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# Content Enrichment and Quality Assurance In Nigerian Libraries

*Nworie, Josiah Chukwumaobi Phd, Cln*

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Libraries have continued to evolve over the years and, one of the current trends in librarianship is content enrichment. It is about how a user can access digital contents of a material on the web at a glance using added bibliographic details like table of contents, reviews and biographic details of the author etc, thereby enabling the user to make a better decision if that document is truly what the user wants. Content enrichment thrives in digital environment especially on the web. Users are expected to have adequate satisfaction and make effective use of library resources. To do this, quality assurance is necessary as it ensures that clients have the least difficulties (if any) in utilising digital services. This study therefore, x-rays how librarians in Nigeria can utilise the web technologies to serve their users effectively irrespective of time and place. The study highlighted some of the challenges of content enrichment and quality assurance in libraries and offers recommendations which might help clients to enhance access, visibility and usage of library resources.

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# Content Enrichment and Quality Assurance in Nigerian Libraries

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## ABSTRACT

*Libraries have continued to evolve over the years and, one of the current trends in librarianship is content enrichment. It is about how a user can access digital contents of a material on the web at a glance using added bibliographic details like table of contents, reviews and biographic details of the author etc, thereby enabling the user to make a better decision if that document is truly what the user wants. Content enrichment thrives in digital environment especially on the web. Users are expected to have adequate satisfaction and make effective use of library resources. To do this, quality assurance is necessary as it ensures that clients have the least difficulties (if any) in utilising digital services. This study therefore, x-rays how librarians in Nigeria can utilise the web technologies to serve their users effectively irrespective of time and place. The study highlighted some of the challenges of content enrichment and quality assurance in libraries and offers recommendations which might help clients to enhance access, visibility and usage of library resources.*

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## I. INTRODUCTION

Raganathan's fifth law of library science (1931) states that, "library is a living organism". Living things grow and change affects them all. Libraries over the years have continued to evolve. The emergence of ICTs has revolutionized the library; ranging from school library (MRC – media resource centres), public library, special library,

academic library, national library and today we have electronic library, digital library, hybrid library and virtual library. Libraries no matter the type continually change and update its collection, its methods to ensure access and virtual presence. Technology for libraries of the future is already available, affordable, email ready, social media-enabled and web-based library systems exist. These libraries are built and undergo constant changes to serve their users and meet up with their patrons demand and information needs. Should these libraries fail to meet up with their users needs, it wouldn't be long before they begin to loose patronage and become outdated, hence the maxim; if you are not updated, you will be outdated. Again, if a library has rich and up to date materials but such materials cannot be accessed by users easily and affordably or that the personnel expected to serve the users are not competent enough to aid users in obtaining their needed information, such a library will also loose patronage. Users approach a library with the intention of solving their information needs. On the other hand, libraries are also built to meet up with patrons information needs. Libraries are very significant to human and societal developments.

Libraries have access points and bibliographies through which users track documents that they need for research, writings, publications and other information purposes. These traditional bibliographic details enable a user to select and retrieve any library collection that he or she needs. Most times, especially in digital setting, these bibliographic details (Author, Title, Subject, publisher, date of publication, ISBN,ISSN etc) are not adequate enough to help a user determine

whether such a material will indeed be of help and useful to satisfy his or her information needs. Today, a user wants to know what other users have said concerning that particular material he or she wants to consult or buy (Review), see what and what that are contained in the table of contents, know biographic information about the author etc. These omissions of broader explanations of a material in bibliography have brought out the concept of content enrichment. According to Kumar (2017), these extra-enriched contents help users to decide on the relevance of the item without the need to access the full text. Nevertheless, there is the need as well to ascertain if these extra-enriched contents are helping the users meet their information needs and how librarians are coping in using the facilities and such concepts thus the quality assurance. Therefore, there is need for quality assurance, whereby librarians are constantly and continuously checked to see if they are performing their expected goals. Content enrichment and quality assurance are imperatives for a successful operation of libraries in today's digital environment. But how can this be done in a most effective way? This, obviously, is what content enrichment and quality assurance aim at. It is important to define the terminologies, review the present situation of libraries in Nigeria, discuss content enrichment and quality assurance in the context of library services, and draw the conclusion.

## II. CONTENT ENRICHMENT

Reitz (2004) defined content enrichment as information added to the bibliographic description of an item not included in the original machine-readable record format, for example image of cover or dust jacket, table of contents, first page or chapter, excerpts from or links to reviews, biographic information about the author(s), and /or illustrator etc. Kumar (2017) supports this definition of Reitz and added that content enrichment of records in an institutional repository include usage of linked open datasets.

Furthermore, Herbert (2018) defined content enrichment as an application of modern content processing techniques like natural language processing, machine learning and Artificial Intelligence (AI) to add structure, context and metadata to content to make it more useful to humans and computers. The content is usually electronic content and is both digital and embedded, requiring identifiers - an explicit understanding of the structure and location of objects which may be relevant to users of information. In other words, content enrichment provides the user with a navigational guide to digital content by grouping data, relating data, and making data more meaningful through electronic identification.

According to Library Technology Reports (2002), Libraries have been providing enrichment for centuries through their catalogs. The bibliographic or catalog record contained in the library online public access catalog (OPAC), the finding aids provided by archives and special collections, the item descriptions provided by museums? all these elements are enrichments of library items. Enrichments provide the user with surrogates for the item itself and assist in determining whether the user should retrieve the item from the shelf, ask to view the archival collection, or view the museum object. These surrogate descriptions are metadata. So, if librarians have been providing enrichment to their users already through catalog metadata descriptions, how can they enrich their library catalog even further in the Web environment? Commercial ventures such as Amazon.com and Barnes & Noble have shown what metadata can do to enrich the access and description of print and digital items. Tables of contents, book cover images, reader reviews of the items, and access to an ordering and delivery system have enabled the success of these commercial ventures. Information organizations would do well to imitate these commercial information centers that use metadata to enrich the bibliographic descriptions of their collections. To do this

effectively and efficiently and consistently, quality assurance is needed.

### 2.1 Quality Assurance

According to Wikipedia (2019), Quality assurance (QA) is a way of preventing mistakes and defects in manufactured products and avoiding problems when delivering products or services. Adebayo (2009) stated that Quality assurance is a way of measuring, improving, and maintaining the quality of any human activity that has a value. It may be academic, sports performance, business, or economy. Quality assurance is a means of ensuring that the best practices are encouraged in a social system. Edet (2010) confirmed that quality assurance is seen as a judgemental concept which could help consumers to differentiate one product from another and also, decide whether to patronize a particular producer or not.

### 2.2 Quality Assurance in Libraries

Githua (2004) stated that quality assurance is the measure of attaining desirable levels of accountability in library education. It is a means of ensuring that services offered is of highest possible standard and is driven by learners, professionals and social demands. In other words, quality assurance in library means the fitness of a library in accomplishing the goals for which it is set up and also maintaining comparable standards. Okebukola (2005) noted that quality assurance in libraries could be judged from ascertaining how good and efficient the staff are, the facilities and resources needed for services delivery, how prepared the learners are in using the services optimally. For Akwang and Etim (2010), some basic ruminants of quality assurance in library system could be the quality of teaching and quality of students availability of relevant resources, adequacy of facilities, staff-user ratio and workload, usage of modern management and administrative techniques, quality of supervision, monitoring and evaluation and zero wastage.

The purpose of quality assurance in information organisation such as library education is to provide relevant services and resources in the courses offered in the university, give credibility to the library management, ensure accountability in respect of the expenditure of library funds, engender confidence in acquisition process, and enhance the total information services available in library school. Kisailowska (2002) noted that quality assurance principles are a certain form of naming and ordering the actions that are necessary for assuring the quality, for instance of teaching, that later is internally measured and evaluated at a given university, and also externally, during an accreditation process. As a result of this, quality assurance principles are to be used as indicators to ensure compliance. It is noteworthy that quality assurance principles regulate both the external and internal activities of an educational institution. Monash University (2005) observes that the library, in assuring quality, should be committed to best practices in service provision and resource management, while still ensuring financial and administrative accountability. This definition by Edet (2010) that quality assurance is seen as a judgemental concept which could help consumers to differentiate one product from another and also, decide whether to patronize a particular producer or not has a good relationship with content enrichment in helping users make right choice in selecting a particular material in the library collection for their information needs.

### III. CONTENT ENRICHMENT AND QUALITY ASSURANCE IN LIBRARIES

Content enrichment is a necessary requirement for the discovery, access, and use of digital resources which now come in overwhelming quantity and in very diverse format. The world Wide Web has unquantifiable data in store that, unless there is a high level of categorization and access, the content may never be fully utilized. It is to enhance this, that content enrichment starts with the basic principles of the organisation of knowledge: from generalia to specificity, and the

semantic web where interpretations of human input are translated into computer digits. The focus is on users, to enable them to identify and make effective use of library resources. To do this, quality assurance is necessary as it ensures that users have the least difficulties (if any) in utilising digital services in the library. OPAC vendors are just beginning to launch enriched metadata software that allows libraries to integrate their collections and services, print and digital, via a single search mechanism and related digital modules that link up to a library's digitized and digital collections as well as other local and remote resources.

A library can include many features in a metadata-enriched catalog. Many libraries now offer enriched OPACs, similar to Amazon.com. They include images of book jackets, allow users to both read and add reviews of books to the bibliographic information, provide table of contents information, or merge other institution's metadata records with their own MARC records. OCLC has plans for an Extended WorldCat, a catalog that provides both enriched bibliographic records and expanded access to multilingual and other metadata records.

In Nigeria, many libraries today are working on digitization and digital projects that are constructed both inside and outside the OPAC, with enriched metadata records either embedded in a digital collection, or produced outside the collection in the OPAC, or both. The status of many libraries in Nigeria shows that many academic libraries have websites, many are considering electronic, digital or virtual presence of their institutions. According to Akintunde (2018), Tertiary Education Trust Fund (TETFund), has now made it mandatory for academic libraries in Nigeria to have visible, current, and interactive websites which should accelerate the development of enriched websites in Nigeria.

However, the current state of library websites is a concern: some are quite current, while for perhaps a good number, maintaining the site is a

huge challenge because of lack of expertise and content. In most cases, the websites do not communicate adequately because they do not have the enrichment which will guide users to their electronic resources. So, visitors to the websites, in most cases, do not have assurance of integrity of the sites because of the lack of content enrichment which also makes navigation easy.

Lack of content enrichment means that websites may have content but the content is not visible because it is neither organized nor structured in a way that the least knowledgeable user of the web can access desirable information. Prioritization in terms of content type is also lacking for many of the present websites of Nigerian libraries. Quite a number of libraries aggregate hyperlinks to other websites which provide resources – free and open as well as subscribed, but are not systematically organized. Systematic organization, like subject classification, means the structuring of content in such a way that similar knowledge categories are grouped together and linked where necessary. Instruction or guides are also provided to enhance use of resources.

According to Okebukola (2005), quality assurance in libraries could be judged from ascertaining how good and efficient the *staff* are, the *facilities and resources* needed for services delivery, and how prepared the *users* are in using the services optimally. We shall x-ray how libraries can effectively and efficiently fulfil them in content enrichment.

i. Library Staff: The knowledge of content enrichment tools and proper training of the librarian are very important in this 21<sup>st</sup> century librarianship. The explosion of information on the Internet has increased rather than decrease the need for experts in the description and organization of digital objects. According to Library Technology Reports (2002), the corporate and commercial world also has realized the benefits of describing and organizing internal and unique information into the digital environment. The many metadata standards indicate not only a lack of understanding concerning the expertise of

information professionals but also a duplication of effort where others have already devised solutions and systems. Information organization experts, especially librarians who are involved in technical services and cataloging operations, have a unique opportunity to actively market their skills in today's world. The business world wants people with knowledge organization and metadata experience to assist them in their digital and worldwide presence on the Internet. Although the titles of these positions reflect their origins in the corporate environment (knowledge manager, metadata specialist, information organization expert), the job descriptions are quite similar to those found advertised for librarians and archivists. The only difference is that the corporate environment pays two to three times more for these skills than the traditional information organizations do. The proliferation of interest in the development of digitization and digital projects has increased the need for those who know how to describe and organize information. Although MARC can and does fulfill the needs for most traditional information organizations in the print world, in the digital environment MARC is often a hindrance and lacks the degree of simplicity or complexity needed to describe and organize digital objects, depending on the project itself. Technical services and cataloging personnel have been encouraged to educate themselves in metadata and its application in the digital environment. To stay on top of developments in metadata, librarians must:

- a) Actively seek and participate in digitization and digital project development and planning being initiated in their area
- b) Educate themselves and their colleagues about the importance of metadata and its benefits in the organization, description, access, retrieval, and preservation of digital objects
- c) Become active in the marketing of the skills and talents that information organizations have to assist the world as digital information increases in quantity and complexity.

Far beyond MARC and Metadata, it is content enrichment today. Information about added bibliographic details that can enable a user find what he or she is looking for with ease and timely. In Nigeria today, the status of libraries shows different levels of development but a definite shift towards the digital environment. Nigerian libraries have both digital and hard copies of resources (hybrid) that include books, journals, newspapers, government publications, institutional repositories and open educational resources. All libraries – whether academic, school, public or special, are expected to have websites which serve as gateway to their content. It is quite visible that more academic and school libraries in Nigeria have websites than other types of libraries. There is every need to equip today's librarian with adequate skills and knowledge of digital library perspectives and how the web environment works. Akintunde (2018) reiterated that, the discoverability, accessibility and usability of digital content is very much a factor of human capital development. It is imperative therefore that much investment is made in developing human capacity to enrich content, otherwise so much money would be spent on the acquisition of access to cloud based services without commensurate benefits. Statistics in the past have showed that libraries in Nigeria minimally utilize databases many of which they paid for (Eifl usage statistics, 2011). These databases include BioOne, Sage, Ebscohost, Emerald Group Publishing, JSTOR, Taylor Francis Library, and Royal Society Journals Collection.

Where there is inadequate human capital development, it is also most probable that quality assurance will not receive adequate attention. However, this is an area which can always be given preference in any service provision so that there would be effective and efficient delivery of service to clients; in this case, discoverability, access and use of content are what the librarian stands to offer when he or she is properly trained. Skills and knowledge acquisition of web technologies are very important to the 21<sup>st</sup> century library. His training and retraining are of utmost

importance if the library wants to continue to be relevant in this present life.

## ii. *Facilities and Resources needed for Services Delivery*

Offering enriched access to library users can only work via a State-of-the-art Infrastructure and assistance from expert Staff. Content enrichment thrives in digital environment, therefore, libraries seeking for relevance and are willing to retain their clients must be digitally complaint and updated. Facilities and resources needed for web presence must be provided and enabled. The satisfaction of any user in the library according to Iwhiwhu and Okorodudu (2012) is dependent on the quality of the information product, the information system and the services that make the information product available. These three levels of measure of satisfaction are defined by the information resources, facilities and services in the library. These sources of satisfaction, when properly harnessed may contribute to users' overall satisfaction. Some of the *facilities* that are needed for web environment in libraries include:

- Audio Visuals: colour TV, VCR,DVD, sound box, telephone etc
- Computer : server, PC with multimedia, UPS etc
- Network : LAN,WAN,MAN, Internet etc
- Printer: laser printer, Dot matrix, Barcode printer, digital graphic printer etc
- Scanner: HP scan jet, flatbed, sheet feeder, drum scanner, slide scanner, microfilming scanner, digital camera, Barcode scanner etc
- Storage devices: Optical disks – CD-ROM, VCDs, CDs, hard disks, jukebox etc
- Software: any suitable software, which is interconnected and suitable for LAN and WAN connection, PC Pandi etc.

The *resources* in the library could be categorized into two: online resources and offline resources.

The online resources include-

- Local database of traditional books in machine readable form

- E-book, V-book, electronic text, map, image, sound, video and, multimedia etc
- E- journal
- LAN, MAN, WAN for browsing, e-mail etc
- Well trained manpower for online help

Offline resources include-

- CD-ROM, Jukebox etc
- Audio- Visual aid etc

Content enrichment as a situation where the content of digital resources is organized and made visible to meet specific needs of clients with the least difficulties is very appropriate. These resources cannot work well without the expertise knowledge and skills of the librarian. This means that the librarian needs to place the contents where users can easily locate them and have full access of them. This is made possible by building in the navigational tools and hyperlinks that will define the resources. In determining the quality of the facilities and resources of libraries for effective service delivery, LRCN and NUC can put up a benchmark for the facilities and resources that are supposed to be in every library in Nigeria.

## iii. *Users*

The user is the most crucial component of the 21st century library. Every effort put into the establishment of a 21st century library is wasted if the library is not meant for use. According to Nwalo (2003), the library user is undisputedly, the most important person in any library setting. He defined a user as anybody who visits the library with the purpose of exploiting its resources to satisfy his information need. The underlined word "visit" as used in the 21st century, include remote access to the library portal or website. The library user is the focal point to the 21st century library and information services, as the library primarily exist to satisfy the user (Aina, 2004). This is the reason why the mission statement of any library always reflects the determination of the other components of the library to render excellent services to library users. As such, a library is said to be productive when the library users are satisfied. Aina (2004) sees the term "user" to include all those who avail themselves of

the services offered by a library. The term encompasses various terms such as patrons, clients, information users, information seekers, consumers, readers, etc. These terms can be used interchangeably, because they all apply to those seeking the services of a library.

According to Anyira (2011), the 21st century has virtually turned everything virtual. The library and its users have also gone virtual. Thus the 21st century library (which is virtual) is defined by Reitz (2005) as a "library without walls" in which the collections do not exist on paper, microform, or other tangible form at a physical location, but are electronically accessible in digital format via computer networks. From the definition above, the library users require 21st century technologies to access library collections, as access is no longer restricted to the user paying a visit to the library (building) physically. The 21st century library therefore, emphasizes access rather than ownership. In this vein, the library user needs to take more responsibility in locating and retrieving information from the library's collections more than they have done in the traditional library enterprise.

Anyira further stated that access to technology coupled with relevant ICTs skill is required to put the 21st century library to good use. Like the library, users have also evolved. In the traditional library setting, library users are easily identified because they appear in the library physically most of the times. A physically-challenged user is seen. Child and adult users are identified but this is not so with in the online environment. It is not easy to identify these things. However, people are identified by their ICT skills irrespective of their age or physical challenges etc. Librarians therefore, need to satisfy their users' information needs online by providing all the necessary contents that will enable the users discover and have access to their library collections.

However, certain contents in the websites are meant for certain groups of people. Content enrichment and quality assurance where content is for targeted audience are discoverable in a

scientific community where knowledge is circulated for research and development. Akintunde further noted that Cloud based services provide content in such a way that only those who are members of the scientific community have maximum benefit. An example is the Journal Storage (JSTOR) database which provides access to purely academic content as a not-for-profit. Its disciplines are classified into: Area Studies, Arts, Business & Economics, History, Humanities, Law, Medicine & Allied Health, Science & Mathematics, and Social Sciences. Each of these 9 categories has further breakdowns. The database is searchable by subject, title, and publisher. Though not classified, search can be made by author and any key word of combination of key words.

Content enrichment in JSTOR is also discoverable in the filters provided in the search field which include: content type, publication date, subject, and access type (whether all content or refined content). These are all access points where a client can possibly access content without unnecessarily searching "through the rubble". Users therefore need to be trained to enable them acquaint with some of the processes and procedures of web contents. The library can organise a seminar, workshop, conference, webinar, teleconferencing, or user education to train her users or make use of her social media handle to do the enlightenment.

### III. CHALLENGES OF CONTENTMENT ENRICHMENT IN LIBRARIES

For many web-based services, one of the main constraints to maximum utilization of resources is the robustness or capacity of institutional gateways. In other words, a library can discover resources in remote servers to the extent that it has inadequate infrastructure and software to carry the capacity. This, perhaps, is the weak point of many Nigerian libraries where subscription is paid for, but access to content is very low because of low capacity of computer hardware and accessories, and limited access to the Internet. Added to these is availability of

electric power which, in most cases, is erratic especially in Nigeria. This can frustrate the possibility of getting the most out of cloud services reduced to nothing.

The politics of limiting the digital resources and access of internet in the library is another challenge. Technical know-how and skills of the operators of data, the systems personnel; and librarians in charge of electronic resources are important factors to consider. It is also necessary to state that as the provision of library services is more and more cloud based, it is necessary that librarians develop capacity to perform their services freely in the digital environment. This requires continuous knowledge and skills development. Many librarians are yet to be fully acquainted with the skills and technical know-how of digital libraries and web technology let alone of users. Most users especially in Nigeria though they know how to surf and browse the internet but many are yet to come up with the requisite knowledge of getting what they want on the internet.

#### IV. RECOMMENDATIONS

Based on the challenges, it is therefore recommended that:

1. Librarians should Offer enriched access via a State-of-the-art Infrastructure and assistance from expert staff.
2. Human and technical support needed to enable users to discover, navigate, critically evaluate, and effectively use digital collections and electronic resources in the library should be provided.
3. Librarians should be adequately trained and retrained on critical roles to play in ensuring that clients have easy access to relevant resources that will directly meet their needs.
4. There should be proper knowledge of the need of clients and a plan to market the resources.
5. The training of librarians for effective content enrichment through workshops, seminars, webinars, conferences should be ongoing and every effort must be made to maximise

subscribed databases through personal development, and the training of clients so that the huge investment on cloud based library services will not become a waste.

6. NUC and LRCN should as a matter of importance, mandate every library in Nigeria to develop well structured, client - focused websites which provide content and easy access to resources. This is foundational to content enrichment and the assurance of quality.
7. Librarians in Nigeria presently, should do well to share notes with each other, and try to help and assist each other in content development, enrichment, and quality assurance.
8. Adequate measure to ensure standardization and quality of content in libraries websites should be encouraged.

#### V. CONCLUSION

Content enrichment, as discussed in this paper is a necessary innovation that has emerged in librarianship to enable discovery, access, and use of digital resources which now come in overwhelming quantity and in very diverse format. It is focused on the users, to enable them to identify what materials they really have the need for. Content enrichment thrives in digital environment especially on the web. Users are expected to have adequate satisfaction and make effective use of library resources. To do this, quality assurance is necessary as it ensures that clients have the least difficulties (if any) in utilising digital services.

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