# MANAGEMENT OF ELECTRONIC RESOURCES FOR EFFECTIVE LIBRARY SERVICES IN FESTUS AGHAGBO NWAKO LIBRARY, NNAMDI AZIKIWE UNIVERSITY, AWKA

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*Abstract*

*This paper discussed the management of e-resources for effective library services in Festus Aghagbo Nwako (FAN) Library of Nnamdi Azikiwe University, Awka. The paper x-rayed the activities of e-resource generation and use in the Nnamdi Azikiwe University community and the management practices of these resources. The e-library content, services, e-management construct challenges in the management of e-resources as well as in FANL were highlighted. The paper concluded that both the library and the University management should give more attention to the provision and management of e-resources, bearing in mind the peculiarity of its effectiveness in information delivery. Part of the recommendation is that continuous acquisition of e-resources in the University library should form part of the acquisition policy of FAN, Library.*

**Keywords: Generating e-resources, Use of e-resources, e-resources Construct, Effective Library Services, Festus Aghagbo Nwako Library.**

## Introduction

Electronic resource management (ERM), is the practice used by libraries and librarians to keep track of important information on electronic information resources, especially Internet-based resources such as electronic journals, databases, and electronic books. The development of ERM became necessary in the early 2000s when it became clear that traditional library catalogs and integrated library systems can no longer handle metadata for resources as mutable as many online products are. In a layman's parlance, an electronic resource is any information source that the library provides access to, in an electronic form. An "electronic resource" is defined by Marshal (2011) as any work encoded and made available for access through the use of a computer. It includes electronic data available by (1) remote access and (2) direct access (fixed media). Remote access of electronic resources refers to the use of electronic resources via computer networks (AACR2, 2002). Direct access electronic resources refers to the use of electronic resources via carriers (e.g., discs/disks, cassettes, cartridges) designed to be inserted into a computerized device or its auxiliary equipment. These may include: full-text journals, newspapers, company information, e-books, dictionaries, encyclopedias, economic data, digital images, industry profiles, market research, career information, etc.

According to Marshall (2011), as libraries

build ever-larger collections of electronic resources, finding ways to managing them efficiently has become a major challenge. This is because the number of electronic journals, citation databases, and full-text aggregators held by most libraries has grown rapidly. Wikoff and Karin (2011) informed that managing these electronic

resources must involve providing the library users with convenient ways to finding and accessing them, including providing library staff with the tools to keep track of them. Libraries subscribe to electronic content in a number of ways. Some publishers offer packages that include many electronic journals, some products may include electronic journals from many different publishers, and libraries acquire some electronic journals individually. There are two fundamental aspects to managing electronic resources: 1) the front-end details of delivering the content to library users and 2) managing the business details of back-end staff functions related to acquisition, payment, and licensing. Festus Aghagbo Nwako (FAN) Library of Nnamdi Azikiwe University, Awka was commissioned officially by Dr. Igwe Aja- Nwachukwu, the then Minister of Education on Saturday, April 26, 2008. Thereafter, on April 21, 2009, the door of the Digital Library, a section of the main library was opened. Due to lack of content then, arrangements were made to acquire contents with a view to registering the University community for effective use of the content. The good news today is that the university community can now enjoy access to peer-reviewed journals from renowned international and even national publishers, digitized indigenous resources and other off line databases.

The Digital Library services were opened to users on March 1,2010. At the moment, the Digital Library has acquired over five thousand (5,000) full-text e-resources, links to online resources and bibliographic entries of over three thousand, (3000) CD-ROMS (rich in applications/system programs, text, journals) theses/dissertations, proceedings, as well as internally generated digitized resources from faculties.

**Management of Electronic Resources**

An electronic resource is any information source that the library provides access to in an electronic format. They include full-text journals, newspapers, company information, e-books, dictionaries, encyclopedias, economic data, digital images, industry profiles, market research, career information, etc. According to Nwagbara (2010), electronic resources (or e-resources) are information materials in digital format that are accessible electronically. Nwagbara was of the view that e-resources are electronic journals (e-journal), electronic books (e-book) online databases in varied digital formats, Adobe Acrobat documents (.pdt), WebPages (.htm, .html, .asp etc) etc

These can be explained as follows:
**Access:** The ability to locate, to gain entry, and to use an electronic resource.

**Acquired:** Refers to electronic resources, online or physical, which the library receives through formal acquisition processes, or to which the library provides access through contractual, licensed, or other official agreements. These electronic resources may or may not be owned by or housed at the Library.
**Collected:** Refers to electronic resources owned by, created by, or archived by the Library and selected for permanent

collection. This category also includes works which are stored elsewhere, but to which the Library has permanent ownership rights.

**Electronic resources:** Works which are encoded and made accessible through a computer, online or in a physical format. This category includes an ever-growing array of electronic journals, monographs, reports, articles, databases, digital collections still and moving images, sound and interactive resources

**Link:** A pointer from the Library's Web resources or bibliographic records to an electronic resource. To link is not to acquire or to collect.

**Online-only resources:** Works which are "born digital" and for which there is no counterpart in print or on physical media.

**Physical media:** Tangible objects, such as disks, which store computer data.

**E-Library Contents and Services in FAN Library, Awka**
The Digital Library of Festus Aghagbo Nwako has acquired enormous e-resources since its inception in 2010. These are CD-ROMs consisting of theses and dissertations, e-books which cuts across almost all disciplines in the University. Others are online links which comprises of:

**OARE:** Online Access to Research in the Environment.

**AGORA:** Access to Global Online Research in Agriculture.

**HINARI:** Health Internet Network Access to Research Initiative.

**World Digital Library**

**DOAJ:** Directory of Open Access Journal.

**EBSCOHOST**

**JSTOR**

**Bioline International**

**Bibliomania**

**BLDS:** British Library of Developmental Studies

**Other offline databases available at the Digital Library are:**
a. MIT Open Courseware .
b. e-Granary
c. Online encyclopedia, dictionaries, and search engines.
d. Multimedia contents
e. Electronic books, study and research materials relating to various departments of study.
f. Microsoft content-based training.
g. Access to local and international dailies.
h. Access to Nigerian online dailies .

**Indigenous Resources**
The Digital Library has collated and processed all publications emanating from the University. These include bulletin, brochures, conference proceedings, inaugural lecture series, addresses, journals, theses/dissertations.

**Services**
A total of 480 desktops and 120 laptops are available and on the network to provide services to users of the Digital Library. On authentication, users avail themselves of the opportunity to access and print, where necessary, all the contents as provided. Opportunity is also available at the business area such as photocopies, lamination,

typesetting, CD duplication, spiral binding, etc. Users are allowed to use or borrow for overnight, any relevant CD in the Digital Library.

Presently, Festus Aghagbo Nwako Library is moving gradually from traditional service delivery to the electronic format as it looks forward to full automation in the near future. However, low patronage of e-resources that has been hosted has necessitated the need to use social media and aggregating tools to reach a wider audience. In effect, the library became

moving gradually from traditional service delivery to the electronic format as it looks forward to full automation in the near future. However, low patronage of e-resources that has been hosted has necessitated the need to use social media and aggregating tools to reach a wider audience. In effect, the library became much interested in rendering services to users mostly in deep web through the hosted domain even though there was a general low awareness of the available e-library resources by the University community. In essence, the digital library staff were determined to brainstorm on how to create awareness, provide desirable services, embed social media in library sites and how to provide social media driven services. The success story today is that the Library has started to use social media in providing these services through their server interface, embedding them for effective, prompt and feed-back delivery services.

Collection development, though not fully defined digitally or electronically through licensing became transformed in some sort. Information is now gained through networks/networking and searches being

done through digital content developments, etc. The technical services has been transformed by the use of ICT hardware and software such as networks, server hardware, network operating systems, web servers, relational databases, web applications, online publishing, electronic printing and hyper-linking, web portals and repositories. In some cases, a minimal use of traditional technical tools for metadata abstractions is put to use. Similarly, the public service mode has taken the form of online access, using bibliographic abstracting and full text downloads, online reservation, loaning and return checks of e-

books, e- journals, etc and collaborative services through interactive social networking using wikis, facebook, blogs, flickr, twitter, myspace, and youtube, etc; for effective e-referencing activities. From the year 2010 when the Digital Library was established, statistics has shown that there has been an appreciable growth of users from almost all the departments in the University.

**E-Management Construct in FAN Library**
Today's Web-based library management software has evolved over time from a variety of offline activities that have often demanded significant integration efforts and work arounds to meet libraries' evolving needs. The changing information environment requires future management services to be more integrated, streamlined and efficient, designed to be parts of a whole, rather than a sum of many parts. An e-resource is a package of e-journals or a database of abstracts and or indexes that include the full text of some or all articles referenced by the indexers (Sadeh and Ellingsen, 2005) and for the e-resources, the interface through which they are offered are considered because the

elements are intricately linked, even though they can be licensed separately. In addition, among e-journal packages, published by a publisher, a specific journal could be governed by a different set of license terms. (Sadeh and Ellingsen, 2005). Other factors that are specific to e-resources and which do not apply to the traditional print include patron authentication, access, administration, usage, manner of acquisition, accession, licensing and bibliographic control. These attribute calls for a concerted effort for management concern. In effect, the issue of transition from acquiring print to acquiring electronic resources requires managerial ability as the need to adapt the internal organization to the new situation is indispensable.

Gronvall (2009) emphasized that in Kenolinska Institute University Library, the budget for e-resources was leveraged from 45% to 96% in 2006 and a decision not to duplicate print and electronic media was enforced. For example, collection of "grey materials" was stopped as most of them are now on the Internet. Bibliographic control in the online environment is an issue of great concern in the management of e-resources. Mitchell and Surratt (2005) noted that the development in the online environment has necessitated the need to adopt proactive measures for effective and efficient management of e-resources in academic libraries. The evolution of this new service delivery envisioned by the Festus Nwako Library was informed by the new information age which is IT-driven. Globally, the new information society is greatly rebranding information seeking behavior of library users, hence, reshaping the librarians' packaging patterns from traditional access mode to e-resources and social media

information delivery system. As a matter of fact, this evolution which was informed by the need to meet users with all forms of information resource became the centre point for repositioning the library such that they could remain of value to themselves and the users, as well. Moreover, the changes in user approach to information sourcing and use has become a source of worry and so, the need to arrest this situation became necessary. Library patrons now focus on Net surfing and social media tools for their information needs. This, has affected the teaching and learning pedagogy within the Library and Information Science discipline. The students and even teachers have suddenly turned into "generation next" individuals whose stock-in-trade has remained "cook computer, eat computer and drink computer" system of teaching and learning. Teaching and learning has hastily become Internet-based and almost all library patrons focus their information search on the Net, hence, the need for the e-resources management approach in the University.

**Challenges in the Management of e-Resources in FAN Library**
Since the inception of this University in 1992, the library system of the University of Nnamdi Azikiwe University, Awka, has a sizeable collection of books, journals and other specialized materials. These specialized materials are in the grey category and they include theses, dissertations, as well as some other official publications. The University library has a number of CD-ROM collections and subscribe to some online databases such as OARE, JSTOR, AGORA, HlNARI and EBSCOHOST among others. Lately the library provided an Internet platform for access to the library-based online databases

and for remote access to Internet-based resources. Unfortunately, these files lack global accessibility due primarily to the absence of management software. Other problems are poor Internet bandwidth, insufficient power generation, and lack of staff, among others. Furthermore, the library is about being automated without adequate policy on the management of e-resources. However, the automation environment requires Integrated Library Software (lLS) for the management of the traditional content as well as the Electronic Resources Management Systems (ERMs) for the management of the entire library for effective service delivery.

Meanwhile, despite the importance and advantages offered by e-resources, studies have identified a number of challenges associated with their use as experienced in FAN Library. These challenges range from lack of or inadequate resources, mainly computers, and poor Internet connectivity, inappropriate usage, lack of appropriate skills among users. Ray and Day (2008) noted that the main factor affecting students' access to electronic information and using them were limited to time and lack of effective information retrieval skills. The use of e-resources in educational institutions is further affected by lack of technical support staff, IT infrastructure and training. In addition, Johnston and McCormack (2006) posit that: "a perceived lack of various resources such as time, equipment or funds, lack of training and insufficient technical support staff and risks associated with implementing innovations in teaching, particularly those using technologies, are the most significant barriers to academic staff using information technology in their teaching". These have affected the FAN Library negatively in effective delivery of library services.

**Strategies to Enhance Management of e-Resources in FAN Library**

Advances in Information and Communication Technology has posed serious challenges to library users and librarians in this information age. Librarians should bravely embrace the change if they must remain relevant. Festus Aghagbo Nwako library braced up to this challenge by equipping the library with sophisticated networks which are managed by a CISCOO 3600 router that is being powered by a network operating system (NOS) in the server room, from where other routers in the virtual halls access the server. Dean (2009) referred to the network operating system (NOS) as the "dialogue", the software that runs on a server and enables such server to manage data, users groups, security, applications and other networking functions. The NOS is typically designed to allow shared files and printer access among multiple computers in a network. Among the four (4) virtual halls in the Digital library, each has two sub-rack routers that feed twelve (12) switches to which the workstations are connected.

The workstations, including the server are protected with licensed anti-virus to checkmate attack and document corrupt. In effect, the challenges have not been fully mitigated but with the support of the Library and University Management, the future is very bright for effective library management in the areas of e-resources. Plans are underway for the provision of an independent drop-down Internet bandwidth for the library and the Digital Library has been organizing in- house content management training on HTML, PHP and JOOMLA, etc. The Library has been hosted on the cloud with domain name, www.uniziklibrary.edu.ng to enable our users

access the library content from any location.

## Conclusion and Recommendations

Considering the peculiarity of e-resources in enhancing the effective library service delivery in academic institutions, the paper concludes that though there have been series of challenges in establishing and management of e-resources in FAN Library, there is great hope for a brighter future. It is hoped that in no distant time, the library will blossom to meet with the world standard both in content and service delivery. In the light of this, the paper recommends that:

1. Continuous acquisition of e-resources in the University libraries should form part of the collection development policy in FAN, Library.
2. Both the Library and University management should prioritize e-resources acquisition and management in FAN Library.
3. Librarians should be given opportunity for in-service training on e-resource management.
4. All needed facilities to enhance the management of e-resources should be provided in FAN Library
5. The server and workstations should be continuously protected with a licenced anti-virus.
6. Awareness campaign programmes should be mounted from time to time for the University community to know the content of the digital library so as to continue to access it always.
7. Alternative power generation such as inverter, solar panels and plant generator should be provided for the library.
8. An independent drop-down and robust Internet bandwidth should be provided for the library.

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