 2016).

Methodology

Research Design

This study adopted a qualitative practice-based case study design to document and critically examine the Information and Communication Technology (ICT) and digital literacy initiatives implemented by the Kano State Library between 2017 and 2023. A qualitative approach was considered appropriate because it facilitates an in-depth exploration of institutional practices, programme implementation, and contextual experiences within their real-life setting. The practice-based case study approach enables professionals to generate scholarly knowledge from

documented institutional experiences and reflective practice, thereby contributing to evidence-informed policy and professional development in library and information services.

The Kano State Library was purposively selected as the case because of its deliberate efforts during the study period to transform public library services through ICT integration, digital literacy programmes, and community-based digital inclusion initiatives. These interventions sought to improve equitable access to information technologies, enhance digital competencies, and expand lifelong learning opportunities for diverse user groups across the state.

Documentary Sources and Data Collection

The study relied primarily on documentary evidences complemented by the author's reflective professional experience. Documentary evidences were obtained from official records of the Kano State Library Board covering the period 2017–2023. These included annual reports, departmental files, programme and project reports, administrative records, policy documents, activity schedules, circulars, committee reports, media publications, photographs, and other institutional records that documented the planning, implementation, monitoring, and evaluation of ICT and digital literacy initiatives.

The documentary evidence was supplemented by the author's reflective professional observations derived from direct involvement in the planning, coordination, supervision, implementation, and evaluation of the initiatives while serving as Executive Secretary of the Kano State Library. This combination of documentary records and professional reflection provided a comprehensive account of the library's digital transformation during the study period.

Data Presentation

The collected data were presented under thematic headings that reflect the major ICT and digital inclusion initiatives implemented by the Kano State Library. Documentary records and professional observations were systematically reviewed, coded, and organised into recurring themes that reflected the major ICT and digital inclusion interventions implemented by the library. The principal themes included ICT infrastructure development, computer appreciation training, Internet literacy programmes, Joint Admissions and Matriculation Board (JAMB) Computer-Based Test (CBT) preparation, online learning support, digital literacy outreach, staff capacity development, and community digital empowerment initiatives.

The emerging themes were interpreted in relation to the principles of Digital Inclusion Theory, which emphasises equitable access to digital technologies, digital skills acquisition, meaningful technology use, and active participation in social and economic life. This analytical framework enabled the study to demonstrate how public library ICT initiatives contributed to reducing digital exclusion, promoting lifelong learning, and supporting digital democracy within the Kano State context.

Research Findings and Discussions

The Kano State Library Experience (2017–2023)

Between 2017 and 2023, the Kano State Library implemented a series of ICT and digital literacy initiatives in response to increasing demand for digital services and the growing recognition that many citizens, particularly students and young people, faced significant barriers to accessing computers, internet services, and digital learning opportunities. Documentary evidence from the Kano State Library Board's annual reports, departmental records, programme files, and administrative documents indicates that the Library adopted a comprehensive approach that combined investment in ICT infrastructure, free access to digital facilities, digital literacy programmes, educational support services, and strategic partnerships (Kano State Library Board Annual Report 2020, 2021, 2022; Kano State Library Board 2020a). These initiatives were deliberately designed to address the four interrelated dimensions of digital inclusion identified in the theoretical framework: access, affordability, digital skills, and meaningful use and participation.

Improving Access to ICT Facilities

Access to ICT infrastructure constitutes the foundation of digital inclusion because individuals cannot benefit from digital technologies without opportunities to use them. In response to this need, the Kano State Government invested substantially in modernising the Kano State Library system during the period under review. According to institutional records, the Murtala Muhammad Library underwent extensive renovation and was equipped with modern ICT facilities, including the procurement and installation of hundreds of laptop and desktop computers to support digital learning, internet access, electronic information services, and computer-based training. Similar ICT facilities were progressively introduced across branch libraries in the forty-four Local Government Areas (Kano State Library Board Annual Report 2020; Kano State Library Board 2020a, 2020b).

Participant observation showed that the establishment of ICT laboratories required continuous collaboration with government agencies, ICT personnel, and library staff supervision to ensure that facilities were functional and accessible to users. The implementation process also involved addressing practical challenges relating to equipment procurement, installation, maintenance, power supply, and staff readiness, all of which influenced the pace of implementation.

These investments significantly transformed the physical and technological environment of the Library, repositioning it from a predominantly print-based institution towards a digital learning environment capable of supporting computer-assisted learning, internet access, and electronic information services. From the perspective of the Digital Inclusion Framework, these

initiatives primarily addressed the access dimension by expanding opportunities for members of the public to utilise ICT facilities that were previously unavailable or inaccessible.

Table 1: Kano State Library ICT and Digital Inclusion Initiatives (2017–2023)

Dimension of Digital Inclusion	Barrier Addressed	Kano State Library Initiative	Purpose within the Digital Inclusion Framework	Remarks
Access	Limited access to ICT facilities and Internet	Renovation of libraries; procurement of 300 and later 500 computers; ICT laboratories; Internet services and the establishment of CBT Centre.	Expanded opportunities for public access to computers, Internet services, and digital learning facilities	The Expansion of ICT infrastructure to improve equitable access to digital technologies across the State Library Headquarters and branch libraries.
Affordability	High cost of ICT devices, Internet connectivity, and digital training	Free access to computers, Internet facilities, digital literacy programmes, and CBT practice sessions	Reduced financial barriers to accessing digital technologies and training	Free ICT services were introduced to ensure that financial constraints did not prevent students and other community members from participating in digital learning opportunities.
Digital Skills	Low levels of computer and information literacy	Basic Computer Skills, Computer Appreciation, Internet Literacy, Information Literacy, Graphics Design, Video Editing, STEM programmes, Hackathons	Expanded opportunities for acquiring practical digital competencies	Training programmes were designed to equip users with foundational and emerging digital competencies required for education, employment, entrepreneurship, and lifelong learning.
Meaningful Use and Participation	Limited opportunities to apply digital technologies	JAMB CBT preparation, support for online and distance learners, access to educational databases, Young Readers Club, Readership Promotion Seminar, community partnerships	Promoted productive use of digital technologies for education, learning, and community engagement	ICT services were integrated into educational and community programmes to encourage the practical application of digital technologies in learning and personal development.

Interpretation of Table 1

Table 1 provides a summary of the ICT and digital inclusion initiatives implemented by the Kano State Library between 2017 and 2023, organised according to the four dimensions of the Digital Inclusion Framework: access, affordability, digital skills, and meaningful use and participation.

The first dimension, access, focused on addressing the limited availability of ICT facilities and internet services. To overcome this challenge, the Library invested in the renovation of library buildings, the procurement of 300 and later an additional 500 computers, the establishment of ICT laboratories, the provision of internet services, and the creation of Computer-Based Test (CBT) centres across the forty-four branch libraries. These initiatives were intended to expand opportunities for members of the public to access computers, internet services, and technology-enabled learning facilities.

The second dimension, affordability, recognised that the high cost of ICT devices, internet connectivity, and digital training often limits participation in the digital environment. Consequently, the Library provided free access to computers, internet facilities, digital literacy programmes, and CBT practice sessions. These interventions were designed to reduce financial barriers and ensure that students, young people, and other community members could benefit from digital services irrespective of their economic circumstances.

Under the digital skills dimension, the Library implemented a broad range of training programmes, including Basic Computer Skills, Computer Appreciation, Internet Literacy, Information Literacy, Graphics Design, Video Editing, STEM activities, and Hackathons. These initiatives were intended to provide users with practical digital competencies required for education, research, employment, entrepreneurship, and lifelong learning.

Finally, the meaningful use and participation dimension emphasised the productive application of digital technologies. Through JAMB CBT preparation, support for online and distance learners, access to educational databases, the Young Readers Club, readership promotion seminars, and community partnerships, the Library sought to create opportunities for users to apply digital technologies in educational, social, and community contexts.

Promoting Affordable Access to Digital Services

Although ICT infrastructure is fundamental to digital inclusion, access alone is insufficient when the costs of devices, internet connectivity, and digital training remain prohibitive. Public libraries therefore have an important responsibility to reduce financial barriers by providing free or affordable access to digital technologies and learning opportunities.

Institutional records indicate that the Kano State Library policy provided users with free access to computers, internet facilities, digital information resources, and computer-based learning programmes (Kano State Library Board 2020b). Basic computer training, digital literacy classes, and Computer-Based Test (CBT) practice sessions for candidates preparing for the Joint Admissions and Matriculation Board (JAMB) examinations were organised at no cost to participants.

Participant observation during programme implementation revealed that affordability was a recurring concern raised by prospective participants, particularly students and young people seeking opportunities to develop ICT competencies. Consequently, programme planning consistently prioritised the removal of financial barriers by ensuring that access to ICT facilities and introductory digital literacy programmes remained free whenever resources permitted. This institutional approach reflected the Library's commitment to expanding equitable access to digital learning opportunities rather than limiting services to those who could afford commercial ICT centres.

Viewed through the Digital Inclusion Framework, these initiatives addressed the affordability dimension by creating opportunities for broader segments of the community to access digital technologies without incurring substantial financial costs.

Developing Digital Skills

The Digital Inclusion Framework recognises that meaningful participation in the digital society depends on individuals possessing the knowledge and competencies required to use digital technologies effectively. In response, the Kano State Library implemented a broad range of digital literacy programmes targeting students, young people, civil servants, and other members of the community. Documentary evidence indicates that these programmes included Basic Computer Skills, Computer Appreciation, Internet Literacy, Information Literacy, Graphics Design, Video Editing, STEM activities, hackathons, and other technology-oriented learning initiatives. Through the Young Readers Club and related educational programmes, participants were also introduced to educational databases, online information resources, and responsible use of digital information (Kano State Library Board, 2021a).

Participant observation showed that the development of these programmes required continuous collaboration with ICT professionals, educational institutions, development partners, and volunteer facilitators. Programme content was periodically reviewed to respond to emerging learning needs and technological developments, while implementation schedules were adjusted to accommodate school calendars, public demand, and the availability of ICT facilities. These observations illustrate that digital skills development within a public library environment requires sustained institutional planning and coordination rather than the provision of occasional training activities.

Collectively, these initiatives expanded opportunities for users to acquire practical ICT competencies that support education, research, employment preparation, entrepreneurship, and lifelong learning, thereby addressing the digital skills dimension of the Digital Inclusion Framework.

Promoting Meaningful Use and Digital Participation

Digital inclusion ultimately seeks to enable individuals to apply digital technologies in ways that support learning, productivity, and participation in community life. Consistent with this objective, the Kano State Library integrated ICT facilities into a variety of educational and community-based programmes.

Institutional records document the establishment of Computer-Based Test (CBT) centres to support candidates preparing for university entrance examinations, the provision of ICT facilities for students enrolled in online and distance education programmes, and partnerships with organisations such as the Society for Better Life and STEM-focused groups to deliver specialised training in graphics design, video editing, innovation, and technology-related skills. The Library also organised readership promotion seminars and other educational activities that encouraged responsible and productive engagement with both digital and print information resources (Kano State Library Board, 2020b, 2021a).

Participant observation indicated that successful implementation depended largely on strategic partnerships with government agencies, educational institutions, civil society organisations, ICT professionals, and community groups. Coordinating these partnerships required continuous institutional engagement, resource mobilisation, and programme planning to ensure that ICT facilities supported a wide range of educational and community activities.

From the perspective of the Digital Inclusion Framework, these initiatives illustrate how public libraries can create opportunities for the meaningful application of digital technologies in education, lifelong learning, innovation, and community development. Rather than viewing ICT infrastructure as an end in itself, the Kano State Library deliberately integrated digital resources into programmes intended to support productive learning and broader community participation.

Discussion and Lessons Learned

The Kano State Library experience demonstrates that public libraries can play a strategic role in addressing digital exclusion through coordinated ICT and digital literacy initiatives. Consistent with the Digital Inclusion Framework, the Library adopted an integrated approach that addressed the four dimensions of digital inclusion—access, affordability, digital skills, and meaningful use—through investments in ICT infrastructure, free digital services, capacity-building programmes, and community partnerships. These initiatives illustrate that digital inclusion extends beyond providing technology to creating opportunities for equitable access, skills development, and productive use of digital resources.

The findings support previous studies that highlight the evolving role of public libraries in promoting digital inclusion and community development (Okojie & Okiy, 2019; Lawan et al., 2025). They also reinforce evidence that inadequate ICT infrastructure, limited digital literacy,

and socio-economic constraints remain major contributors to the digital divide in developing countries (Okocha & Edafewotu, 2022; Nirmani, 2025). Although this study did not evaluate programme outcomes, it demonstrates how public libraries can respond institutionally to these challenges through planned ICT interventions.

An important lesson from the Kano State experience is that successful digital transformation requires more than investment in ICT facilities. Sustainable digital inclusion depends on effective leadership, supportive government policies, continuous staff development, strategic partnerships, and adequate institutional coordination. The study therefore contributes practical evidence on how public libraries can strengthen their role as community digital learning centres and support national digital development agendas.

Conclusion and Recommendations

This paper has documented the Kano State Library's experience in implementing ICT and digital inclusion initiatives between 2017 and 2023. The study demonstrates that public libraries can contribute meaningfully to bridging the digital divide by expanding access to digital technologies, strengthening digital literacy, and supporting lifelong learning through community-based services. The experience further illustrates the continuing relevance of public libraries as strategic institutions for promoting digital inclusion and sustainable community development in the digital age.

To strengthen the role of public libraries in advancing digital inclusion, the study recommends that governments increase investment in ICT infrastructure and broadband connectivity; public libraries integrate digital literacy into their core services; library personnel receive continuous training in emerging technologies; partnerships with educational institutions, ICT organisations, and development agencies be strengthened; community-based digital programmes be tailored to local needs; and library authorities periodically assess their digital initiatives to support continuous improvement and long-term sustainability.

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