# Emerging Technologies for Library Education: A Review

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## Abstract

The literature review was on emerging technologies for library education: a global overview**.** Librarians who keep up with technology developments are better equipped to handle the opportunities and problems that come with living in the digital era. Emerging technologies are having a global impact on library education, changing both the services provided by library professionals and the training they get to provide library education programmes across the globe. This article dwelt on the overview and explanation of the main concepts of emerging technologies in library education: information structure and administration; career advancement and lifelong learning; social media and online engagement; services for supporting research; and information on librarians can learn throughout their careers. The challenges observed in using emerging technologies for library education includes inadequate internet connectivity, device availability, and software compatibility amongst others. Adapting to these technologies is crucial for Nigerian library professionals who want to efficiently meet their users' information needs while also helping to build a modern and sustainable library system. As a result, library education programmes across the country must adjust their curricula to include these technologies, ensuring that graduates have the skills and knowledge required to survive in a quickly changing information ecosystem.

**Keywords: Technologies, Education, Library, Global Impact, Library Education**

## Introduction

Programmes for teaching students about libraries are changing to provide them the abilities and information they need to take advantage of new technology and offer creative, user-focused library services. Librarians who keep up with technology developments are better equipped to handle the opportunities and problems that come with living in the digital era (Anshari, Syafrudin & Fitriyani, 2022). Emerging technologies are having a global impact on library education, changing both the services provided by library professionals and the training they get to provide library education programmes across the globe. Globally, especially in Nigeria, the introduction of new technology has had a big impact on library instruction. Many facets of library education, including information access, organization,

management, and user services, have changed as a result of these technologies. The following domains are among the critical areas in which emerging technologies are having a significant impact on library instruction worldwide (Opele, 2022).

## Literature Review

### Overview and Explanation of the Main Concepts of Emerging Technologies in Library Education

#### Information Availability and Digital Tools

Peng, Pal, and Huang (2019) are of the view that new technologies have changed how libraries distribute resources and increased access to information. Digital resources such as e-books, e-journals, online databases, and multimedia content are being welcomed by libraries all around the world. Global library education programmes have had to adjust to modern technologies in order to teach students how to use and navigate digital resources efficiently.

#### Information Structure and Administration:

Emerging technologies have altered traditional information organization and management techniques. To organize and access information, libraries today use digital asset management systems, semantic web technologies, and metadata. These technologies have to be included into library education programmes in order to provide students the tools they need to manage and organize information effectively (Oladele & Opele, 2022)**.**

#### User Interface and Interaction

Rafi, Jianming and Ahmad (2019) opined that new technologies have made it easier to interact with and offer services to library patrons in new ways. These days, libraries provide individualized suggestions based on user interests, interactive online platforms, and virtual reference services. Globally, library education programmes have realized how critical it is to teach students how to use these tools in order to properly interact with the library's user community and offer improved user services.

#### Archiving and preserving digital content

Onwubiko, (2019) stated that an emphasis on digital archiving and preservation is now necessary due to the proliferation of digital materials. Preserving digital materials for future access is a problem that libraries around the world must deal with. Training in digital preservation methods, metadata preservation, file formats, and digital archiving strategies has been included to library education programmes.

**Knowledge of information and technology**

The significance of digital literacy and information literacy in library instruction has increased due to emerging technology. It is important to teach students how to use and critically assess data from a variety of internet sources. Global library education programmes include a strong emphasis on digital literacy abilities, such as efficient search techniques, assessing online material, and using digital information in an ethical manner (Ofuebe, Ugwu & Ugwu, 2022). .

**Integration of Emerging Technologies.**

Globally, library education programmes have realized that they must include direct integration of modern technologies into their courses. This involves educating students on cutting-edge technologies that are becoming more and more important to library operations and services, like blockchain, artificial intelligence, machine learning, and data analytics. Library education programmes equip students for the rapidly changing technology landscape by incorporating modern technologies (Obionwu, Broneske & Saake, 2022).

**Collaborating and building relationships**

Mlekus, Bentler and Paruzel (2020) noted that emerging technology has made it easier for libraries and library professionals to collaborate globally and network globally. Libraries work together, share resources, and share knowledge through online platforms. Social media, online forums, and collaborative technologies are used extensively in library education programmes to foster connections and global networking between librarians and other professionals.

**Career Advancement and Lifelong Learning**

The swift progression of technology necessitates that library professionals across the globe partake in ongoing education and ongoing professional growth. Programmes for librarian education place a strong emphasis on the value of continuing education and give librarians access to online courses, workshops, and conferences to keep up with the latest developments in library science. This guarantees that in the face of new technologies, librarians will always be knowledgeable and flexible (Menkhoff, Kan, Tan & Foong, 2022).

**Artificial Intelligence (AI) and Machine Learning:**

Globally, AI and machine learning technologies are revolutionizing library operations and services. In order to teach students in subjects like natural language processing, recommender systems, data analysis, and task automation, library education programmes are introducing AI and machine learning ideas. Libraries can improve content discovery, tailor user experiences,

and allocate resources more efficiently thanks to these innovations (Manser Payne, Peltier & Barger, 2021).

**Analytics and Visualization of Data**

King, (2002) argued that in order to better understand user behavior, collection management, and decision-making, libraries are utilizing data analytics and visualization tools more and more. To help librarians make data-driven decisions and enhance user services, data analytics and visualization techniques are being incorporated into library education programmes to teach students how to analyze library data, interpret trends, and use visualizations with effectiveness.

**Mixed and Virtual Reality**

Technology such as virtual reality (VR) and augmented reality (AR) have the power to completely change how people interact with information and library spaces. Programmes for library education are investigating how to incorporate VR and AR into their curricula to teach students how to create immersive experiences, virtual tours, and interactive learning environments. These technologies can simulate real-world situations, provide engaging user experiences, and transform instruction (Agarkar & Agrawal, 2019)

**Intelligent Libraries with the Internet of Things (IoT)**

Connectivity and communication between things and devices are made possible by the Internet of Things (IoT). IoT technologies can be utilized in libraries to optimize space utilization, track usage patterns, and improve security. IoT principles are being included into library education programmes to help students learn how to deploy IoT devices, analyze data produced by IoT systems, and manage IoT environments Kasajima & Hashimoto, 2020).

**Blockchain Methods**

Ubogu (2021) noted that blockchain technology has the power to completely transform industries including transparent transactions, copyright protection, and digital rights management. Students are being introduced to blockchain principles through library education programmes, which also explore applications like digital asset management, decentralized publishing, and digital content authentication. Librarians can better manage new concerns pertaining to digital ownership and intellectual property by becoming knowledgeable about blockchain technology (Akuffo & Budu, 2019).

**Social Media and Online Engagement:**

Ubogu (2020) stated that online communities and social media platforms are now vital resources for libraries to interact with patrons, advertise services, and hold conversations.

Programmes for library education include a strong emphasis on using social media for outreach, marketing, and community development. Students get knowledge on how to create interesting content, use social media platforms efficiently, and evaluate social media analytics.

**Privacy and cyber security**

Cyber security and privacy issues grow critical as libraries handle more and more sensitive user data and conduct online transactions. Cyber security and privacy education are incorporated into library education programmes to teach students about privacy laws, incident response procedures, and best practices for data protection (Alawode & Adewole, 2021). This gives librarians the know-how and abilities they need to protect user data and reduce cyber security threats.

**Moral Aspects to Take into Account**

The issues that need to be addressed in library education are emerging technological innovations. Pupils gain knowledge of ethical concerns pertaining to digital gap, algorithmic prejudice, privacy, and intellectual property. Libraries should guarantee that their staff members approach evolving technologies with a solid ethical foundation by emphasizing ethical decision making, critical thinking, and responsible technology use through library education programmes (Ubogu, 2012).

**Technologies for Gratification and Learning**

Library education programmes are using gratification approaches, like adding game aspects to their teaching activities. These methods support student engagement and foster an interactive, pleasurable learning environment. In order to offer students flexible and engaging learning opportunities, newer learning technologies including online learning platforms and virtual reality simulations are also being included into library instruction (Alam, 2021).

**Humanities Digital**

Ubogu (2022a) opined that technology and the study of humanities disciplines are combined in the multidisciplinary field of digital humanities. Digital humanities ideas are being introduced into library education programmes to teach students digital storytelling, data visualization, and text mining, among other skills. As a result, librarians may assist scholars and researchers in utilizing digital tools and techniques for both teaching and research.

**Makers Spaces and robots**

Robotics and maker spaces are being used by libraries more and more in an effort to promote innovation, creativity, and experiential learning. These ideas are being used in library

education programmes to teach students how to create and run maker spaces, lead robotics workshops, and incorporate maker activities into library programming. This gives librarians the tools they need to encourage the culture of learning (Anshari, Syafrudin & Fitriyani, 2022).

**Cloud Computing and Instruments for Collaboration**

The way libraries store, administer, and distribute information and resources has changed as a result of CLOUD computing. In order to promote effective teamwork, remote collaboration, and seamless resource access, library education programmes place a strong emphasis on the use of cloud-based platforms, collaborative tools, and project management software. This equips librarians to collaborate and share information in distributed teams by utilizing cloud technology (Ubogu, 2021).

**Information ethics and digital citizenship**

Promoting information ethics and digital citizenship is essential in light of the rise of fake news, online harassment, and information overload. Programmes for teaching students about library education have a strong emphasis on media literacy, critical thinking abilities, ethical use of digital resources, and responsible information consumption. This makes it possible for librarians to assist people in navigating the digital environment and arriving at wise judgments (Chukwusa, 2022).

**Universalism and accessibility**

The importance of accessibility and inclusion in libraries is being highlighted by emerging technologies. The main goals of library education programmes are to teach students about assistive technologies, accessible content creation, and universal design principles. This guarantees that librarians can provide hospitable spaces and offer users with a range of requirements fair access to information and services (Armstrong & Landers, 2018).

**Large Data Sets and Data-Informed Decision Making**

Chatterjee and Kar (2020) argued that big data analytics is being used by libraries more and more to improve services and guide decision-making. Librarians can use data-driven insights to optimize resource allocation, enhance user experiences, and make well-informed decisions about library operations by participating in library education programmes that include training on data collection, analysis, and interpretation.

**Constant Learning and Flexibility**

Ubogu and Chukwusa (2022) are of the view that in light of the swift progression of technology, library practitioners must foster an attitude of perpetual learning and flexibility.

Programmes for library education include a strong emphasis on professional growth, lifelong learning, and keeping up with new developments in technology and trends. This guarantees that librarians are prepared to handle the ever changing information management and library services environment. In order to equip librarians for the changing requirements of patrons and to deliver creative and inclusive library services in the digital age, libraries and library education programmes around the world are embracing these technologies (Tian, Zhang, Rong, Ma & Yang, 2023).

**Free Admission and Unrestricted Learning Resources**

The expansion of open access publication and the accessibility of free educational resources have been made possible by emerging technology. Programmes for library education place a strong emphasis on the value of OER and open access in lowering obstacles to knowledge and learning. Students receive instruction in institutional repository management, open access advocacy, and promoting the use of open educational resources (OER) in teaching and learning (Colombo & Ferrari, 2019).

**Preservation and Curation of Digital Content**

Jungwirth & Haluza (2019) suggest that in order to curate and preserve digital content, libraries are essential. Training in digital curation tactics, metadata standards, and print production techniques are the main goals of library education programmes. This guarantees the long-term accessibility and usability of digital items by providing librarians with the necessary skills to properly curate and preserve them.

**Internet Regulation and Policy**

Ubogu (2021a) posited that emerging technologies raise a number of concerns about intellectual property, privacy, and internet governance. Libraries can help with these problems by teaching students about copyright laws, internet governance frameworks, and privacy legislation. Librarians are equipped to participate in local, national, and worldwide policy conversations and to negotiate the legal and ethical issues that arise with evolving technologies.

**Internet-based and remote services**

Online and remote library services have become more popular as a result of the COVID-19 epidemic. In response, training in online instruction, virtual reference, remote service delivery, and digital outreach has been incorporated into library education programmes. Librarians are ready to adjust to changing conditions and offer smooth access to resources in both real-world and virtual settings (Onwubiko, 2019).

**Digital Knowledge for a Range of Audiences**

Opele (2022) revealed that to participate in the digital society and have equitable access to information, one must be digitally literate. Digital literacy is crucial for a variety of people, including underprivileged communities, elderly folks, and those with restricted access to technology, according to library education programmes. Librarians are skilled in creating and implementing digital literacy initiatives that cater to the unique requirements and obstacles faced by these groups.

**New Technology in the Management of Libraries**

Processes for managing libraries have also been altered by emerging technologies. Programmes for library education include instruction on integrated library systems, library management systems, and new developments in library automation. By learning about the deployment and upkeep of these technologies, students become equipped to efficiently oversee library operations and deliver flawless user experiences (Chukwusa, 2019).

**Professional Collaboration and Networks**

Ubogu and Chukwusa (2023) observe that through online communities of practice, professional networks, and online platforms, emerging technologies have made it easier for library professionals throughout the world to collaborate. Programmes for library education have a strong emphasis on networking and collaboration, giving students the tools they need to participate in online communities, exchange knowledge, and keep current with new developments in the field.

**Services for Supporting Research**

Shukla & Ahmad (2018) posited that libraries now offer more services to help research, such as data management, scholarly communication, and research impact measurements. To equip librarians to assist researchers across the digital research lifecycle, library education programmes include instruction on these services. To help researchers maximize the effect of their work, students learn about research assessment metrics, open science, and research data management.

**Designing User Experience (UX)**

In an effort to improve the user experience, libraries are putting more and more emphasis on user-centered design approaches. UX design principles are incorporated into library education programmes to teach students how to do user research, make user-friendly interfaces, and assess and enhance the usability of library resources and services. UX-savvy

librarians are able to create user-friendly online spaces, interfaces, and library facilities that satisfy the changing requirements and expectations of their patrons (Winkler & Perrin, 2017).

**Automation and Computer-generated Intelligence (AI) in Library Services**

TzafilkouPerifanou & Economides (2022) indicated that automation of repetitive work, increased accessibility, and increased efficiency are the goals of the exploration of robotics and AI technology in library services. Robotics and AI applications in libraries are being taught as part of library education programmes, giving students the knowledge and abilities to apply and oversee these technologies in a productive manner.

**Digital libraries and digitization**

Oladele and Opele (2022) observe that information access has changed as a result of the digitalization of library holdings and the creation of digital libraries. Library education programmes train students in managing digital collections and facilitating seamless access to digitized items by emphasizing digitization techniques, metadata standards, and digital preservation. Long-term access to digital resources can be guaranteed by librarians with experience in digital libraries, who can also help with the preservation and distribution of cultural assets (Ubogu, 2022b).

**Applications and Mobile Technologies**

Accessing information and services has been transformed by mobile devices. Training in responsive design, mobile-friendly interfaces, and mobile app development is included in library education programmes. Experts in mobile technologies can create mobile-friendly websites, create apps for libraries, and enhance user experiences for patrons through personalized webpages (Kasajima& Hashimoto 2020).

**Libraries and the Internet of Things (IoT)**

Libraries may design intelligent spaces and offer individualized services thanks to the Internet of Things (IoT). Students are introduced to Internet of Things principles and uses, including location tracking, smart shelving, and sensor-based monitoring, through library education programmes. With the ability to build and execute IoT solutions, librarians can optimize resource management, improve space usage, and improve user experience in libraries (Jungwirth&Haluza, 2019).

**Online and Offline Services**

Libraries can now reach people who are not physically in their locations because to the growing importance of virtual and remote services. Virtual reference, online learning, and remote service delivery are the main areas of focus for library education programmes.

Information access, research support, and library resources can be made available to users anywhere in the world by librarians with experience in virtual and remote services (Duan, Edwards &Dwivedi, 2019).

**Digital Promotion and Engagement**

Ubogu and Chukwusa (2023) stated that digital marketing techniques are being used by libraries to advertise their offerings, interact with patrons, and reach new markets. Programmes for library education include instruction in content development, social media administration, and digital marketing strategies. Digitally savvy librarians may create impactful marketing initiatives, interact with patrons on social media, and take advantage of digital platforms to raise awareness and utilization of library services.

**Contextual Professional Development**

The study of Ubogu and Chukwusa (2021) revealed that the high rate of technology advancement necessitates a commitment to ongoing professional development in the library field. Library education programmes emphasize the importance of lifelong learning, staying current on developing technology, and participating in professional development. Librarians with a perpetual learning mindset can adapt to new technologies, learn new skills, and stay current in the ever-changing library sector. The implications of new technology for library and information science education in Nigeria. According to the literature, new technologies have had an impact on library instruction in Nigeria and around the world in the following areas:

**Digital resources and accessibility**

Research has proven that developing technologies have transformed information access and retrieval. Libraries now offer online databases, e-books, e-journals, and other digital resources, allowing users to access material remotely. Libraries in Nigeria must adapt to emerging technologies by educating students how to properly browse and use digital resources (Alam, 2021).

**Managing and organizing information**

Kasajima and Hashimoto (2020) noted that traditional library teaching centered on physical material cataloguing and classification. However, emerging technologies like metadata and digital asset management systems have brought new ways of organizing information. These technologies must be integrated into Nigerian library education programmes to teach students good information organization and management.

**Preservation of digital content**

Winkler and Perrin (2017) noted that as library assets become more digitized, the importance of preserving digital materials grows. Students enrolled in library education programmes must understand and apply digital preservation strategies such as metadata preservation, file formats, and digital archiving.

**Information Literacy**

Technological advancements have necessitated an increased emphasis on information literacy in library training. Students must learn how to critically examine and use information from various online sources. Nigerian library programmes should emphasize digital literacy skills, teaching students how to effectively search, analyze, and use digital information (Alam, 2021).

**Services for Users**

Opele (2023) says that new technologies have transformed how libraries deliver services to their patrons. Libraries are increasingly offering virtual reference services, online training, and interactive platforms for user engagement. Library education programmes must teach students how to use these technologies to provide outstanding user services and interact with the library's users.

**Integration of New Technologies**

Nigerian library education must quickly include current technologies into the curriculum. This includes teaching students about emerging technologies such as artificial intelligence, machine learning, data analytics, and blockchain, which are all becoming increasingly relevant in library management and service delivery (Akuffo& Budu,2019).

**Librarians Can Learn Throughout Their Careers**

Ansari and Khan (2020) observe that with the quick speed of technology changes, Nigerian library professionals must engage in lifelong learning to stay current with emerging trends. Library education programmes should promote a culture of continual professional growth, giving librarians the ability to adapt to new technology and changing customer needs.

**Blended Learning**

Belas, Kmecova and Cepel (2020) opined that blended learning approaches in library instruction are now possible because to electronic media technologies. Blended learning combines traditional in-person education with online components, allowing students to interact with course materials and resources outside of the classroom. This method increases

flexibility and accessibility, allowing Nigerian students to study library science online and at their own pace.

**Mobile Technologies**

Akuffo and Budu (2019) revealed that the widespread use of mobile devices has transformed information access and user behavior. In Nigeria, library education programmes can leverage mobile technology to teach students about mobile applications, responsive web design, and mobile-friendly interfaces. This teaches students how to establish and develop library services for mobile users.

**Open Access and Open Educational Resources**

Alaoui and Belouali (2020) stated that the proliferation of open access publishing and Open Educational Resources (OER) has transformed the availability and affordability of intellectual content. Nigerian library education programmes can address open access concepts, copyright issues, and the use of OER in research and teaching. This boosts students' use of open access resources and promotes knowledge diffusion.

**Data Management and Research Support**

The rise of data-driven research mandates that library staff be skilled in data administration and research assistance. Nigerian library education programmes must include instruction in data curation, data visualization, data analytic tools, and research data management. Librarians can use these abilities to help researchers manage and understand massive datasets (Alam, 2021).

**Collaboration and Networking**

Ansari and Khan (2020) agreed that libraries and library workers can now collaborate and network more easily thanks to emerging technologies. Library education programmes can highlight the use of social media, online communities, and collaborative tools to help students, faculty, and librarians connect and share knowledge. This encourages a collaborative culture and keeps students up to date on emerging trends and best practices.

**User Experience Design**

With a growing emphasis on user-centered services, library education programmes in Nigeria should incorporate user experience (UX) design ideas. Students should be taught how to assess user demands, conduct usability tests, and create intuitive interfaces for library systems and websites. This guarantees that Nigerian libraries offer user-friendly and accessible services (Alaoui& Belouali, 2020).

**Artificial Intelligence and Automation**

AI and automation technologies have the potential to simplify library procedures and boost productivity. Chatbots for virtual reference services, automated cataloguing systems, and machine learning techniques for information retrieval are examples of AI applications in libraries that students can learn about through library education programmes. This prepares students to employ AI technologies in library operations (Akuffo & Budu, 2019).

**Privacy and Security**

As technology advances, user privacy and data security become more essential concerns. Library education programmes should address these issues by educating students on privacy rules, data protection best practices, and cyber security procedures. This prepares Nigerian librarians to manage sensitive user information responsibly and protect against security threats

**Digital Citizenship and Ethics**

In the digital age, library instruction should focus on digital citizenship and ethical considerations. Students must understand digital rights, responsible technology use, and the ethical implications of evolving technologies. This allows future librarians in Nigeria to assist people in navigating the digital realm and making educated decisions (Anshari, Syafrudin & Fitriyani, 2022).

**Continuous Professional Development**

Attaran, Attaran & Kirkland (2019) highlighted that Nigerian library personnel must engage in ongoing professional development to keep up with evolving technologies. Chukwusa (2021a) and Chukwusa (2021b) further noted that library education programmes should promote lifelong learning and offer librarians the opportunity to upgrade their skills through workshops, conferences, and online courses. This ensures that librarians remain knowledgeable and adaptive in the face of changing technology and user demands.

**Challenges**

The impact of developing technologies on library education presents a number of challenges that must be addressed in order for them to be effectively integrated. When considered globally, these difficulties include: Infrastructure: In many locations, unequal access to technological infrastructure is a substantial challenge. According to Chukwusa, J. (2020) and Chukwusa (2017), disparities in internet connectivity, device availability, and software compatibility impede the widespread adoption of emerging technologies in library teaching.

Bridging the digital divide and ensuring fair access to ICT resources are critical for inclusive educational opportunities.

**Digital Literacy**

Kasajima and Hashimoto (2020) acknowledged that adequate training and support programmes are required to improve digital literacy and provide instructors and students with the skills they need to understand and exploit emerging technology in library instruction. Individuals and institutions may have different levels of digital literacy, which can make it difficult to use modern technology effectively.

**Cost and Sustainability**

Belas, Kmecova and Cepel (2020) observed that the implementation of emerging technology frequently requires considerable financial commitments. The expenses of procuring and maintaining gear, software licensing, training, and technical support can be prohibitive, particularly for resource-constrained organizations. Sustainable funding structures and strategies must be devised to ensure the long-term viability and affordability of incorporating developing technologies into library instruction

**Curriculum Adaptation**

According to Ubogu (2021b), the quick pace of technology changes makes it difficult to produce and adjust curriculum content to accommodate emerging technologies. Traditional curriculum structures and processes may struggle to meet the changing needs of library education. Curriculum design must be flexible and responsive to guarantee that students have the skills and knowledge they need to succeed in a technologically driven information landscape (Bilso, & Markwei, 2019).

**Ethical Considerations**

Chatterjee and Kar (2020) note that the incorporation of developing technology generates ethical issues that must be addressed. Data privacy, security, intellectual property rights, algorithmic prejudice, and digital citizenship are all critical issues that must be addressed. It is critical to develop ethical principles, rules, and frameworks that encourage the responsible and ethical use of developing technology in library instruction.

**Professional Development**

Chukwusa and Ifukor (2022) opined that library educators demand continual professional development opportunities to keep up with new technology and its applications in library instruction. Training, workshops, and resources to help educators improve their pedagogical talents and technological competencies are essential for successful integration. Collaboration

with technology experts and industry professionals can help build successful professional development initiatives.

**User-Centered Design**

Emerging technologies in library education should be designed and implemented with the user in mind, taking into account the diverse needs and preferences of students and instructors. User feedback and participation in the development and evaluation of technological solutions are essential to ensure their relevance, usability, and success in educational settings. Addressing these difficulties requires collaboration between library educators, professionals, policymakers, technology developers, and other stakeholders. By actively collaborating, it is possible to overcome obstacles and leverage the potential of developing technologies to improve library education on a global scale (Darabont, Antonov & Bejinariu, 2017).

**Conclusion**

According to the assessment, library education programmes are constantly evolving to equip librarians with the skills and knowledge needed to capitalize on the possibilities of emerging technologies and provide creative and user-centric library services in the digital age. Adapting to these technologies is crucial for Nigerian library professionals who want to efficiently meet their users' information needs while also helping to build a modern and sustainable library system. The study also found that emerging technologies have a substantial impact on library education in Nigeria. As a result, library education programmes across the country must adjust their curricula to include these technologies, ensuring that graduates have the skills and knowledge required to survive in a quickly changing information ecosystem.

Finally, this study looked at the impact of developing technology on library instruction around the world. The study has shed light on the problems, opportunities, and implications of incorporating modern technology into library instruction. The results of this study show that emerging technologies have the potential to alter library instruction in a variety of ways. They provide new opportunities for improving curricular material, delivering education, and promoting professional growth. These technologies, which range from virtual and augmented reality to artificial intelligence and data analytics, have the potential to transform how library education is imagined, taught, and performed.

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