



ACCOMMODATING EMERGING TRENDS IN LIBRARY SPACE USAGE FOR SUSTAINABLE LIBRARY DESIGN: A REVIEW.

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ABSTRACT

A library can be best described as a store house for knowledge, ideas and information and a place where people acquire same for their personal, family and societal benefit. In contemporary libraries users acquire these through both the traditional (printed materials) and digital sources in addition to which other collaborative and cultural facilities are made available. With advancement science and technology, changes are coming into libraries and there is a need for them to be properly accommodated either at the design stage or remodeling stage for the library to meet these current trends. This study therefore aims at establishing the emerging trends in library design and finding out ways a futuristic library typical of a modern society can be put in place to take care of the needs of today and that of the future while enhancing sustainability. Literature review and case studies of several contemporary libraries were carried out to find out these emerging trends in library space usage. The findings of this study include technology integration, inclusive libraries, flexible spaces and green libraries. Security of library materials, library staff and library users and their belongings also helped to enhance the sustainability of the libraries. It will therefore be recommended that the library should have relevant facilities and planning and design strategies that will enhance security and sustainability through self service facilities, maker shift spaces, smart design features, passive security features, flexible spaces, fund generating facilities e.t.c. The libraries should be planned to be able to adapt to allow for the ever-changing user needs and innovations and variety of functions now expected should help to ensure human, environmental, economic and social sustainability.

Keywords: *Digital libraries, Flexible spaces, Library design trends, Passive Design, Sustainability*

INTRODUCTION

Libraries are considered as collection of books, reference materials, resources and services and the structure in which they are housed (Ibrahim, 2010). Library building plans started as single room buildings with shelves arranged along the walls. With the increase in population of library users and the need for noise zoning, compartmentalization started emerging in library building plans. At first, the library users had to rely on staff to access books but with the time, self-service started becoming more and more intensive. With the coming of the 20th century however,

various design techniques were gradually being introduced into libraries such as modular planning, allowance for expansion, heating and air conditioning and also visual and acoustic enhancement. Similarly, libraries are the intellectual backbone of any society. They are required for the development of the individual and the society at large. They provide members of the society with knowledge, information, cultural values and relevant ideas in addition to other supporting facilities. Libraries have been observed to be very significant without which, institutions, societies and

parastatals will lack the basic knowledge needed for future development.

However, globally with the coming of the digital age the role of libraries is evolving in ways that were once unimaginable. No longer merely repositories of books and physical media, libraries are transforming into dynamic hubs of learning, innovation, and community engagement (Ambareesh & Joseph, 2014). A review of the existing literature has acknowledged the prevalence of poor reading culture in Nigeria. To be more specific, the poor reading culture among primary and secondary school students in Nigeria have reached an alarming state (Innocent, 2020). To proof further the prevalence of poor reading culture in Nigeria, a review of the extant literature shows that about 30 million people have graduated from secondary school with poor reading culture (Kayuni, 2017). Also, available statistics shows that about 40% of Nigerian adults never finish reading a play or a novel from cover to cover after leaving school (Kayuni, 2017). Considering the poor reading culture exhibited by the Nigerian populace, there is need for newer and contemporary libraries to be put into place (Opara, 2016). As observed advancement in science and technology has brought about the use of computers and the international network in libraries; hence digital libraries are coming into place. These digital libraries are now making the process of information sourcing, circulation and retrieval very fast and effective. These have affected the landscape and nature of libraries in Nigeria. It therefore becomes imperative to study the transformational pattern of our library, with a view of identifying trends that will guide library design decision. There is a need for accommodating these emerging trends when designing new libraries in Nigeria or integrating these

trends into our existing libraries as they emerge. This study therefore aims at establishing the emerging trends in library design and finding out ways more sustainable and futuristic libraries typical of a modern society can be put in place to take care of the needs of today and that of the future. The study will help stakeholders and library designers on the various facilities to be incorporated into the library and the best way they can be accommodated within the library for user convenience and sustainability.

LITERATURE REVIEW

Relevant conceptual and theoretical frameworks were studied based on the trends and transformational patterns in libraries. Some existing current libraries were also studied.

History of Libraries

In describing the history of libraries, it can be delineated into three eras; these are the Ancient times, Medieval times, and Modern era (Aina, 2004). Human history is generally divided into three major eras: Ancient (c. 3000 BCE–500 CE), Medieval (c. 500–1500 CE), and Modern (1500 CE to present)

Ancient times

Libraries have existed far back as 6000 years ago (Aina, 2004). The beginnings can be traced to the Sumerians (West Pakistan) who developed clay tablets in which cuneiform signs and characters were used to record the activities of the government, temple, and business. There was evidence of ancient libraries in Greece. But the best known of these were Aristotle's library and the Alexandrian library. Most of such libraries were planned in such a way that they comprised of a single monumental hall pillared and decorated with symbolic sculpture, murals

and portrait busts with ridges, alcoves and sometimes galleries around. Here book cupboards or shelves stood against walls, often from the floor up to the ceiling level allowing for spaces for day lighting.

Medieval times

The period extends between the fall of Rome and the beginning of the Renaissance specifically from 500 to 1500 CE, according to various sources like Britannica. During the medieval era in Europe Islamic libraries were also being developed. Paper was invented as a medium of writing in the Islamic world; having learnt the art of paper making in China. Apart from mosques serving as prayer houses, they also served as schools, community centers, and libraries. Most of such libraries were planned in such a way that they comprised of a single room library with bays formed by bookcases. They were lit by windows along either side. The readers, books and staff are all together in a single room. (Aina, 2004). Christianity played a significant role during this era. Libraries were usually in monasteries and cathedrals. The works of Bishops were responsible for the growth of libraries. The monks were responsible for collecting manuscripts and then hand copying them. During this era, many aristocrats were interested in book collection and also many union cities were established. Most of such libraries were planned in such a way that they comprised of a single room library with bays formed by bookcases. They were lit by windows along either side. The readers, books and staff are all together in a single room.

Modern era

The increasing spread of education, coupled with the invention of the movable type printing press by Johannes Gutenberg, a German in 1450 accelerated the growth of libraries in Europe. The Chinese had earlier invented paper and the

use had been extended to Europe and hence books were produced in large quantities which made them affordable. The manuscripts in the libraries were replaced by books, and for the first time, books were arranged on the shelves of the Vatican library in Rome. Many people became literate in Europe, hence libraries were established throughout Europe. Libraries sprouted all over Great Britain. Thomas Bodley donated his private collection to the Oxford University (Wayne& Donald, 2015).

In 1927 an international association of libraries was founded in Edinburgh, Scotland. The association which was then known then as the International Federation of Library Association (IFLA) was formerly to represent the interest of library and information services and their users. The association is now known as the International Federation of Library and Institutions.

Plan type

Closed book stacks: books were enclosed and users can only get them through library staff.

Open access plan: Planned in such a way that readers have access to the books. Readers help themselves.

Twentieth century

Modular plans with various shapes varying from one library to the other. Libraries were built in such a way that users had accessibility to most library materials. Self-service takes place. There were lower ceiling heights due to improvements in lighting and ventilation. Libraries of today have transformed to meet the technological and societal needs of our society. They provide makerspaces. Today, libraries are designed as flexible, multi-functional spaces featuring makerspaces, innovation labs,

collaborative work areas, digital media studios, and community meeting rooms (Bryant, 2019). They also host events, workshops, lectures, and social services.

Various researchers tried to come up with the various library types and they could be best put as comprising of academic, national, public, special and national libraries. They all have their various facilities and services but the public libraries can be seen to offer most of the services of the other libraries. From the works of the various researchers, the generally agreed functions of a contemporary public library should include the following: to be a site for acquiring intellectual benefits, to be a place for supplying the people with their informational needs, provision of cultural and social facilities to the general public, libraries as community hubs, provision of halls for wedding, reception, symposia, conferences and meetings, provision of reading facilities for all age groups and playing grounds for children and provision of e- library for the users. Persistent Challenges Identified in the Literatures include Funding, Sustainability, Digital Divide, Security of staff and library possessions.

History Of Nigerian Libraries

Nigeria came into existence as a result of colonialism. Libraries were highly influenced by the colonialists and they were developed in line with the needs and interests of the colonial masters. Public libraries and other libraries in Nigeria were established with the ideology of the colonial masters in mind (Emmanuel, 2020). In Nigeria, libraries play a central role in the preservation, organization, and dissemination of knowledge. The history of libraries in Nigeria is deeply linked to the nation's political development, cultural evolution, educational growth,

and technological progress. However, the story of Nigerian libraries begins long before colonial contact, extending into the traditions of indigenous documentation, oral knowledge keeping, and early African writing systems used across different communities. In Nigeria today various forms of libraries have been observed to include Academic libraries, National libraries, Public libraries, School libraries and Special libraries.

Emerging Trends in Library Design

Libraries have served as buildings housing collections of books, journals and other reference materials. However, with increase in population, improvement in way of life and advancement in science and technology and with change in the cultural paradigm, hybrid and more contemporary libraries are coming into place. They are helping to make information sourcing, circulation and retrieval very fast and effective; enhancing knowledge and skills acquisition, helping to foster collaboration and interaction among community members and general enhancement of the society.

According to Nichols (2024), the emerging trends in library design include:

- 1) Flexible Spaces for Collaboration and Learning
- 2) Incorporating Technology for a Digital Experience
- 3) Sustainability and Green Design
- 4) Creating Welcoming and Inclusive Spaces
- 5) Adapting to Changing User Needs
- 6) Embracing a Mix of Modern and Traditional Elements

Flexible Spaces for Collaboration and Learning

A very important trend in the use of libraries is their rapidly wide spreading role as a center for collaboration and

learning. This trend is expanding and demands on the library as a place for interaction is growing fast. While the library has been and will continue to be a popular place for individual study, many libraries now also make use of it as a place for group study and meeting. Traditional libraries with rows of static bookshelves are being replaced by open, multifunctional areas that encourage collaboration and learning. Designers are incorporating moveable furniture, modular walls, and flexible layouts to allow for a variety of uses, from study sessions to public lectures to art exhibits (Nichols, 2024).

Incorporating Technology for a Digital Experience:

Emerging Frontiers and Future Directions in libraries also include areas such as artificial intelligence, digital preservation and IT. Key Changes that have taken place in libraries include the expansion of collection from mere books and national dailies to include electronic materials like e- journals and e- books. Also, the manual cataloguing system has been replaced with the electronic catalogue system. These has helped to shape the way libraries are designed to ensure safety of users and electronics required to meet these needs. The advent of information and communication technologies (ICTs) from the late 20th century onward marks the most significant point in library evolution. Scholarship identifies this phase as the rise of the "hybrid" or "electronic library" (Rusbridge, 1998).

As they evolve, these libraries are set to play a crucial role in shaping the future of information access and community support (Adigun et al., 2024). Consequently, libraries worldwide are adopting various emerging technologies and strategies to tailor their services to the

unique needs of their communities (Ajani et al., 2023). It is widely acknowledged that libraries leveraging emerging technologies have the potential to establish stronger connections with their communities on a global scale (Ajani et al. 2023). Thus, libraries worldwide are adopting various emerging technologies and approaches to tailor library services to the specific needs of their communities (Tella, Ajani, & Ailaku, 2023).

Traditionally perceived as custodians of knowledge, libraries are now situated within a transformative epoch where their roles and functions must undergo significant adaptation to fulfil the exigencies of this digital paradigm shift (Tella & Ajani, 2022). Artificial intelligence (AI) and machine learning (ML) have revolutionized modern libraries, evolving them from traditional repositories of information into dynamic hubs for knowledge exchange and innovation. Virtual reality (VR) and augmented reality (AR) are emerging as revolutionary technologies, reshaping how library users engage with materials and enhancing the overall learning environment. AR overlays digital content onto the physical world, while VR immerses users in entirely computer-generated realities. With these technologies, libraries can create immersive experiences, offer virtual tours, and establish interactive learning environments with immense potential. (Umesh, 2024).

Sustainability and Green Design

According to Sandholdt (2022), there are four pillars of sustainability which include Human, Social, Economic and Environmental Sustainability. They are all geared towards sustainable development. That is development that meets the needs of the present generation without

compromising the ability of future generations to meet their own needs.

Libraries are increasingly framing their mission around the United Nations Sustainable Development Goals (SDGs), focusing on climate action, equity of access, and inclusive services for marginalized communities (IFLA, 2021). Libraries have traditionally been regarded as repositories of knowledge, providing access to books, journals, and other resources. However, in recent years, libraries have expanded their role beyond mere information storage and retrieval. With the global focus on sustainability and environmental awareness, libraries have recognized the need to embrace eco-friendly practices and contribute to the overall well-being of the planet.

Libraries have long been an integral part of communities, serving as centers for learning, knowledge dissemination, and cultural exchange. With the increasing emphasis on environmental sustainability, libraries are evolving to incorporate more eco-friendly practices to reduce their ecological footprint. The concept of "green libraries" is gaining popularity globally, with many libraries adopting practices that are not only environmentally responsible but also financially sustainable and socially equitable (Mishra, 2023).

Creating Welcoming and Inclusive Spaces

The Affective Impact of Library Spaces. As a library renovation or new building is being planned, attention should be given to what students and any other library users will see as they enter the building. Also creating environments that enhance a sense of belonging as libraries have the potential to play an important role in enhancing students' sense of belonging on a campus. What learners see in the environment around them, such as

physical artifacts and messaging, tells them whether they belong or not. Some universities have high percentages of students, whether graduate or undergraduate, who are parents of young children. They need spaces to accommodate them and their children.

For special libraries, it was discovered that, natural light is good for mental health and conducive to learning and productivity. Libraries no longer have to be dark inner sanctums illuminated by artificial light. This can be accomplished by maximizing exterior windows, creating interior windows to allow sunlight to penetrate farther into the space, and lowering shelving.

Adapting to changing user needs

One of the key challenges facing modern libraries is meeting the changing needs of their users. As society becomes more digital and information becomes more readily available online, libraries must adapt to remain relevant. This means designing spaces that are more than just repositories for books, but that also provide access to digital resources, educational programs, cultural events, and other services that cater to the diverse needs of their communities (Nichols, 2024). As they evolve, these libraries are set to play a crucial role in shaping the future of information access and community support (Adigun et al., 2024). Thus, libraries worldwide are adopting various emerging technologies and approaches to tailor library services to the specific needs of their communities (Tella, Ajani, & Ailaku, 2023).

Embracing a mix of modern and traditional elements

While contemporary library design is focused on innovation and modernity, many libraries are also embracing a mix of

modern and traditional elements. This can include preserving historic features of older buildings while incorporating modern amenities, or blending traditional architectural styles with cutting-edge technology (Nichols, 2024). Libraries are embracing virtual and augmented reality technologies to create immersive learning experiences. Virtual library tours, educational simulations, and augmented reality-enhanced resources offer interactive and engaging content. By integrating these technologies, libraries are redefining the way users interact with information, making learning more dynamic and appealing, particularly to younger audiences (Rajat, 2018). Modern libraries are expanding their role as innovation hubs by creating makerspaces equipped with 3D printers, laser cutters, and VR equipment. Access to software like Adobe Creative Cloud, Canva and AutoCAD empowers library patrons to create, design and prototype (press reader team, 2025).

METHODOLOGY

This paper is a thematic review intended to identify trends and patterns in the research area. Literature review was carried out to trace the evolution of libraries since their inception to date. Online journals, text books and online articles were used as sources of literature for the study. The various current trends were also investigated. Reasons for evolving in terms of libraries were looked into to determine the reasons behind them. Sustainability as a very important factor in libraries was also looked into. Case studies were also carried out to study some contemporary libraries. The case studies selected were as a result of them being recently built libraries with emphasis given to emerging trends. Greenpoint Library and Environmental Education

Center is a current library that was built to the response to meet sustainability in Educational buildings. FFA Architecture Future-Proof Libraries in a Digital Age was designed by a firm providing award-winning expertise in architecture, planning, and interior design focused on developing architecture that is timeless, beautiful, and sustainable. The case studies were analyzed by thematic analysis. The research philosophy used is the pragmatist philosophy. Pragmatism is a research paradigm that focuses on the practicality and applicability of research findings, rather than a mutually exclusive philosophical position. This approach allows researchers to explore research aims that cross philosophical boundary, using different perspectives for different aspects of the study (Dulal, 2025). Case studies were used for qualitative depth and the literature review for broader context. The data was analyzed by thematic analysis. The results obtained from this research will be used to solve real life problems; that is, it will help to address the issue of accommodation and sustainability in modern or emerging libraries.

CASE STUDIES

Case Study One: *Greenpoint Library and Environmental Education Center, Brooklyn, United States (construction in 2020).*

The library is a contemporary library accommodating emerging trends in libraries such as IT, collaboration areas, roof top/ outdoor reading. It has an ambition of creating environmental stewards and nature lovers out of future generations of New Yorkers. It serves as a demonstration project for innovative approaches to sustainable design and a learning tool for the community.

Sustainability of the Library

The building helps to enhance sustainability by using sustainable building materials, delivering lectures on measures to enhance sustainability in the environment. It also has measures to keep the building sustainable.

The expansive outdoor landscape assists in stormwater retention. Water is also collected on an upper roof, stored in a visible cistern, and accessed by community members to water the raised community gardens. The landscape provides habitats for native birds and pollinators. The library provides street-level exterior green space, clear visual connections to interior activities, and two accessible green roofs on the upper floors.

The plaza design offers the public an engaging civic space that demonstrates sustainability and reinterprets the environmental history of the region allowing this library to pursue expansive public programming focusing on environmental activism and act as a community hub for education, and awareness, in the larger context of public responsibility.

Facilities and Functions of the Library

The new library was a community hub for environmental awareness, activism, and education. It provides enlarged indoor and outdoor spaces to house activities related to the exploration of the house.



Figure 1: First Floor plan of the library

Source: <https://www.archdaily.com/979294/greenpoint-library-and-environmental-education-center-marble-fairbanks-architects>



Figure 2: Second Floor Plan of the Library

Source: <https://www.archdaily.com/979294/greenpoint-library-and-environmental-education-center-marble-fairbanks-architects>

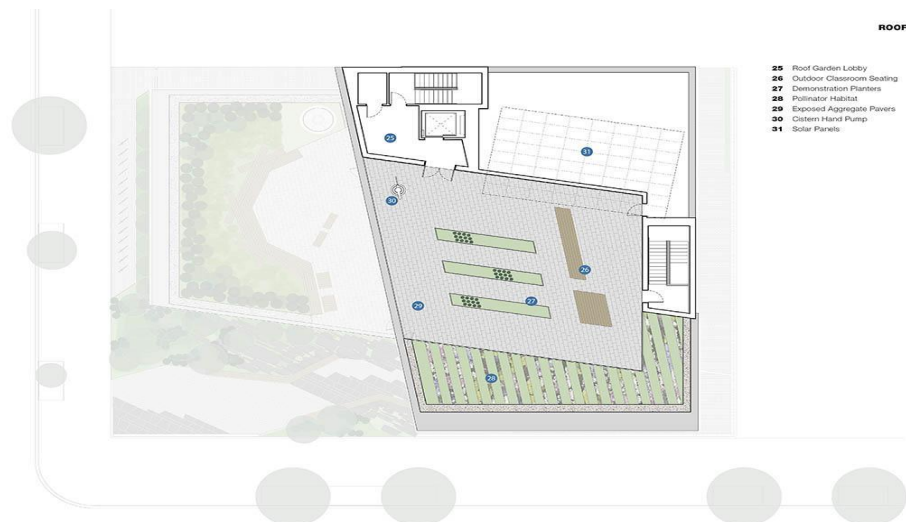


Figure 3: Roof Top of the Library

Source: <https://www.archdaily.com/979294/greenpoint-library-and-environmental-education-center-marble-fairbanks-architects>

Case Study Two: *FFA Architecture and Interiors: Designing Future-Proof Libraries in a Digital Age*

FFA Architecture and Interiors is a full-service design firm providing award-winning expertise in architecture, planning, and interior design. Since 1956, our practice has been focused on developing architecture that is timeless, beautiful, and sustainable. In an era of rapid technological change, designing

libraries that remain relevant and functional for decades presents unique challenges. The key lies not in predicting future technologies but in creating adaptable spaces that can evolve alongside community needs. For civic leaders and library administrators planning new facilities or renovations, understanding these design principles is crucial for long-term success

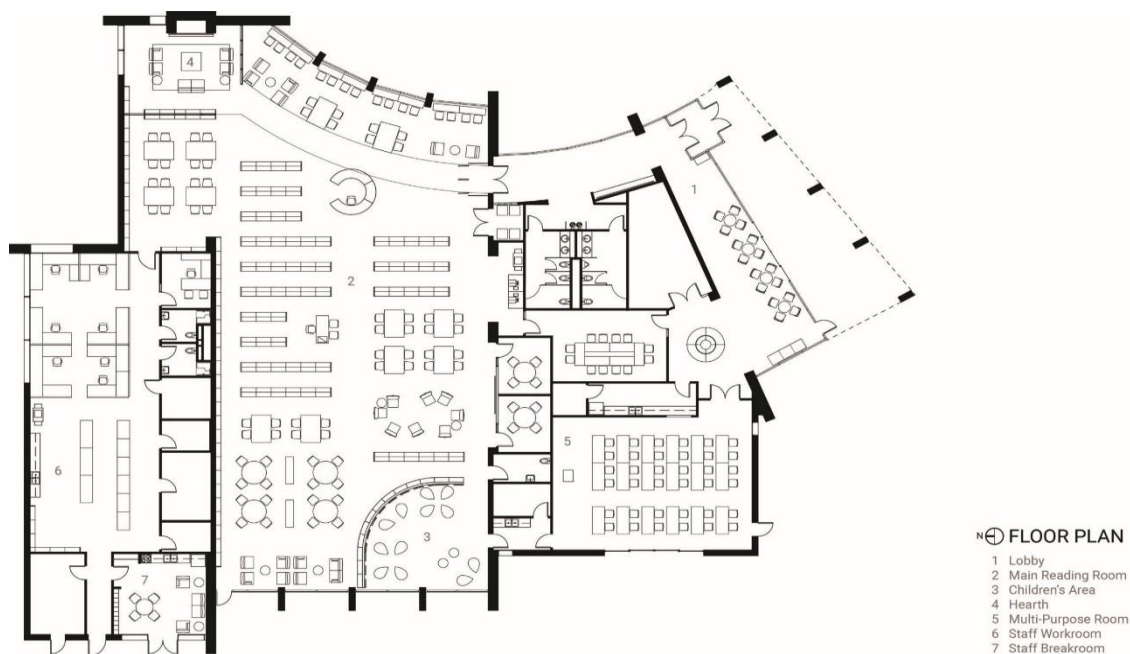


Figure 4: Floor plan of the Library

Source: <https://ffadesign.com/news/designing-future-proof-libraries-in-a-digital-age/>

Flexibility

Open, column-free floor plans serve as the canvas for future reconfigurations, while high-quality ambient lighting ensures spaces remain functional regardless of their ultimate use. These seemingly simple design choices have profound implications for a library's long-term viability. Modern library design must anticipate change while avoiding overly specific

technological solutions that could become obsolete

Futuristic design

Successful future-proof designs incorporate robust infrastructure that supports both current and future needs such as Power distribution systems that accommodate changing device requirements. Flexible lighting systems that adapt to different space

configurations, HVAC systems designed for varying occupancy patterns, Network infrastructure that can be easily upgraded, Mobile furniture systems that support multiple uses, The goal is to create a foundation that can adapt to changing requirements without major renovation.

Technology Integration Without Obsolescence

One of the most challenging aspects of modern library design is integrating technology without creating spaces that feel outdated when that technology evolves. Success in this area comes from focusing on principles rather than specific solutions.

Sustainability Meets Technology

Modern library design increasingly integrates sustainable technologies that enhance environmental performance and user experience. Key features include: Smart lighting systems that maximize natural light use, Energy-efficient HVAC systems with user-controlled zones, Photovoltaic arrays integrated into building design, Low-carbon materials like mass timber, Climate-responsive building materials and systems.

FINDINGS AND DISCUSSION

From the literature review and case studies carried out, various design considerations have to be put into place to accommodate emerging and future trends so that the library does not go obsolete in the advent of any new trend and therefore help to enhance the sustainability of the library.

Figure 4 has an open plan that can be reconfigured to take care of future needs that can arise. Modular plan is very important in library design as it enhances flexibility of library spaces. Designers are incorporating moveable furniture, modular walls, and flexible layouts to allow for a

variety of uses, from study sessions to public lectures to art exhibits (Nichols, 2024). With emerging trends in libraries, there is a need for the library to be able to take care of all these changes and additions coming into place. Flexibility in library spaces allow for the utilization of one or multiple functional space for different activities at different times. Modular plans help to ensure that some spaces do not remain redundant for very long period of time. Library buildings should be made in modules so that separations and combinations can be easily made. Modular walls or light partitioning elements and light easily movable multipurpose furniture can also help in the process of achieving flexibility in the library. Also, consideration should be made in the flooring to accommodate any electronic cabling that will be required in the future. With the coming of emerging trends which allows for diverse facilities in the library, proper zoning, lighting and acoustic treatments will be required.

Security of library staff and their belongings is very essential in all libraries. Also, the security of library materials, electronics and other gadgets are also very important as they help to enhance the sustainability of any library. The first step in security design is assessing potential threats. Knowing what we're guarding against will allow us to deploy the appropriate design measures and weigh costs (Robert, 2021). Security or passive security in libraries can be achieved through some design measures. Landscaping, building design and lighting can be used to enhance security in libraries. Limiting the number of entrances into a building also helps to enhance security in the building. If books are stolen by throwing out through windows, external areas around windows need to be properly secured by landscaping in a way

that will deter users from going near the building immediate surroundings.

Where feasible, providing space around our building's aids in this effort. The farther away from a structure that an explosion occurs or that an intruder is identified and stopped, the better. For those especially symbolic buildings that attract mass gatherings, many of the above measures can also keep crowds at a distance and limit access to building entry points via readily controlled channels. (Robert, 2021). Good library design should integrate security for the protection of the building, its occupants, and its collections. The challenge is to provide an environment that balances safety and comfort. In making decisions about the configuration of library space, architects play an important role. Designs that incorporate passive security measures such as openness, transparency, visibility, and proper planning are key to the creation of a safe environment.

There are four pillars of sustainability which include Human, Social, Economic and Environmental Sustainability (Sandholdt 2022), all these aspects of sustainability should be met in the public library. For human sustainability, the library should be inclusive in nature and meet user requirements and comfort. For social sustainability there should be facilities for socio-cultural events and lectures etc. For economic sustainability the library should be able to sustain itself and generate funds for its day to day running while for environmental sustainability it should be able to educate community members on ways of avoiding harmful environmental practices while also ensuring same within the library building. It also involves managing resources like water and energy so that they are available at that time and for

future library users. Sustainable libraries are also referred to as green libraries.

Mishra (2023), stated that the concept of "green libraries" is gaining popularity globally, with many libraries adopting practices that are not only environmentally responsible but also financially sustainable and socially equitable. In Figure 3, solar panels and roof gardens are provided. All these helps to enhance sustainability. Roof gardens with seats can be placed on the roof tops for outdoor reading as they create a calming environment where readers can take a pause to look at the nearby green environment. From Figure 2, there is a nest seating which is an outdoor seating area. Concrete benches can be provided during the landscaping of the building exterior with fountains around where readers can have a cool and serene environment for reading in the natural environment. Rain water harvesting can be incorporated to take care of water supply. Passive cooling techniques should be maximized in the library design with should be complemented with solar panels to take care of cooling. The solar panels should be considerable so that it can take power of electronic power supply needed in the library in case of shortage of electricity supply. Shops for snacks and drinks and a Mosque can also be located around the building to encourage reader to stay more within the library premises. The Greenpoint Library uses high-techs features like "visible cisterns" and "solar panels". Due to their high cost of installation and maintenance, passive design should be employed to enhance proper lighting in libraries during the day to enhance economic sustainability. Readily available rain water harvesting techniques can be used.

Fund generating facilities: fund generating facilities should be attached to the library as they will help in the smooth day to day

running of the library thereby enhancing sustainability. Figure 2 has a large community event space which can also be converted into lab spaces to train community members on sustainability. Hall rentals for events, symposia and conferences, computer training institutes and skills acquisition centres e.g. a computer training area to solve the problem of digital divide essential in a public library to enhance sustainability of the library as they will help to generate funds for smooth running of the library. The library can be designed in such a way that traditional library services are offered in the morning period and skills acquisition activities in the afternoon periods. Conferences, symposia and other events can take place during weekends within the same space. This also enhances flexibility in the use of the library. Figure 4 has a multipurpose room for seminars, conferences e.t.c.

No longer merely repositories of books and physical media, libraries are transforming into dynamic hubs of learning, innovation, and community engagement (Ambaresh & Joseph, 2014). Libraries of today have transformed to meet the technological and societal needs of our society. Bryant (2019) stated that today, libraries are designed as flexible, multi-functional spaces featuring makerspaces, innovation labs, collaborative work areas, digital media studios, and community meeting rooms. They also host events, workshops, lectures, and social services. Therefore, it will be encouraged that our public libraries should accommodate a lot of these facilities as they will help to attract users to the library, educating members of the society, meet the cultural needs of the community and enhance the general sustainability of the library, humans and the environment. They should however be

tailored to the specific needs of the society. All these helps to ensure the library remains relevant as they perform diverse functions and respond to the changing needs of the society.

CONCLUSION AND RECOMMENDATIONS

Libraries have been in existence since a very long time ago. It is due to increase in population, improvement in way of life and advancement in science and technology amongst other factors that has led to the change in library forms and space usage. The trend due to the emergence of Information Technology, provision of flexible spaces to take care of emerging trends, facilities for promotion of culture and need for revenue generating facilities will help shape the way libraries are designed both now and the near future. Passive security, lighting and cooling techniques should be employed to enhance economic sustainability. It will be recommended that our libraries in Nigeria are made in such a way that smart facilities are incorporated in the design to assist in tackling security and enhance user experience. Green libraries should also be constructed as they are cheaper to maintain. The libraries today should now be planned to be able to adapt to allow for the ever-changing uses and variety of functions now expected. An up to date, secure, user friendly and sustainable library will help to enhance the development of the society.

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