

REQUIREMENTS FOR GLOBALIZATION OF ACADEMIC AND RESEARCH LIBRARIES

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ABSTRACT

In recent times, students and lecturers in Nigerian tertiary institutions have increasingly demanded and preferred access to electronic sources delivery and preferred access to networked information from their respective libraries (Covi and Cragin, 2004). One of the effective ways for the academic and research libraries to meet these increasing demands is globalization.

Introduction

According to Wikipedia, globalization is the process of international integration arising from the interchange of world views, products, ideas and other aspects of culture. Globalization is a process leading to greater interdependence and mutual awareness among economic, political, and social units of the world. It is considered as accelerated compromise of contemporary world and the intensification of consciousness of the world as a singular entity. It is a process by which the people of the world are united into a single society and functioning together. Advances in transportation and telecommunication infrastructure, including the rise of the telegraph and its posterity, the advent of internet are major factors in globalization, generating further interdependence of economic and cultural

activities. The term globalization is derived from the 'globalize' which refers to the emergence of an international network of social and economic systems.

For the purpose of this paper, globalizing is defined as international network of library and information systems. It is a situation whereby libraries are networked globally for international exchange of information and library services. Libraries by their very nature are complex organization where the main reason is to provide equal access to information and recorded knowledge.

Therefore, when we talk of globalizing academic and research libraries we are referring to the process through which academic and research libraries are networked globally for international exchange of information and services. The focus of this paper is to itemize and discuss the requirement for globalization.

Literature review:

'Globalization': theory and experience is an online publication by George Williams College. It dealt extensively on the meaning of globalization and de-location, risk, technological innovation and globalization and so on. It gave a broad and comprehensive view of globalization in relation to information exchange, benefits of globalization and the way the impediments. One thing that came out clearly is that globalization involves diffusion of ideas, practices, and technology. It is the intensification of worldwide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa.

Academic and Research libraries must have sufficient Information and Communication Technology (ICT) facilities and all the components to be part of and beneficiary of the globalization project. Ugah (2005) gave a general overview of these ICT components. They are: Computers; Storage Media; Database; Software; and Communication. Computer system, include the Cathode Ray Tube (CRT) or the Screen, mouse, key board, speakers and scanners. Computers also exist in various types: Mainframe; Mini-computers; Micro-computers; Laptops; Notebooks; and handsets. Storage media are also in various types: internal, backing and archival storage; magnetic media; tape devices; magnetic discs; optical media; and micro-form. Database is a collection of files of information but organized in such a way that the same information can be assessed from different

computers in different locations. Software is a set of instruction with which the computer can operate and each set of instruction is called a programme. Types of software include system software, application software and general-purpose software. Communication is simply the exchange of information, ideas, data and so on. It is a process which exists in various types: voice communication, text communication, data communication, satellite communication, networks and electronic mails. All these combine to make up ICT for globalization.

Okiy (2010) discussed globalization and ICT in academic libraries in Nigeria. The paper examines globalization as it relates to library services, including the benefits, and challenges. The author gave suggestions towards achieving a more effective ICT culture in Nigerian academic libraries. Akanni (2008), listed one of the features of globalization to include 'A world in which people interact with their colleagues around the globe, exchanging information and message and coordinate activities through variety of technological and communication means'. On the benefits of globalization, Alasa and Kelechukwu (1998), identified fourteen benefits, some of which are quick and convenient information exchange, transfer of data between machines, and ability to reach fellow librarians with messages and documents independent of the constraints of mails, telegraphs or even fax. On the impediments of globalization, she identified dearth of information and communication technology infrastructure, as the most prominent. Others include funding, epileptic power supply of electricity, among others. She suggested recommendations on the way forward.

Ogunsola (2004) highlights the challenges of globalization, examined the importance, implications and opportunities of ICT opened to Nigerian libraries in the current information age to the concept of globalization. The paper addressed possible areas of importance and advantages that can propel Nigerian universities and their libraries into being a respective player in the global IT revolution and enhance their status in what is now global village. The paper stresses the necessity for Nigerian universities to be part of the new and emerging technologies which are challenging the traditional process of teaching and learning and the way education is managed.

Aazami and Yousefzadeh (2011) focused on challenges and opportunities in globalization for developing countries. They reviewed and analyzed the changes brought on by globalization in three university libraries in Iran. It is a report of an empirical study, which employed a survey of 50 academic librarians, followed by interviews. The result showed that academic

librarians have positive perspective to globalization. According to them, living in an era known as 'information age' and knowledge based society. Libraries are more upbeat on the possibilities opened up by the globalization. They stressed that in the later decades of the 20th century, the pace of social change has quickened dramatically as a result of increasing connectivity among people and countries worldwide, through information and communication technology. In fact, both library and information science (LIS) and globalization depend heavily on ICT to meet their objectives. Innovation in ICT let people share information and knowledge more. In other words, it has been a central and driving force for globalization process.

None of the literature reviewed gave the requirements for and the process of globalization and that is the focus of this paper.

General Requirements for Globalization

1. Library Automation

Library automation refers to the use of computers to automate the typical library procedures and operations. Computers are central to automation. The first step to library automation is the acquisition and installation of computers and the associated technologies. Areas of automation include: Automation of Library functions; Use computers and electronic resources within the library;

Accessing remote electronic resources through the Internet; Provide services like electronic/digital library services, computer laboratory, multi-media centre.

2. Internet Access

The next step is Internet connectivity and access. Internet access connects individual computer terminals, computers, mobile devices, and computer networks to the Internet enabling users access Internet services. Internet service Providers (ISPs) offer Internet services to the public through various technologies that offer a wide range of data signaling rates. Access technologies generally use a modem, which converts digital data to analog for transmission over analog networks such as telephone and cable networks

3. Appropriate Software

The automation software category includes programs that allow users to create system processes that can automatically complete tasks or jobs on their computers. There are library-specific software out there. Some are

paid for and expensive, while some are free. Some major available integrated library management software include: Evergreen, an open source integrated library system; Computerized Data System/Integrated System for Information Services (CDS/ISIS) developed by UNESCO. It is an information retrieval package developed to handle bibliographic information. Other free software include Koha, which is also an open source integrated library system; New Gen Lib, New Generation in Library Automation and Networking; Greenstone, a suite of software for building and distributing digital library collection; and DSpace, a turnkey institutional repository application. It is left for any individual library or librarian to choose, adopt or adopt any one appropriate for its operations. Each library may develop its own in-house software.

4. Appropriate Personnel

The library must engage appropriate staff and or train the staff on ground to be able to handle computers and other ICT facilities. The library personnel must among others, have the various computer skills in order to drive the automation system as to realize the globalization project. These skills include the ability to the basic computing operations like using the mouse, managing various windows, alternating between using the mouse and key board, minimizing windows, opening and closing files. Others include word processing, that is type sentences, insert texts, select and highlight texts, vary font size and style, understand cut, copy and paste, use undo commands, create text box, use borders, spell checkers, and so on. The library personnel must have the skills to use the Internet, know search engines and how they work, how to use links, understand the general structure of web address, use Uniform Resource Locator (URL). Must understand the general structure, and use of e-mail addresses. Other skills include the use of spread sheets, creation and use of data base, creation and use of power points (Faga and Amidu, 2013).

On how to acquire these ICT skills, Faga and Amidu, (2013) recommended the following programmes: orientation; on-the-job-training; off-the-job-training; apprenticeship; coaching, among others. Some libraries collaborate with the Directorate of ICT of their institutions to second ICT staff from the directorate to the library. Some libraries recruit fresh polytechnic and university graduates in Computer science, send them to library schools. They become library staff with ICT background.

Content of Globalization

Library holdings, such as textbooks, journals etc.; Institutional Repository –Research and intellectual output of the institutions i.e. Theses and

dissertation, project reports, Seminar papers, Workshop proceedings; Indigenous knowledge; Culture of the people.

Process of Globalization

1. Digitization

Digitization is the representation of an object, image, sound, documents or signals by discrete set of its samples or point. It simply means capturing an analog signal in a digital format. The term digitization is often used to when diverse forms of information such as text, sound, image, or voice are converted into binary code. The term can also be used to describe the scanning of analog sources into the computer. It means creating digital surrogates of analog materials such as books, journals, newspapers etc. Digitization is the primary way of storing images in a form suitable for transmission and computer processing, whether scanned from two-dimensional analog originals or captured using an image sensor equipped devices such as digital camera or scanner. Digitization is also used to describe the process of populating databases with files or data. It is part of process involving digitization of analog sources before uploading to databases. Fortunately, they are equipment available now that convert hard copies of library collections to electronic/digital format. A ready example is Bookeye 3.

2. Designing and Creating databases

A client/server database system is made up of two components:

- a. Programs that provide an interface for client-based users to access data;
- b. The database structure that manages and stores data on the server.

Creating a database to serve your library needs requires an understanding of how to design, create, and maintain each of those components to make sure that your database performs optimally.

3. Online cataloguing

There are many tools for online cataloguing. Connexion is one of the powerful and yet easy-to-use tools that lets you perform original and copy cataloguing with WorldCat, the world's most comprehensive bibliographic database and the OCLC cooperative. It is a global catalogue of library collections. Catalogue in Connexion and you receive quality records that help seekers find what they need quickly. Connexion gives you a choice of interface: an easy-to-learn web interface and window-based client interface. From basic copy cataloguing to full original cataloguing, Connexion integrates your cataloguing with worldCat, the world's most

comprehensive database of bibliographic and library ownership information. WorldCat saves cataloguers' time by aggregating knowledge and eliminating duplication of efforts. Including your holdings in worldCat enables you make your collections available through the WorldCat Local Service and on the web at WorldCat.org. WorldCat holding also help you analyze your collection and compare it to others, using WorldCat collections Analysis Service and help thousands of libraries keep materials moving through the WorldCat Resource sharing system.

4. Uploading to the Website.

Many libraries may choose to design their own websites themselves. After the website is designed, it needs to be uploaded to the server in order to be visible on the Internet. The following steps should be used to upload a website to the server.

Perform a research on the Internet for the various options for building a website and choose the one that is best for your library.

Find a website hosting source. Many Internet Service Providers (ISPs), also provide free hosting space to their customers, but there other free and inexpensive websites hosts available. Consider the amount of space the hosting sources offer. Check out some of their hosted sites for loading speed, and determine whether they offer 24/7 support for their clients. Download a File Transfer Protocol (FTP) application. These programs are used to upload information to servers.

Install the FTP application. Follow the on-screen instruction. You may need to get information from the web host, such as the FTP name needed. They may also have specifics as to where and how to save your website files. Connect to your web server using FTP application.

The system must have the following requirements:

1. The software system must have features and the modules you would expect to find in an integrated library management system such as:- OPAC; Acquisition; Cataloging; Circulation; Serials; Reserve; Patron Management; Branch Relationships; Reporting; Stock verification etc. Most of library-specific software that meet these requirements had been listed and briefly discussed above.

2. Be completely web based.

Both the Online Public Access Catalog (OPAC) and the staff clients must be

completely web based. The Library users in any part of the world don't need to install any software on their desktops. Web based system are much easier to manage during installations, software or hardware problems or upgrades. The Library system must be able to run on all browsers including internet explorer, Mozilla Firefox and Chrome, windows, Linux and Mac based desktops.

3. Must comply with various library standards like MARC 21 for cataloging,Z39.50 for data exchange etc.

The University Library system must be compliant with various library standards like MARC21 for cataloguing, Z39.50 for data exchange and SIP/NCIP for RFID based hardware. Compliance to MARC21 standards makes it easy to migrate, import or export data from or to other library systems. With its Z39.50 capabilities the Library system be made into a Z39.50 server, so others can search for copy records from your installation.

4. Must have tools to export and import data.

The system must have excellent tools to export and import catalog, authorities or patron data. If one is migrating a large number of records, the system must be able to use powerful command line tools. And if one needs to import incremental records on an on-going basis your system must be able to use easy-to-use and flexible GUI tools. The system must allow export of MARC data including bibliographies and holding in MARC or MARCXML formats.

5. Enhanced Content

The Library system must be able to integrate with Google, Amazon and several other web services to display valuable content along with each catalog item. Book jackets and previews from Google, or reader reviews and similar items lists from Amazon are very popular. Readers can also navigate seamlessly to other external database like Worldcat, Google Scholar or BookFinder.com if they need to.

6. Powerful Catalog Search

The Library system catalog search should be superior to commercial or open source alternatives. This will enable the Library users search in any field - title, author, call number, subject and more, or search for a term in all fields at once.

7. Web1.0;web2.0;web3.0features

The Library system must be able to support several useful Webs 1.0, 2.0, and 3.0 features. Library users can create their own reading lists and share

with friends and colleague all over the world. Library staff can create public reading lists to better serve their patrons. Staff can publish News items on the OPAC or on the Staff Client for that matter. Patrons may want to know what other readers think about a particular item. Patrons can submit comments on any item in the catalog. Staff can choose to moderate the comments before they are displayed on the OPAC. Librarians should increase their technological knowledge-base, become proactive and think ahead of these streams of technologies and how they can be adapted professionally for the use of their clients (Adedoyin, Ezeudu, Adegun, and Tomomowo-Ayodele, 2013).

Conclusion

It is obvious that academic and research libraries in Nigeria need to do more in the provision of ICT facilities and infrastructure as to be able to bring to the academic and research communities the benefit of globalization. This paper highlights the general requirement for globalization which among others include library automation, Internet access, appropriate software and more importantly, appropriate personnel. The paper also discussed the process of globalization which include digitization, designing and creating databases, online cataloguing, and uploading to the website.

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