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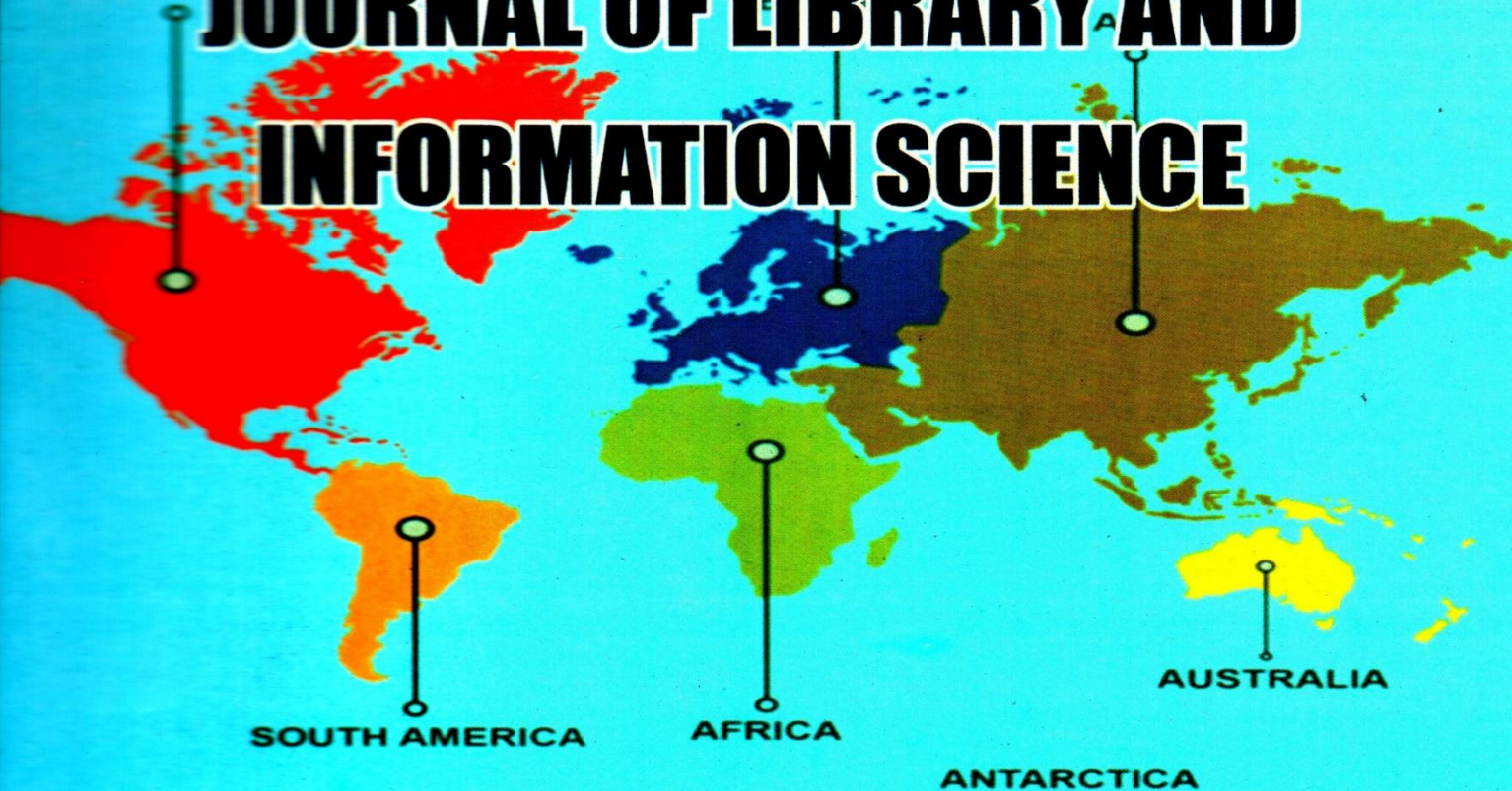
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THE ROLE OF ICT IN THE PROVISION OF LIBRARY SERVICES: A PANACEA FOR SUSTAINABLE DEVELOPMENT

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ABSTRACT

In this era of globalization, in which the world is connected, information gains its power through permanent storage and wide distribution, which could be achieved through ICT. ICT has continued to be a driving force in the issue of national advancement and development. Information is power, as power is effectively an infinite resource and a vital tool needed for the sustainable development of all sectors in any nation. The study concluded that ICT is a generic term that refers to the technologies that are used to collect, store, edit, and communicate information in various formats. Libraries have become one of the institutions mostly used to manage, disseminate, and preserve knowledge. The library's collection comprises both the physical materials and all digital or electronic information resources and services that the library provides. However, libraries are playing a very important role in facilitating access to global information and knowledge resources. The aim of libraries is to provide services that satisfy their users' needs and wants, and the incorporation of ICT into library services has provided libraries with a great opportunity to do so. One of the recommendations made was that the government should adopt the role of ICT in the provision of library services to contribute to the sustainable development of the nation, since the timely and effective provision of useful information can assist in building up a society.

KEYWORDS: ICT, Library Services and Sustainable Development

Introduction

Information and communication technology (ICT) has continued to be a driving force in the issue of national advancement and development. Information is power, as power is effectively an infinite resource and a vital tool needed for the sustainable

development of all sectors in any nation (Adebayo, Ahmed, & Adeniran, 2018). A nation without functional libraries and information centres may lack access to information that would enable its sustainable development. In this era of globalization, in which the world is connected, information gains its power through permanent storage and wide distribution, which could be achieved through ICT. According to Janakiraman and Subramaniah (2015), the world now experiences a digital scenario in which ICT has changed the possibilities of library job promotions and has brought changes to expected library performances. The term "library" has evolved from being a physical structure sited in a particular geographic area into a virtual or electronic environment that is easily accessible globally. Formally, library collections were contained in a physical structure and consisted of physical materials or information resources like books, encyclopedias, periodicals, films, and videotapes (Islam & Islam, 2006). The library's collection comprises both the physical materials and all digital or electronic information resources and services that the library provides. According to Walsh (2010), libraries have become one of the institutions mostly used to manage, disseminate, and preserve knowledge. They try to meet the demands and needs of the current and future civilizations. In other words, they satisfy the educational needs, cultural needs, and general informational needs of their users.

ICT is a generic term that refers to the technologies that are used to collect, store, edit, and communicate information in various formats (Raji, 2018). The use of ICT improves access to digital information, narrows the digital divide and also improves the standard of living. Adoption of ICT in libraries is a way of improving the information services provided in libraries. This is an era when people need to access timely information with ease, and this can only be done through the application of ICT to library services. It is also a way of contributing to the sustainable development of the nation, since the timely and effective provision of useful information can assist in building up a society (Adebayo, Ahmed, & Adeniran, 2018). ICT as an enabling tool, assist libraries in provision of information, which is very paramount to development of the various sectors in the nation. Libraries are playing a very important role in facilitating access to global information and knowledge resources. The aim of libraries is to provide services that satisfy their users' needs and wants, and the incorporation of ICT into library services has provided libraries with a great opportunity to do so. As seen in research by Adanu (2006), the expansion of ICT in libraries has demanded investigations into its roles and services. Existing research mostly focuses on ICT and library services, particularly in the areas of sustainable developments that have transformed how libraries access, retrieve, store, control, and disseminate information to users (Khan, 2016). However, related research only examined the different characteristics of digital libraries; their purposes, advantages, and certain key features. In digital libraries, little research has been done on the role of ICT in the provision of library services; a panacea for sustainable development in Nigeria.

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Concept of Information and Communication Technology

Information and communications technology (ICT) is an extensional term for information technology (IT) that stresses the role of unified communications and the integration of telecommunications (telephone lines and wireless signals) and computers, as well as necessary enterprise software, middleware, storage, and audio-visual that enables users to access, store, transmit, understand, and manipulate information (Murray, 2011). ICT refers to a technology that is used to handle communications processes such as telecommunications, broadcast media, intelligent building management systems, audio-visual processing and transmission systems, and network-based control and monitoring functions (Techopedia, 2020). ICT is defined as a diverse set of technological tools and resources used to transmit, store, create, share, or exchange information. These technological tools and resources include computers, the Internet (websites, blogs and emails), live broadcasting technologies (radio, television, and webcasting), recorded broadcasting technologies (podcasting, audio and video players, and storage devices), and telephony (fixed or mobile, satellite, video-conferencing, etc.). According to IGI Global (2020), ICT refers to technologies that provide access to information through telecommunications and focuses on communication technologies. This includes the Internet, wireless networks, mobile phones, and other means of communication. ICT is the technology that supports activities involving information. Such activities include gathering, processing, storing, and presenting data. Increasingly, these activities also involve collaboration and communication.

ICT stands for information and communication technology. It refers to technologies that provide access to information through telecommunication. It is similar to information technology (IT) but focuses primarily on communication technologies. This includes the internet, wireless networks, cell phones, and other communication mediums (Ratheeswari, 2018). It means that we now have more opportunities to use ICT in teacher training programs and improve the quality of teachers' ability to teach effectively. ICT is one of the wonderful gifts of modern science and technology, which has brought tremendous changes in library and information science. It has opened up a new chapter in library communication and facilitated global access to information across geographical limitations (Tomar, 2021). The term ICT is also used to refer to the convergence of audio-visual and telephone networks with computer networks through a single link system. There are large economic incentives to merge the telephone network with the computer network system using a single unified system of cabling, signal distribution, and management. In other words, it is considered as a broad-based term comprising the acquisition, organization, storage, and retrieval of information that can be in textual or numerical, vocal and photographic forms, audio–visual, or integration of all of the above, which could be best described as multimedia, using a coalition of computer and telecommunication gadgets (Mahmood & Badia 2019). However, ICT is a universal and similar concept to information technology (IT) that signifies not only a

distinct unit of technology but a collection of technologies like telecommunications facilities, data processing facilities, semi-conductors, consumer electronics etc.

Concept of Library

A library refers to a collection that includes printed materials and other physical resources in many formats such as DVDs, CDs, and cassettes, as well as access to information, music, or other content held on bibliographic databases (Wikipedia 2021). A library is a collection of books, periodicals, or other materials, primarily written and printed. A library refers to a place in which literary, musical, artistic, or reference materials (such as books, manuscripts, recordings, or films) are kept for use but not for sale. Any evaluation project presupposes a view of the nature and objectives of a library. A "library" refers to an apartment in which literary, musical, artistic, or reference materials (such as books, manuscripts, recordings, or films) are kept for use but not for sale (Merriam-Webster 2020). The Library is a collection of books and other non-book materials, housed, organised, and interpreted to meet the yearning needs of people for information, knowledge, recreation, aesthetics, research, and enjoyment. FRN (2004) sees the library as the pivot of the educational enterprise, which gives the platform for the sharing of knowledge aimed at rejuvenating Nigerian schools through the provision of current books and journals. According to Eberhart (2010), a library is a collection of formats that are organized by information professionals or other experts who provide convenient physical, digital, bibliographic, or intellectual access and offer targeted services and programs with the mission of educating, informing, or entertaining a variety of audiences with the goal of stimulating individual learning and advancing society.

The term "library" has itself acquired a secondary meaning: a collection of useful materials for common use, and in this sense is used in fields such as computer science, mathematics and statistics, electronics, and biology. Libraries have been around for a very long time and have traditionally been seen as collections of information and services. Libraries have always played a significant role in enabling people to engage with all kinds of information and knowledge resources (Curran, Murray, Norrby, & Christian, 2006). A library is a collection of information, sources, resources, and services, organized for use and maintained by a public body, an institution, or a private individual. In the more traditional sense, it means a collection of books (New World Encyclopedia, 2022). This collection and services are used by people who choose not to or cannot afford to purchase an extensive collection themselves, who need material no individual can reasonably be expected to have, or who require professional assistance with their research. A library is a place set apart to contain books, periodicals, and other material for reading, viewing, listening, study, or reference, as a room, set of rooms, or building where books may be read or borrowed (Dictionary, 2022). The library is a documentation system that gathers, organizes, retrieves, and disseminates recorded information with the aim of communicating knowledge to its users. Such a system pursues objectives in the documentation field proper corresponding to its customers'

priority information needs. However, it is also a collection of manuscripts, publications, and other materials for reading, viewing, listening, studying, or referencing.

Concept of Digital Library

A digital library is a collection of documents in organized electronic form, available on the Internet or on CD-ROM (compact-disk read-only memory) disks. Depending on the specific library, a user may be able to access magazine articles, books, papers, images, sound files, and videos. Digital libraries are organized collections of information resources and associated tools for creating, archiving, sharing, searching, and using information that can be accessed electronically. According to the Encyclopedia of Science, Technology, and Ethics (2022), digital libraries differ from traditional libraries in that they exist in the "cyber world" of computers and the Internet rather than in the "brick and mortar world" of physical buildings. Digital libraries can store any type of information resource (often referred to as documents or objects) as long as the resource can be represented electronically. Examples include hypertext, archival images, computer simulations, digital video, and, most uniquely, real-time scientific data such as temperature readings from remote meteorological instruments connected to the Internet. The term "digital library" has a variety of potential meanings, ranging from a digitized collection of material that one might find in a traditional library through to the collection of all digital information along with the services that make that information useful to all possible users (TechTarget, 2019). A digital library refers to a new way of carrying out the functions of libraries, encompassing new types of information resources, new approaches to classification and cataloguing, intensive use of electronic systems and networks, and dramatic shifts in intellectual, organizational, and electronic practices.

A digital library, also called an online library, an internet library, a digital repository, or a digital collection, is an online database of digital objects that can include text, still images, audio, video, digital documents, or other digital media formats accessible through the internet. Objects can consist of digitized content like prints or photographs, as well as originally produced digital content like word processor files or social media posts (Witten & Bainbridge, 2009). In addition to storing content, digital libraries provide means for organizing, searching, and retrieving the content contained in their collections. Digital libraries can vary immensely in size and scope and can be maintained by individuals or organizations. The digital content may be stored locally or accessed remotely via computer networks. These information retrieval systems are able to exchange information with each other through interoperability and sustainability (Lanagan & Smeaton, 2012). A digital library refers to a special library with a focused collection of digital objects that can include text, visual material, audio material, and video material, stored in electronic media formats (as opposed to print, microform, or other media), along with means for organizing, storing, and retrieving the files and media contained in the library collection (Mora, 2013). Digital libraries can vary immensely in size and scope, and can be maintained by individuals, organizations, or affiliated with

established physical library buildings or institutions, or with academic institutions. The electronic content may be stored locally or accessed remotely via computer networks. An electronic library is a type of information retrieval system.

Concept of Digital Library Services

The services provided by the library to online students can include instruction on how to access and use library materials; reference services to provide quick and in-depth answers to student questions; and materials delivery services that provide students with access to library materials online or items delivered to students' homes (IGI Globals, 2022). These are services provided by the library to the users. This can include instruction on how to access and use library materials. The library's services and facilities include Circulation Service, Reference Service, Online Reservation of Books, Recommendation of library material, Current Awareness Service, Inter Library Loan Service, Photocopying/Printing Service, Orientation and Information Sessions, Selective Dissemination of Information, Audio-Visual Service, and Multimedia Section. Some of the services offered in the library are as follows:

Circulation Services: Library materials are borrowed and returned at the circulation desk, which is located near the main entrance. Reserved books, audio-visual materials, periodicals, reference books, and CDs/DVDs can be used in the library (Institute of Space Technology, 2015).

Reference Services: The library provides reference and referral services to its users. Queries are answered using all possible sources. If the required information source is not available at the IST Library, the users are referred to other libraries where the required information may be available.

Recommend an Item: We welcome faculty, staff, students, and other members to recommend any material that can add value to our library collection. The purchase of recommended items is subject to approval and the availability of funds. However, we try our best to honor all the recommendations of our valued library members.

Inter Library Loan Service: Materials that are not held by the IST library might be borrowed temporarily from other libraries on an inter-library loan basis. To avail this facility, users need to submit their demands to the HoD (Library).

Audio/Visual Service: Library members can utilize audio-visual resources available in the library. To facilitate the users, the necessary equipment has been provided for this purpose. Library staff also extends help to the members in using these resources (Institute of Space Technology, 2015).

Multimedia Section: A Multimedia section has been established in the library with 10 of the latest computers equipped with multimedia and internet facilities. Equipment required for the use of different types of information media (like CDs, DVDs, audios,

videos, etc.) is available in this section so that users can have better access to the information resources in digital format.

A digital library service is an assemblage of digital computing, storage, and communications machinery together with the software needed to reproduce, emulate, and extend the services provided by conventional libraries based on paper and other material means of collecting, storing, cataloguing, finding, and disseminating information. The digital library is an environment to bring together in support of the life cycle of information, in addition to digital collection and information management tools. A crucial part of this definition is that the information is managed. A stream of data sent to Earth from a satellite is not a library. The same data, when organized systematically, becomes a digital library collection. Digital Library Services provides a wide array of services to assist members of the library with organizing collections of materials or making them more widely available. Some of the services offered by the digital library may include current awareness bulletins; externally purchased databases; CD-ROM databases; remote information services; internet information sources mirroring and cataloguing; e-mail; audio and video communication; electronic table of contents; electronic Document Delivery Service; electronic publishing; central storage facilities for hosting digital collections and indexes; and tools for loading, storing, searching, and displaying digital objects.

Concept of Sustainable Development

Sustainable development is an organizing principle for meeting human development goals while also sustaining the ability of natural systems to provide the natural resources and ecosystem services on which the economy and society depend. The desired result is a state of society where living conditions and resources are used to continue to meet human needs without undermining the integrity and stability of the natural system. Sustainable development can be defined as development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs (UNESCO, 2015). Sustainable Development (SD) has become an ubiquitous development paradigm; it has become the catchphrase for international aid agencies, the jargon of development planners, the theme of conferences and academic papers, as well as the slogan of development and environmental activists (Ukaga, Maser, & Reichenbach, 2011). Sustainable Development is a revolutionary concept that is, unfortunately, extremely difficult to define pragmatically. The concept of sustainable development is one that is arguably multi-disciplinary, complex, and systematic, yet defining the concept is without a doubt a great task. Sustainable development was a term first coined in 1980, when the intent of the concept was merely basic (ANON, 2011). It was in the World Conservation Strategy, a union between three prominent environmental non-governmental organizations (IUCN, WWF, and UNEP), that sustainable development took on the meaning of "conserving the earth's natural resources."

Sustainable development is the idea that human societies must live and meet their needs without compromising the ability of future generations to meet their own needs. The "official" definition of sustainable development was developed for the first time in the Brundtland Report in 1987. Specifically, sustainable development is a way of organizing society so that it can exist in the long term (You Matter, 2020). This means taking into account both the imperatives of the present and those of the future, such as the preservation of the environment and natural resources or social and economic equity. The concept of sustainable development is rooted in three main pillars that aim to achieve inclusive growth as well as create shared prosperity for the current generation and to continue to meet the needs of future generations (Team Leverage Edu, 2020). These three pillars are economic, social, and environmental development. They are interconnected and reflect the goals of community development and social and environmental stability. According to Klarin (2018), the concept of sustainable development is based on the concept of development (socio-economic development in line with ecological constraints), the concept of needs (redistribution of resources to ensure the quality of life for all) and the concept of future generations (the possibility of long-term usage of resources to ensure the necessary quality of life for future generations). However, the overall goal of sustainable development (SD) is the long-term stability of the economy and environment; this is only achievable through the integration and acknowledgement of economic, environmental, and social concerns throughout the decision-making process.

Digital Library Service and Sustainable Development

Libraries have contributed to the paradigm shift towards sustainable development in Nigeria. The library and information centres are important institutions that serve as a channel to knowledge, provide information literacy skills, life-long learning opportunities, research and the learning development of an individual. According to Igbinovia & Okuonghae (2019), the library provides a platform for users to access different types of information and information resources in different formats in order to meet their information needs. Libraries are of great value, especially as far as development is concerned. Libraries are tools for the development of society. Thus, in order to enable people to live responsibly, a library must be able to meet their needs at the appropriate time. Lozano (2002) agreed that the general library's role is to provide information to its community. Acquiring knowledge dispels ignorance. As such, the general objective of the library is to serve as a center for information where people acquire the needed knowledge to reduce their ignorance and level of uncertainty about their environment. This view has been supported by declarations such as that of Oladokun, Eyitayo, & Abayomi (2021), who stated that there can be no sustainable development without access to information and there can be no meaningful, inclusive access to information without libraries. However, the actualization of the sustainable development goals will be feasible only if the provision of all the essential infrastructures, including information agencies, is given the desired attention to

contribute their quota in that direction (Onah, Urom, & Unagha, 2015). Furthermore, the aim of all libraries is to provide information for all their users. It is no longer a secret that the attainment of the SDGs requires citizens to have access to timely, accurate, and adequate information. Information and knowledge provide access to economic opportunities, personal and societal development. According to Igbinovia & Okuonghae (2019), the roles of libraries towards sustainable development are:

1. Promotion of universal literacy, inclusive of media literacy, information literacy, and digital literacy.

2. Bridging information gaps and helping government and non-governmental organizations to understand local information needs and indigenous knowledge.

3. Advancing digital inclusion through unrestricted access to information and communication technologies (ICT) and dedicated staff to help people develop new digital skills.

4. Supporting research efforts aimed at innovation and development

5. preserving and providing access to the rich cultural heritage of the world.

Conclusion

The study concluded that ICT is a generic term that refers to the technologies that are used to collect, store, edit, and communicate information in various formats. Libraries have become one of the institutions mostly used to manage, disseminate, and preserve knowledge. The library's collection comprises both the physical materials and all digital or electronic information resources and services that the library provides. However, libraries are playing a very important role in facilitating access to global information and knowledge resources. The aim of libraries is to provide services that satisfy their users' needs and wants, and the incorporation of ICT into library services has provided libraries with a great opportunity to do so.

Recommendations

1. The government should adopt the role of ICT in the provision of library services to contribute to the sustainable development of the nation, since the timely and effective provision of useful information can assist in building up a society.

2. The government should allocate resources for the creation of digital libraries for the sustainable development.

3. Proper training and awareness programs should emphasize the value of digital libraries to help with the sustainable development.

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