# The Prospects and Challenges of Open Access Educational Resources (OAER) in the Library Retrieval System

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**ABSTRACT---** *In this paper, we discussed "Prospects and Challenges of Open Access Educational Resources in the Library Retrieval System". The paper highlights benefits of open access educational resources (OAER) to include:unrestrained accessibility of educational resources; cheaper and cost effectiveness of information resources; enhances easy publication of intellectual works; global visibility and utilization of research findings; improves societal intellectual capacity building; and easy dissemination of information. Also, the paper points out some challenges militating against the success of OAER to consist of: lack of awareness among the intellectual community; inadequate funding of OAER in libraries; technical and technological problems. However, the paper concludes by proffering some remedies to ameliorate the challenges confronting OAER in library retrieval system; such as: current educational reforms aiming at given e-learning a place in the educational policy in Nigeria should be vigorously pursued; Nigerian government should depoliticize the educational system and give education experts free hand to objectively run the affair of education in the country; library authorities while planning to purchase OAER hard wares and facilities, should go for those ones that have lesser hazard effect on the health condition of its library personnel; library management should engage the services of personnel who are skilful in the ICT and its accessories in order to sustain the effectiveness of OAER in the library operations; and finally, more telecommunication companies especially those who are interested in the educational development should be licensed to commence operations in the country, while the established ones should drastically reduce their internet connectivity charges.*

**Keywords**--- Open access, Open access educational resources, Electronic resources, Library retrieval system.
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## 1.  INTRODUCTION

Generally, library could be regarded as a place, building, well ventilated room(s) or space where books and other educational resources are being selected, acquired, processed, organized and displayed for reading, research and reference purposes.Library collections are to be made available to potential readers from time to time without any restriction. In the same vein, Ranganathan (1963) states among his fundamental laws guiding the librarianship profession that "Every book its reader; every reader his/her book; books are for use; save the time of readers and library is a growing organism". In saving the precious time of library users, its resources should be made available without any restriction; this would help in the effective dissemination of information to various information seekers that usually visit the library collections for their information needs.Similarly Yaya, Achonna and Osisanwo (2013) posit that information should be made available to every user without any restriction or censorship. Therefore, open access is one of the various information retrieval methods through which educational resourcesthat are stocked in the library could be made available to the prospective users.

Hence in this paper, we shall look at the topic in the following spectrum: Library retrieval system; Concept of Open Access Educational Resources; Prospects of Open Access Educational Resources; Challenges of Open Access Educational Resources and it shall be concluded as we proffer some solutions to those impending challenges that could affect the effectiveness of open access educational resources in the library retrieval system.

## 2. LIBRARY RETRIEVAL SYSTEM

Library retrieval system are various ways through which information resources stocked as library collections could be made available to the intending and potential library users. Library materials could be made available to the information seekers through printed hard copy as well as electronic soft copy. Thus, information retrieval is concerned with retrieving documents that are likely to be relevant to a user's information need as expressed by his request. A request is an imperfect expression of a user's information need; only a user will be able to tell whether a document contains the information he/she is seeking (Fordjour, Badu &Adjei, 2010). They cited Rowley (1988) in their study and stressed that information retrieval (IR) is concerned with the exploitation of the information and other contents of documents. The establishment of various large databases, which are mounted on computers and made available to anyone who wishes to search them, has a significant impact on the effectiveness and efficiency of the retrieval of information.

The concept of open access retrieval system is pivotal to the process of e-learning of the educational resources within and outside the library traditional collections. This implies that they are linked to each other; e-learners depend mostly on the electronic educational resources that are easily disseminated through the open access e-books and e-journals. North Atlantic Treaty Organization (2014) posits that e-Learning could be applied in a variety of ways and could be integrated into the mainstream of education and training programmes. It further reiterated that e-learning technologies encompass Advanced Distributed Learning (ADL), Computer-Based Training (CBT), immersive training, mobile learning (m-Learning) and trans-media learning. All these are helpful in making e-learners to appreciate the usefulness of open access educational resources in meeting their information needs.

## 3. CONCEPT OF OPEN ACCESS EDUCATIONAL RESOURCES

The term open access connotes making information available to information seekers and users without any restriction of any kind.Open access educational resources (OAER)are oftenappearing inthe electronicformat. Thisimplies that theyhaveto appearin soft copy formats (e-books& e-journals) and not in hard copy formats(printed books& printed journals). Hard copy educational resources could be located in the traditional library shelves which restricted its users to a particular library building. But when an educational resource is "Open Access (OA)" it means that it can be freely accessed by anyone from any location in the world using an internet connection. This indicates that the potential readerships of Open Access articles are much greaterthan that of locally-based articles where the full-text is restricted to local subscribers. Evidence shows that making research material Open Access increases the number of readers and significantly increases citations to the article - in some fields increasing citations by 300% or more (Uzuegbu&McAlbert, 2012).

Educational resources in other hand consist of both printed and non-printed text books, periodicals, research worksand other intellectual resources that are carefully stocked in the library open shelves and databases; these are to be made available at no cost in order to pave way for the accessibility and retrieval of needed information resources by various information seekers.Educational resources that are stocked in the library open shelves and its repositories should be widely circulated without any restriction as Ranganathan (1963) rightly stressed that "every book its reader" and "every reader his/her book".

Still on the concept of open access, it is the term used to describe literature that is available to any reader at no cost on the Internet (Ivwighreghweta&Onoriode, 2012).Prosser (2003) defines open access as "free and unrestricted access on the Internet to literature that scholars provide without expectation of direct payment". He stated that the reasons for open access are to accelerate research, enrich education, and share learning across rich and poor nations. To further elaborate the acknowledgement of open access in the global society, Bhaf (2010) records that, presently, there are about 1,451 of open access repositories registered in Open DOAR (http://www.opendoar.org/ ), a directory of open access repositories.In the same vein, Uzuegbu and McAlbert (2012) see OA as a key contributor in providing universal access toinformation and knowledge. They affirmed that the issue of open access is recently gathering global encouragement and support. Hence, the National Knowledge Commission of India commissioned in 2005 is demonstratingencouragement for open access. The commission's success in India today is driven by her belief that "Open access material stimulates research and helps students, teachers and researchersacross the world" (Uzuegbu&McAlbert, 2012: 2). The copyright owner—usually the author—allows the user to freely read, download, copy, print, distribute, search, link to the full text of the article, indexing and abstracting such intellectual resources for lawful purposes, (Kwan,2003 in Ivwighreghweta&Onoriode, 2012).

Bailey (2006) points out that in December 2001, the Open Society Institute convened a meeting of prominent scholarly communication change agents in Budapest that strongly influenced the nascent open access movement. The result of this meeting was the "Budapest Open Access Initiative" (BOAI). Its definition of open access (OA), while refined by subsequent documents, remains the most influential one to this day. To sum up definitions of OA, the author highlights some notable features thatwere included in the Budapest Open Access Initiative" (BOAI):

*"First, open access works are freely available. Second, they are 'online', which wouldtypically mean that they are digital documents available on the Internet. Third, they are scholarly works... Fourth, the authors of these works are not paid for their efforts. Fifth, as most but not all authors of peer-reviewed journal articles are not paid and such works are scholarly, these articles are identified as the primary type of open access material. Sixth, there are an extraordinary number of permitted uses for open access materials; users can copy and distribute open access works without constraint. Seventh, there are two key open access strategies: self-archiving and open access journals". (Bailey 2006:15)*

In open-access journals, authors either retain copyright or are asked to transfer the copyright to the publisher. The only role of copyright in open-access literature is to give authors control of the integrity of their work and the right to be properly acknowledged and cited (Kwan, 2003 in Ivwighreghweta&Onoriode, 2012). Although open access is a concept that is most often applied to online publication, it is nonetheless compatible with print for those journals that also have a printed version. Open access is free of charge for readers of the online version, but does not exclude priced access to print versions of the same work (Ricardo &Mercè, 2004). According to Ivwighreghweta andOnoriode (2012), the revolution of Open Access since early 1990s has liberated libraries and information centers all over the world. More than ever, librarians are experiencing a rise in prestige because of their ability to contribute to the digital management of information, which somewhat was being threatened by commercial information providers of the Internet era (Swan& Chan, 2010).

However, Asense Media Services (2013) posits that OA does not affect peer-review; articles are peer-reviewed and published in journals in the normal way. There is no suggestion that authors should use repositories instead of journals. Open Access repositories supplement and do not replace journals. Some authors have feared that wider availability will increase plagiarism: in fact, if anything, Open Access serves to reduce plagiarism. When material is freely available the chance that plagiarism is recognised and exposed is that much higher.Hence, OA addresses the problems of high cost of journals, foreign exchange of local currencies and delaying in getting the foreign subscribed journals by taking the results of research that has already been paid for and making it freely available on-line, through repositories and websites. This process can have significant advantages for individual authors, for researchers, for institutions and for the process of research generally by freeing up the process of dissemination. Many funders have recognised that the job of research is only half-done if the results of that research cannot reach the widest audience. Some are formulating policies to require Open Access to their funded research (Adsense Media Services, 2013).

Unfortunately, as good as the open access educational resources may sound to be in the intellectual world, however many scholars are not aware of the enriching impact that the open access of educational resources could made in their publication aspirations. Obuh and Bozimo (2012) stated that awareness of information resources is a pre-requisite to subsequent usage of open access educational resources unless an individual uses it unknowingly. According toDinev, Hu and Goo (2005), awareness raises consciousness and knowledge about a certain technology and its personal and social benefits. This view was supported by their study which established awareness as the central determinant of user attitude and behaviour towards technology. In the open access environment, awareness has also been acknowledged as an important factor determining usage of this mode of scholarly communication(Warlick&Voughan, 2006; Fullard, 2007; Obuh&Bozimo, 2012). Open access concept is still not widely known among researchers from different geographical localities and research disciplines. Some of the studies indicate that open access was an unknown concept to many researchers(Christian, 2008; Greyson et al, 2009). A study by Christian (2008) for example, revealed that while only 3% of 66 respondents at the University of Lagos in Nigeria were aware of the open access concept, 22.7% others knew very little about it and a majority (74%) of the respondents were completely unaware of open access. It should be noted that even where open access awareness is reported, the level of understanding was not uniform for different open access terms.

Consequently, Ivwighreghweta and Onoriode(2012) conclude their paper by advocating that more awareness programmes be put in place to sensitize lecturers and other information seekers on the various benefits derived from the use of open access journals. The authors reiterated that researchers who use open access journals should make effort to sensitize others about it as a way of contributing to the open access movement.Similarly, Obuh and Bozimo (2012) recommended in their study that efforts should be geared towards inculcating the awareness of the concepts, techniques, technologies and benefits of open access in scholarly communities.

However, the following OA websites could be harnessed by scholars in their various research efforts: Access to Global Online Research in Agriculture (AGORA) http://www.aginternetwork.org/; African Journals

On Line (AJOL) http://www.ajol.info/; Bioline International http://www.bioline.org.br/journals; BioMed Central (BMC) http://www.biomedcentral.com/; Chemistry Central http://www.chemistrycentral.com/; Directory of Open Access Journals (DOAJ) http://www.doaj.org/; Free Medical Journals http://www.fj4d.com/; Health InterNetwork Access to Research Initiative http://www.who.int/hinari/; High Wire Press http://highwire.stanford.edu/lists/freeart.dtl; JSTOR http://www.jstor.org/; Online Access to Research in the Environment http://www.oaresciences.org/en/; PhysMath Central http://www.physmathcentral.com/; PubMed http://www.ncbi.nlm.nih.gov/pubmed; SAGE Hindawi http://www.sage hindawi.com/journals; World Bank http://go.worldbank.org/I4MW0I0TZ0; Bookboon.com http://bookboon.com/; eScholarship Editions http://www.escholarship.org/editions/; Free Books http://www.e book.com.au/freebooks.htm; Free Books for Doctors www.freebooks4doctors.com; Free Tech Books www.freetechbooks.com; Google Books http://books.google.com/; The National Academies Press http://www.nap.edu/; The Online Book Page http://onlinebooks.library.upenn.edu/; Open Library http://openlibrary.org/ Project Gutenberg http://promo.net/pg/; Global Legal Information Network (GLIN) http://www.glin.gov/; Questiahttp://www.questia.com and Internet Public Library http://www.ipl.org/(extracted from Yaba College of Technology guide to online resources).

Thus, an open access educational resource (OAER) attracts some number of benefits to its numerous users across the globe. But regrettably, academic and research institutions in Nigeria, including the librarians, are yet totake advantage of the benefits emanating from open access initiative, giving reasons ranging from: "low uptake and lack of knowledge or awareness of open access, poor and inadequate funding, poor state of ICT facilities on campus, lack of advocacy, Inadequate manpower and skilled personnel, space problems among others" (Uzuegbu&McAlbert, 2012: 8). Hence, this paper discusses some enviable benefits that emanate from this educational retrieval system called "Open Access"

## 4. PROSPECTS OF OPEN ACCESS EDUCATIONAL RESOURCES

Researchers and information seekers worldwide could derive the following enviable benefits from the open access of the educational resources:

### 4.1 Unrestrained accessibility of educational resources:

The primary advantage of open access journals is that the entire content is available to users everywhere regardless of affiliation with a subscribing library. Researchers and scholars all over the world have great quest for both primary and secondary data for their research work; OA educational resources is one of the major secondary data that would effectively meet scholars' information needsand also enhance the quality of their intellectual works.Suber (2006) affirmed that open access is the main motivation for most authors in their publication efforts. Researcher citations of articles in a hybrid open access journals has shown that open accessjournals articles are cited and accessed more frequently or than non-open access articles (Antelman, 2004; Anderson, 2013).Okoye and Ejikeme, (2010) noted that with open access, articles can be accessed online free of charge. Information seekers can access intellectual resources at any time and in everywhere without undue resistance from anyone; unlike the traditional/physical library whose accessibility is limited to a particular opening hours and with some conditions attached to admittance into the library building (Adeyanju, Achonna&Yaya, 2012). Therefore, OA provides unrestrained accessibility of educational resources to any information seekers globally at no cost.

### 4.2 Cheaper and cost effective:

With open access (OA) facility being enjoyed by most academic libraries in some developing countries like Nigeria; they can acquire educational resources like e-books and e-journals at cheaper rate than to acquire the original hard copies of these resources from their foreign based publishers. To buttress this assertion, Anderson (2013) decries the high cost of extending access to academics and educational resources in most developing countries throughout the world are both compelling and obvious. For instance in our academic libraries here in Nigeria (Yaba College of Technology and Nigerian Baptist Theological Seminary) the authorities of these institutions spend colossal amount of money to acquire foreign and locally based library collections annually; but with OA facility, these resources are easily and freely accessed and acquired for the academic utilization of their patrons.

### 4.3 Enhances easy publication of intellectual works:

Open access of educational materials helps authors to easily accessed information resources that would enable them to easily publish their research works without unnecessary delays due to inability to access the needed information resources for their intellectual works.Miguel et al (2013) assert that access to information is fundamental for the economic and social growth of a country; hence the Open Access (OA) movement is establishing itself as a model for publishing scientific and academic literature that would help in national economicdevelopment.The authors reiterated that the survey carried out in 2010 as part of the Study of Open Access Publishing (SOAP) project shows that a high

proportion (71%) of Argentine researchers in diverse subject areas are aware of OA journals in their field of expertise, and are in favour of the OA movement, because they believe that it benefits the scientific community.

## 4.4    Global visibility and utilization of research findings:

Through open access, researchers have wider visibility and utilization of their research findings. They have a significant larger and more diverse global audience. It also enhances increased exposure to research and citation rate. Open Access provides an avenue to connect with a global society more easily and researchers can publish without printing costs (Jain, 2013). Unlike local journal articles that are not in open access websites, its intellectual contents are restricted only to those locally based authors and researchers who could afford its subscription rate.

## 4.5    Improves societal intellectual capacity building:

The open access of educational resources helps in building intellectual capacity of diverse populations of the human society such as faculty members, students, authors, library readers and other citizens in the entire human society.  It helps in putting rich and poor on an equal footing; Open Access provides free articles for teaching and learning (Jain, 2012). OA gives authors a worldwide audience larger than that of any subscription-based journal, no matter how prestigious or popular, and demonstrably increases the visibility and impact of their work (Willinsky, 2010; Suber, 2010). Also, library readers around the globe can have barrier free access to the latest literature and research findings equally, society as a whole benefits from an expanded and accelerated research cycle in which research can advance more effectively because researchers have immediate access to all the findings they need (Jain, 2012).

## 4.6    Easy dissemination of information:

The OA enhances easy and immediate dissemination of information to seekers and users of such without delay unlike in non-open access facility where it takes longer period before information would get to the end users. Increasingly Open Access is being embraced in developing countries, such as in Africa as well in Latin America; and in particular Brazil, where much of the national research literature is distributed through Open Access journal services. Two of such resources are Bioline International, a Brazil-Canada initiative that assists publishers in developing countries, and SciELO (Scientific Electronic Library Online) that is a collaboration of publishers in Latin countries (Abdulrasak, 2009; Jain, 2012).

Open Access Journal Systems are now well established in developing countries. For example, Bioline International is a collection of over 70 OA journals published in 17 different countries; a Brazil/Canada non-profit initiative, established 1993. MedKnow Publications – a collection of 59 medical journals published on behalf of societies and associations, mainly in India (Abukutsa-Onyango, 2010). These intellectual publications are easily disseminated to several users without undue delay unlike the traditional method of information dissemination where a user has to personally visit the library for his/her information needs.

# 5.    CHALLENGES OF OPEN ACCESS EDUCATIONAL RESOURCES

The benefits recorded by OAER as discussed in this paper cannot be overemphasized however; the following are some hurdles that affect its overall effectiveness mostly in the developing countries like Nigeria:

## 5.1    Lack of awareness among the intellectual community:

Many scholars and researchers in the intellectual community especially in the citadel of learning are not aware of this important information retrieval facility. They often run short of information resources in their research work; consequently, it takes them longer period to complete any meaningful research in their various disciplines. However, some researchers are not aware of various OA websites when searching for information for their various research works. In fact, many of these people are computer-phobia and stack illiterates when it comes to using and operating Information communication technology (ICT) devices.

## 5.2    Inadequate funding:

 Finance is an essential factor that determines the success of any organization; equipping and maintaining ICT facilities in academic libraries inclusive. Money is needed to procure educational e-databases and resources, hardware,

software, furniture and fittings, to engage experienced manpower in the library and to construct a befitting structure to house the library collections and Information Communication Technology facilities that would make open access resources possible. Unfortunately, there is an acute short supply of fund to implement several laudable library projects in most institutions of higher learning in Nigeria. It could be noted that most public higher institutions are owned and financed by the Federal and State governments. The general perception of most government officials is that library is not a money generating institution; that is, they are not for money organization (Yaya;Achonna&Osisanwo, 2014); they believe that its projects must not be given a top priority. This negative posture had greatly affected the educational system especially the school media services in most Nigerian schools; many beautiful projects and visions are calling for the attention of government in order to make it a reality.

### 5.3 Technical challenges:

These are technical related problems that are militating against the effectiveness of open access resources hardware (equipment) and software in most academic libraries. According to Siracusa (2009) and Doiron (2011), those technical factors include: 1) the size and quality of the screen; 2) resistance to reading on a screen rather than holding a "real book"; 3) the e-reading device itself – too small, scared of breaking it, having to charge the batteries, etc.; and 4) the lack of e-book and open access educational standards both in platform and publishing rules. Others point out issues of e-book piracy (Rivero, 2010; Spring, 2010) and conflicts with open access, propriety rights and copyright (Williams, 2011) collectively referred to as digital rights management (Doiron, 2011).

### 5.4 Inadequate skilled manpower:

The part played by the manpower in any organization cannot be understated; the organization may have a well-furnished buildings, procure modern hardware and software, raw materials or buy current and relevant library materials; but if it lacks skilled manpower all the effort is in futility. According to Ekwueme (2013), skilled manpower is needed for the implementation of all the new technology in the library. This is one of the main challenges in the school media resource center. It is worrisome to note that in most academic libraries, there are no enough qualified librarians to manage the library collections talk less of operating the e-books facilities and accessories. Library is pitifully left in the hands of unqualified personnel who know nothing about the librarianship profession. Ashcroft and Watts (2004) noted that Nigeria has an acute shortage of digital system librarians; information and web technology literate staff in libraries install and manage technology networks. At such, library will not be able to function effectively and realize its stated goals and objectives.

### 5.5 Technological challenges:

These could be seen as related to aforementioned technical factors but has some differences. According to Adeyanju et al (2012), building and sustaining an open access educational collection requires the proper technological infrastructures. These infrastructures include telecommunication, servers, and application platforms with its software applications. Telecommunication infrastructure is a major factor in the deployment of Information Communication Technology (ICT), particularly for the implementation of an e-book library collection. Interestingly, Nigeria has recorded a massive improvement in the telecommunication industry over the past few years; especially with the full commercialization policy of the Federal government in that sector. The Nigerian Communications Commission's regulatory efforts have led to the proliferation of Internet cafes in all parts of the country especially in the citadel of learning; and this has also made a significant impact in all sectors such as:, commerce, social and educational research output (Adeyanju et al, 2012).

## 6. CONCLUSION AND RECOMMENDATIONS

In conclusion, e-learning which is an offshoot of open access educational resources could serve the purpose of being utilized as an alternative to conventional mode of instructions especially in university institutions in Nigeria (Yonlonfoun, 2011). It could also be used to supplement or complement the quantity of traditional library resources made available to support teaching, learning and research activities in most Nigerian institutions of higher learning. The flexibility and accessibility of open access educational collections with time and geographical location worldwide can aid lead to positive exploitation of individual differences with learning and greater research output of students and researchers in mostinstitutions of higher learning in Nigeria. The recent development and awareness of the government on ICT have opened an opportunity to adopt open access educational resources to actively deliver distance learning education for educating large number of general populace in the Nigerian society.

Hence, the following aspects are profferedas remedies to some of thoseaforementioned challenges militating against OAERin attaining its desired objectives:

✓ The current educational reforms going on should aim at given e-learning a place in the educational policy of Nigeria. Government should subsidize the cost of personal computers so that it can be easily affordable by average Nigerian

citizenry. It can be noted that Nigeria is one of the low income developing countries in Africa although the previous Federal civilian administration of President Goodluck Jonathan claimed that she has the highest/largest economy in Africa; but Nigeria is a country where the cost of computer and internet facilities is very high compared to the income and poverty ratio of the general populace.

✓ Political factors. Government should depoliticize the educational systemand give education experts free hand to objectively run the affair of education in the country. That is, educational matters should be separated from the political wrangling visible among civilian administrators in the land. School developmental projects such as e-books and full library digitization should be actively supported by the government of the day in spite of their political inclination.

✓ Technical factors. The library authorities while planning to purchase those OAER hard wares and facilities, they should go for those ones that have lesser hazard effect on the health condition of its library personnel.

✓ Inadequate skilled manpower. Library management should engage the services of personnel who are skilful in the ICT and its accessories in order to sustain the effectiveness of OAER in the library operations. Also, the unskilled staff should be sent to attend seminars and workshops where they will be exposed to some practical courses in ICT; thereby enhance their mental capabilities to manage the e-book collections in the absent of ICT experts.

✓ Finally, technological challenges. Even though the Federal government had recorded great success in the telecommunication sector; yet, there is still much to be done in this regard; more telecommunication companies especially those who are interested in the educational development should be licensed to commence operations in the country. The already established ones should drastically reduce their internet connectivity charges so as to enable more schools to get connected to the telecommunication facilities.

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