

Emerging Roles of Libraries in Creating Synergy between Service Delivery and Technology Integration in Academic Libraries: An Overview

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Abstract

Libraries are undergoing significant transformations to adapt to the changing needs of their communities. Service delivery through emerging technology is a recent trend in library and information science. On this note, this study is carried out to ascertain the roles of libraries in creating synergy between library service delivery and technology integration in academic libraries. Roles of libraries in service delivery were highlighted and emerging technologies that can be adapted in libraries were also identified. It was discovered that in developing countries like Nigeria, awareness about applications of emerging technologies like Artificial Intelligence, Virtual and Augmented Reality, Blockchain Technology, Cloud computing, IoT are not elaborating. Emerging technology and its development have given rise to the new roles of libraries to navigate the future, such as shifting the role of libraries from controlling access to information facilitating discovery; redefining the roles of libraries to inclusive services that cater to diverse user needs which include accessibility and language support; shifting the role of libraries from collection centered to user centered design and so on. These roles have greatly improved the accessibility of information, enhanced user experience and facilitated the efficient management of library services delivery. However, libraries also faced many challenges in implementing these new technologies, such as cyber-security threats, changing in information seeking behaviours, lack of technical expertise, lack of clear policies and lots more. To overcome these challenges requires a proactive approach, such as investment in staff training, collaboration with technology partners and development of active policies to ensure the effective and responsible use of technologies. With these, libraries can navigate the future, stay relevant and continue to provide vital services and support to their communities.

Key words: Roles of Libraries, Library Service Delivery and Technology Integration

Introduction

Libraries serve as information centers and provide information for the communities they serve. They provide access to qualitative information through various means to meet the information needs of their users (Dei & Asante, 2022). Previously, libraries provide meetings space for community groups, organizations and individuals. They also host author readings, workshops, book clubs, children's storytime and cultural events. Not only that, the libraries play their

primary roles effectively by selecting and acquiring books, journals and other materials to support the information needs of their users. Conventionally, libraries organize and maintain their collections through cataloguing and classification systems manually, likewise the preservation system.

In today's world, transformation has wielded a supernatural force that has impacted on almost all aspects of human endeavour causing a rapid shift from the analogue way of doing things to the digital formats. The emergence of the global pandemic covid-19 also lends credence to the technological revolution that ushered in digital transformation in almost all spheres of human activities including librarianship. With emerging technology, libraries are transforming into variety of forms such as electronic libraries, virtual libraries or digital libraries which influenced the changing roles of library professionals. The emergence of the digital era has brought a paradigm shift into library services, influencing the functions and roles of information professionals to use computers and new digital devices for performing various house-keeping jobs such as cataloguing, classification, acquisition processing, reference work and serial control to deliver various computerized services to the library users (Osinulu, 2021). Library is the heart and soul of an institution. There is no doubt that the information environment is becoming increasingly digital, and IT has a wide-ranging impact on library service delivery.

Nowadays, library traditional roles have been expanded, which include teaching library users how to use the new technologies to meet their information needs. The concept of new technology as a universal information technology is the new science of information collection, storage, processing and transmission. In this emerging era, libraries are dynamic, user-centered and multifaceted information centers that play crucial roles in facilitating access to information, fostering learning and innovation, and promoting digital literacy. In academic libraries, the use of modern technologies for services delivery to enhance effective service is extremely overwhelming. Therefore, the incorporation of technology into library services has affected its functionality at multiple levels which include new configurations of searching space, autonomous and active learning process using the technology has been adopted. Issa (2010) agreed to the fact that the advent of Technology in libraries has seen the introduction of electronic services like computerized subscription, library software, bibliographical utilities, resources sharing and the internet, thus culminating into a face lifting modern librarianship to a fulfilled level.

The new roles of libraries enable librarians to offer digital literacy training, enhancing users' technology skills and confidence. Not only that, technology integration enables the creation of maker-spaces and innovation centers, providing users with access to emerging technologies and collaborative workspace. Similarly, library roles ensure accessibilities and inclusion by prioritize technology integration for service delivery. The synergy between technology integration and service delivery in libraries enables innovative, efficient and user-centered experiences, ultimately enhancing the library's role in supporting teaching, learning and research activities as part of modern service delivery in libraries.

The library service delivery methods have evolved over the years to reflect advances in technology, changes in user needs, and the availability of resources. Library service delivery in academic libraries has undergone significant changes in recent years due to various factors such as increasing client expectations, changing technologies, financial uncertainties and the availability of alternative sources of information for learners and researchers (Temitope & Olutoki, 2024). Similarly, Martins and Ledimo (2015) referred to service delivery as where, when and how a service product is delivered to the customer, whether fair or unfair. Service delivery in the context of this study can be referred to as the ability of a library to provide the information needs of users at the time of request in order to satisfy the expectation of users and experience.

Igwebuike and Agbo (2017) affirmed service delivery as a component of business that defines the interaction between service providers and clients where the provider offers a service whether that be information or a task, and the client either finds value or loses value. Service delivery is act of providing a service to a customer. Therefore, a good service delivery should provide the recipients with an increased value. The concept of library service delivery is fundamental to libraries. Essentially, library service deliveries are library processes and activities that are deployed by libraries to deliver information services and resources to library users, with the aim of enhancing the activities and productivity of library users. It is a known fact that libraries have witnessed significant changes in recent years. This change which is brought about by information and communication technologies (ICT), which has impact on the mode of providing information services in our various libraries. The traditional methods of information dissemination have given way to electronic means of communication. While the developments and application of ICT in library operations have improved and facilitated the dissemination of

information and access. It has equally provided new roles in information provision, access, dissemination and knowledge sharing (Lawal, 2022).

According to Sahabi and Ootobo (2021), libraries have undergone major changes in recent years. This change, caused by Information Communication Technology (ICT), which has affected the way information services are delivered. Nowadays, conventional methods of disseminating information have given way to electronic means of service deliveries as a result of technology integration embracement in libraries. In the development and application of ICTs in library operations, dissemination and access to information have improved and are also included new roles in the provision, distribution and transmission of information to the users. The librarians are now playing a positive role in discharging their duty as their roles evolving in this digital era, because advancement of ICT has made it easier to satisfy the information needs of users irrespective of time or location. As a result of technological advancement, libraries are no longer keepers of books, they are now gateways to a variety of sources of information. Haber (2011) assumes that the supply of books in recent centuries is an independent function of libraries, but that their offerings have evolved with the digital age, to meet the changing needs of their users as a result of technology integration in the libraries.

Technological integration in library and information science is the use of technology to improve the efficiency and effectiveness of library services. This includes using of technology to locate, store, retrieve and share information. Furthermore, technological integration is the act of using technology to improve services delivery, management and access of information. It includes the use of information and communication technology skills for problem solving. Technological skills have become essential requirement for library professionals to survive in this evolving world of information because these would give them competitive advantages in the job market. InEkere Ozioma, Eberechukwu and Helen (2020), modern technology devices are part of tools that can help to provide efficient and effective service delivery in libraries, and for librarians to perform their roles effectively, they have to fully utilize modern technologies.

The integration of technology into libraries has improved the quality of services offered to users. This is because technology has automated many library tasks, making it easier for librarians to manage resources and provide services. According to Ganesamoorthy and Selvakamal (2024), as new technologies are developed, libraries' content, media, methods of information access,

physical characteristics of the buildings and so on will also change. Information is accessed through technology system, which include digital devices, operating systems, digital media, networks, servers, audio visual systems etc. Serving as user-centered, libraries and librarians are playing a crucial role in creating a close synergy between technology integration and library services delivery in modern ways to their 21st century users. The synergy between technology integration and service delivery in libraries is of harmonious combination of technology and services to provide innovative, efficient and user-centered experiences. Technology integration enables libraries to provide virtual reference services, expanding access to information and expertise.

In Ekere et al (2020), there are needs for library professionals in academic and research libraries to acquire appropriate digital skills to use emerging technological facilities if they really want to discharge effective services to 21st century users. Not only that, modern technologies have substantially changed the roles of libraries in this information era, this is because 21st century library services require to make use of new technologies in critical library activities such as acquiring library materials, cataloguing the materials acquired, preserving the materials, diffusing them as well as providing reference services to users among others.

Raphael and Hamsatu (2022) discussed that the main goal of academic library is to acquire information resources in different formats, and in various disciplines of human knowledge, and to process, organize, disseminate and provide access to them and to use the resources for the provision of library services to the library users. For library to accomplish these tasks, computers and communication technologies which are widely used by majority of university staff and students should be fully integrated for effective service delivery. In rendering services in this emerging era, library staff should be composed and ready to embrace the new technologies for easier service delivery in order to facilitate user engagement and analytics.

In today's dispensation, many libraries are now combining both physical space and a virtual library of electronic materials and services together. This development is a signal that there is paradigm shift from old library operations methods to one supported by technology of diverse form. One of the expectations of the library users is to be able to access accurate, current and appropriate information. This was however a difficult task to accomplish before but with the technological integration into library services, it is possible to provide enhanced information

services that will enable libraries to provide innovative and effective services, to support digital scholarship and research, not only that, it can also enhance user experiences. However, the development so far faces a lot of challenges with regards to information seekers, information materials and the general management of the available resources (Manir, 2011). On this note, this study seeks to ascertain the new roles of libraries in creating synergy between library service delivery and technology integration in academic libraries.

Statement of Problem

Technology integration can bring several problems to service delivery in libraries. Rapidly changing technology can render hardware and software obsolete, requiring frequent upgrades and replacements. Not only that, technical issues can cause system downtime by disrupting library services and affecting user access to resources. Therefore, to address the problems associated with emerging technologies, this study attempts to ascertain the new roles of libraries in creating synergy between library service delivery and technology integration in academic libraries.

Research Objectives

The broad objective of this study is to ascertain the new roles of libraries in creating synergy between library service delivery and technology integration in academic libraries, Nigeria. The specific objectives are to:

1. ascertain the new roles of libraries in service delivery in academic libraries
2. identify emerging technologies that can be adapted in academic libraries?
3. establish the new roles of libraries in creating synergy between library service delivery and technology integration in academic libraries

Research Questions

1. What are the new roles of libraries in service delivery in academic libraries?
2. What are the adoptable emerging technologies in academic libraries?
3. What are the new roles of libraries in creating synergy between library service delivery and technology integration in academic libraries?

Literature Review

Emerging Roles of Libraries in Service Delivery in Academic Libraries

This literature review explores the emerging roles of libraries in service delivery in academic libraries. Libraries have always been considered as a vital and integral organ in a society; they are established to meet the information needs of diverse users in the community. The fast development and adoption of modern information technologies are changing the traditional ways of library practices in the academic world. Academic libraries are undergoing significant transformations to enhance service delivery in response to evolving technological advancements, changing user expectations and dynamic landscape of higher education. According to Akinyemi (2023), academic libraries are crucial parts of educational establishments because they give lecturers and students access to a wealth of knowledge resources to support their academic activities.

In this digital age, libraries are adjusting to new technologies to provide better services delivery, using of artificial intelligence and other modern technologies in library for service delivery can enhance development that many libraries can adopt. Technology integration has resulted in revolutionary changes that have improved the efficacy and efficiency of academic library services. Similarly, Koltay (2019) identified some of the tasks and roles that academic libraries have to fulfill in order to react to the appearance of research 2.0 that materializes in data intensive research and requires supporting activities from library and librarians.

Birgit, Andrea, Lucia and Jeroen (2023) reported that over the last few years, the research reproducibility landscape has been rapidly evolving as discussion around open access, FAIR and open data, research integrity, open source and open infrastructures continue to converge. When it comes to reproducibility, research libraries, publishers and other stakeholders need to navigate a web of interconnected roles and responsibilities in navigating the fast-paced world of technological solutions emerging to support open science practices. Evgenia and Valentini (2014) identified new and evolving roles of librarians as technology specialist, embedded librarian, teachers, information consultants, knowledge managers and subject librarians

It is very important for libraries to have ambition of adopting the new technologies and the factors of implementing the new technologies as well (Som & Rajesh, 2022). In this digital age, libraries design and organize digital information systems, ensuring intuitive access to resources. Not only that, libraries foster community engagement, promoting literacy, lifelong learning and social inclusion. The emerging role of libraries in service delivery is focused on adapting to the changing needs of users, leveraging technology, and providing innovative and inclusive services

to the users such as digital literacy training, coding and programming, online learning platforms, scholarly communication, accessibility services, digital inclusion and many more.

Adoptable Emerging Technologies in Academic Library

New technologies have been emerged into the library services while old tools had been rebranded as a result of emerging technologies. Ganesamoorthy and Selvakamal (2024) affirmed the emerging technologies as innovations that have the potential of changing the status quo. Libraries in developed countries have been using emerging technologies like Robotics, Cloud Computing, RFID, Big Data, Institutional Repositories, Virtual and Augmented Reality, Book Delivery Drones and Web 2.0 to provide library and information services to their users. Ehoniyotan and Bairat (2023) agreed that emerging technologies have attained the highest level of acceptance all over the world, and as a result of these cutting-edge technologies, transactional libraries are evolving to mark a rapid growth in information sharing and a corresponding increase in knowledge and skills. In Ganesamoorthy and Selvakamal (2024): Okwu, Okwu&Oladokun, 2024), the following adaptable emerging technologies were identified:

1. **Artificial Intelligence (AI):** Artificial Intelligence involves the development of computer systems capable to perform tasks that typically require human intelligence, such as speech recognition, image processing, decision making, and natural language processing. AI is being used in various fields, including Education & learning, Finance & Banking, Transportation & Logistics, Healthcare & Medical, Customer services & Marketing and lots more. Leveraging AI into library services, such as Cataloging, Classification and Collection Development practices, it will reduce manual labour, circulate data, and recommend new titles for acquisition, also improves accuracy. Not only that, AI-powered chatbots can provide 24/7 reference services and answering frequently asked questions and helping users with basic inquiries. AI Chatbots can also assist users with navigating library systems, finding resources and troubleshooting technical issues. Integration of AI into library services can innovate, improve and expand library services. Ultimately, AI will enhance user experience and supporting the diverse needs of the library communities. These and many more are the ways AI can be applied to transform industries, organizations, institutions and improve our daily lives.
2. **Block-chain Technology:** This technology can be of a great advantage to libraries because of its numerous benefits. Blockchain-base authentication systems can ensure secure access to library resources and materials; it helps libraries to manage digital rights

and prevent unauthorized access or sharing of copyrighted materials. Similarly, blockchain technology can help libraries to preserve digital collections by creating immutable, tamper-proof records of digital artifacts. Not only that, blockchain-based system can provide personalized recommendations for users based on their reading history and preferences.

3. **Virtual and Augmented Reality:** These are forms of immersive technologies that alter the user's perception of real world. VR creates a completely artificial environment that shuts out the physical world, it provides an interactive and immersive experience while AR overlays digital information onto real world. AR technologies enhance the real world by adding virtual objects, sound or other sensory inputs. Not only that, Mixed Reality (MR) combines elements of both VR and AR. MR technology blends digital and real-world objects, allowing users to interact with both. They can be used in education, training stimulations, gaming, and immersive experiences.

- a. can be used to provide virtual experiences patrons

4. **Internet of Things (IoT):** The IoT can be used in libraries to create a more efficient, user-friendly, and innovative environment. The libraries can use IoT to track book usage, monitor circulation, prevent theft and optimise collection development. Similarly, it can be used to support users with disabilities such as wearable devices or smart canes. Not only that, use of IoT sensors in libraries can help to detect emergencies earlier. Moreso, implantation of IoT-based surveillance systems enhances library security and safety.
5. **5G Wireless Networks:** 5G is the fifth generation of wireless technology. By leveraging 5G wireless networks, libraries can create a more connected, innovative, and accessible environment that enables the libraries to offer mobile hotspots, and providing patrons with internet access outside of the library. Not only that, 5G networks provide advanced network security features, protecting library data and systems from cyber threats.
6. **Quantum Computing:** This has potential to revolutionize various aspects of library operations and services. Quantum Computing is capable to speed up cataloging and classification processes, enabling libraries to efficiently organize and provide access to their collections. This technology can also optimize collection management by analyzing vast amounts of data to identify patterns, trends and relationships
7. **Cloud computing:** Adopting Cloud computing technology into library services will enables libraries to improve their operations, enhance patron services and reduce costs.

Cloud computing can bring numerous benefits to libraries. Similarly, this technology allows patrons to access library resources and services remotely at any time. Not only that, it enables libraries to store large amount of information without the need for physical infrastructure.

Roles of Libraries in Creating Synergy Between Library Service Delivery and Technology Integration in Academic Libraries

The introduction of emerging technological trends has had significant impact on the library performance. These impacts have transformed the way libraries operate and provide services to their users (Okwu, Okwu&Oladokun, 2024). The following roles are highlighted for creating synergy between library services and integration of emerging technology by Ganesamoorthy and Selvakamal (2024).

1. **Community Engagement:** It is parts of responsibilities of libraries to engage with the community to understand their technology needs and develop services that meet those needs.
2. **Developing a Strategic Plans:** The roles of libraries in creating synergy between library services and integration of emerging technologies cannot be under emphasized. New normal libraries call for aligning technology with library overall strategic plans and goals by ensuring that library technology is accessible to all patrons, including those with disabilities.
3. **User-Centered Design;** Libraries should be able to design library services and technology with the user in mind
4. **Collaborative Workspaces:** It is the new responsibility of libraries to create collaborative workspaces that integrate technology, such as video conferencing and virtual whiteboards.
5. **Staff Training:** Libraries must provide ongoing training and support for library staff to ensure they are comfortable using emerging technologies in their daily routines so as to meet the information needs of their diverse users.
6. **Patron Training:**The roles of libraries in creating synergy between library services and integration of emerging technologies cannot be under emphasized. Libraries offer training and support for patrons to help them effectively use library technology conveniently.

7. **Technical Support:** Provision of technical support for patrons and staff to ensure that technology is running smoothly

Benefits of Emerging Technologies on Roles of Libraries

According to literature reviewed, emerging technologies are transforming the roles of libraries especially in academic and research libraries. The following were identified as benefits of emerging technologies on the roles of libraries:

1. Emerging technology has shifted the role of libraries from controlling access to information facilitating discovery and exploration
2. Integration of emerging technologies into library service delivery has redefined the roles of libraries from collecting and preventing library materials to connecting people, ideas and resources.
3. Emerging technology has brought positive effect to change physical library space to virtual space by expanding libraries' virtual presence, providing online services and creating immersive experiences.
4. Emerging technology has shifted the role of libraries from collection centered to user centered
5. As a result of embracement of emerging technology in libraries, librarian's role has redefined to teaching of digital literacy skills, ensuring patrons can effectively use technology
6. Integration of emerging technologies into library service delivery has redirected the roles of libraries to navigate complex intellectual property and copyright issues, ensuring patrons understand their rights and responsibilities
7. Integration of emerging technologies into reference services delivery has altered the roles of libraries to provision of virtual reference and research support, using technologies like chatbots, video conferencing and instant messaging.
8. As a result of acceptance of emerging technologies in libraries, library staff need to develop new skills in order to meet up with 21st century information seekers.

Challenges of Emerging Technologies on Library Roles

There are some constraints to effective information technology availability and application in libraries, especially in academic and research libraries (Fagbe, Amanz, Oladipo,

Oyenuga&Adetunji,2015). While emerging technologies offer many benefits, they also pose challenges and negative effects on library roles (Arvind, 2017), which including the following:

1. **Shift to Non-Traditional Roles:** Libraries may need to adapt to non-traditional roles of technology such as digital scholarship, data curation and emerging technology support.
2. **Continuous Learning and Professional Development:** Library staff must continually update their skills to keep pace with emerging technologies
3. **Changing in information Seeking Behaviours:** Users may rely more heavily on emerging technologies for information, potentially altering their information seeking behaviours
4. **Lack of Technical Expertise:** Library staff may not have the necessary technical skills to integrate new technologies
5. **Resistance to Change:** Staff and patron may resist changes brought by technology integration
6. **Training and Support:** Insufficient training and support can hinder the effective use of new technologies in libraries
7. **Bureaucratic Processes:** Slow decision-making processes and bureaucratic red tape can hinder technology integration
8. **Lack of clear Policies:** Unclear policies and procedures can make it difficult to integrate new technologies
9. **Cyber-security Threats:** Cybersecurity threats can compromise the integrity of library systems and data.
10. **Inadequate Infrastructure:** Inadequate infrastructure, such as insufficient electrical outlets or network connectivity can hinder technology integration in libraries.

Conclusion

Emerging technologies have revolutionized the way library's function and discharge services to their patrons. The libraries need to have ambition of adopting the new technologies and the factors of implementing the new technologies are also important. Emerging technology and its development have given rise to excitement of service delivery in libraries, as a result of this, libraries can enhance a synergy between library services and technology integration ultimately by providing library staff and patrons with skills and knowledge they need to succeed in the digital age. Similarly, fostering collaboration and partnership are very essential roles to create the synergy between library services and technology integration in new normal libraries. Not

only that, libraries align technology with library goals by integrating technology into library services because most of libraries have expands their collections to include digital resources, implementing online catalogs, embrace collaboration, develop social app and adopt data-driven decision making. These roles have greatly improved the accessibility of information, enhanced user experience and facilitated the efficient management of library services delivery. However, libraries also faced many challenges in implementing these new technologies, such as cyber-security threats, changing in information seeking behaviours, lack of technical expertise, lack of clear policies and lots more. Overcoming these challenges according to Okwu et al(2024) requires a proactive approach, investment in staff training, collaboration with technology partners and development of active policies and procedures to ensure the effective and responsible use of technologies. With these, libraries can navigate the future, stay relevant and continue to provide vital services and support to their communities.

REFERENCES

- Akinyemi, O. (2023). Enhancing Academic Library Service Deliver Using Artificial Intelligence (AI). *Library Philosophy and Practice* (e-journal) 8042. <https://digitalcommons.unl.edu/libphilprac/8042>
- Arvind, M. (2017). Emerging Technologies and Impacts on the Libraries. *Indian Journal of Science and Technology*, vol. 10(31), DOI:10.7485/ijl/2017/v10i3/113915
- Birgit, S., Andrea, C., Lucia, L. & Jeroen, S. (2023). Emerging Roles and Responsibilities of Libraries in Support of Reproducible Research. *The Journal of Association of European Research Libraries*. Vol.33, 1-22.
- Dei, D. J. & Asante, F.Y. (2022). Role of academic libraries in the achievement of quality education as a sustainable development goal. *Library Management*. DOI: 10.1108/LM.02.2022.0013
- Ehonyiotan, F. S. & Bairat, A. O. (2023), Impact of Emerging Technologies in Libraries: Issues and Opportunities. *Lokoja Journal of Information Science Research*, vol.1(1)
- Ekere, J., Ozioma, E. E., Eberechukwu, M.E., & Helen, N. O. (2020). Utilisation of modern technologies for service delivery in special library in South-east Nigeria. *Information Impact Journal of Information and Knowledge Management*, 10(2):139, DOI:10.4314/ijkm.v10i2.10
- Evgenia, V. & Valentini, M. (2014). A systematic literature review informing library and information professionals emerging roles. *New Library World*. Doi:10.1108/NLW-05

- Fagbe, O.A., Amanz, R.C., Oladipo, S., OyenugaE. &Adetunji,O.O. (2015). The role of information technology (IT) in the academic library. Paper presented at 3rd School of Education and Humanities international conference, <https://doi.org/10.5666666666294/mw202466664>
- Ganesamoorthy, M. &Selvakamal, P. (2024). Emerging Technologies and Trends in Library: A study. Conference: Connecting the Nation for Knowledge and Cultural Heritage at Puducherry
- Haber, S. (2011). The changing role of libraries in the digital age. www.huffingtonpost.com/steve-haber/
- Igwebuike, E.U. &Agbo, A.D. (2017). Improving ICT Application to Library and Information Services in Special Libraries in Nigeria. *Journal of Applied Information Science & Technology* vol.10(2):102-110.
- Issa, W.O.A. (2010). Imperative and challenges of computer applications in libraries. *Modern library and information Science for Information Professional in Africa: Ibadan.* Text link publishers. 1-7.
- Koltay, T. (2019). Accepted Emerging Roles of Academic Librariesin supporting Research 2.0. *Journal of Academic Librarianship*. 45(2):75-80
- Lawal, H. (2022). Information Service Delivery and Role of 21st Century Librarian. DOI:10.13140/RG.2.2.19460.40327
- Martins, N. &Ledimo, O. (2015). An evaluation of service delivery at the university of South Africa's Regional Offices, *South African Journal of Information Management*, vol17(1),1-8
- Okwu, E., Okwu, N. E.&Oladokun, B. D. (2024). New Technological Trends and Application in Libraries: An overview. *Seminar and Medical Writing Education* 3(4):64, doi:10.56294/mw202464
- Osinulu, I. F. (2021). Digital Literacy Competencies among Library Officers in State and Federal Universities in Ogun State, Nigeria. *World Libraries*, vol25(1). worldlibraries.dom.edu/index.php/worldlib
- Raphael, K.A. and Hamsatu, K. A. (2022). Academic Libraries and Technology Integration: Library as a growing organism. *Journal of Research in Humanities and Social Science*, vol.10(11), 10-17
- Sahabi, M.K &Otobo, E.E (2021) Academic Library and Challenges of Service Delivery in Nigerian Universities in the Digital Era. *Information Impact: Journal of Information and Knowledge Management*,12:2,5161,DOI:<https://dx.doi.org/10.4314/ijikm.v12i2.4>
- Som, N.& Rajesh, T. (2022). A review on Emerging Trends and Technologies in Library. *American Journal of Information Technology*. Vol.6(1). Doi.10.11648/j.ajist.20220601.12