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Open Access Movement: Reception And Acceptance By Academic Libraries In Developing Countries

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OPEN ACCESS MOVEMENT: RECEPTION AND ACCEPTANCE BY ACADEMIC LIBRARIES IN DEVELOPING COUNTRIES

ABSTRACT

The open access movement in its diverse forms constitutes the most interesting and promising model for the research output of an academic library or university. Even though the growth of OA presents some challenging hurdles to academic libraries, there are a number of notable benefits that are good enough to boost this movement. OA has come for good and is rapidly gaining impetus with an increasing number of academic institutions accepting and adopting open access policies and mandates for their research, publishing and dissemination. The purpose of this study is to discuss the situation of open access in academic libraries in developing countries with focus on academic libraries in Cameroon. This article explains the concept of Open Access (OA) by providing its meaning and definition. It throws light on the emergence and development of the Open Access movement, Open Access initiatives, and various OA declarations in the world. It describes different types of OA and the steady progress and increase of journals in the Directory of Open Access Journals (DOAJ). The advantages of OA, its impact on scholarly community in Cameroon have been examined. Finally an overview of OA initiatives in Cameroon is explored.

KEY WORDS: Open access; academic libraries; Open access initiatives in Cameroon, types of open access; benefits of open access; Cameroon.

INTRODUCTION

Academic libraries today are in a transitional phase. Information and Communication Technologies (ICTs) has greatly impacted academic library services and practices. Library users today request information in various formats from various sources. They are highly specific in their needs and are aware of various alternative sources of information. The immediate consequence of this is that libraries and librarians are tapping all opportunities to satisfy their users.

Research is very important in an academic setting like a university. Current and updated information is very essential to research. Hence scholars and researchers depend on scholarly

journals to meet their information requirements. Academic libraries are information providers constantly searching for, and subscribing to journals in numerous disciplines in accordance with the objectives of their institution. But with the increasing tremendous growth of specialization in various disciplines, the number of journals to be subscribed keeps increasing. The prohibitive factor for the academic library is the escalating cost of scholarly journals, inadequate infrastructure and stringent library budget. This has led to a phenomenon called "scholarly crisis" where libraries have to meet the users growing demands of both print and electronic scholarly publications whose prices are shooting up, and very often outpace the growth of library budgets which are disappearing. As subscription costs for commercial online resources escalate, academic libraries in developing countries are looking to the internet for relevant and reliable open access alternatives to supplement library collections, and they are finding them by their thousands. OA movement which was once perceived as an alternative to traditional models of scholarly publishing, is perceived today as a booster to both the academic scholars, libraries, library managers and universities (Nosakhere & Abdelwahid, 2014).

OPEN ACCESS OF SCHOLARLY LITERATURE: DEFINITION AND MEANING.

Open Access (OA)" is a broad term used for all knowledge resources which are made available to the public for access and open consumption at a wide scale, without any hindrances or subscription fee or access charges" (Swan, 2012). The definition of open access can be seen in three very influential public statements: The Budapest Open Access Initiative (February 2002), the Bethesda Statement on Open Access Publishing (June 2003), and the Berlin Declaration on Open Access to Knowledge in the Science and Humanities (October 2003), commonly referred to as the BBB (3Bs) definition of Open Access. All 3Bs agree on the rudiments of OA scholarly publishing. Even though somewhat divergent, these statements essentially indicate that OA allows its users to read, download, copy, print, search, distribute, or link to the full text of works, permitting the use for any legitimate purpose, as long as access to the material is possible through the internet". Open Access is not applicable to content for which authors are expecting financial compensation. It functions within the current copyright law by permitting authors to either transfer rights to publishers who tolerate free access to their work, or retain the right to post their papers on institutional servers (open archiving).

Open Access is free, immediate, permanent online access to the full text of research articles for anyone, worldwide. It is principally envisaged for scholarly journal articles, but is also

provided for the increasing and available number of theses, and scholarly monographs. Unlike articles that are licensed in most conventional databases, academic libraries can create their own local digital copies build institutional repositories of their resources. Academic libraries by working in synergy to build repositories of OA literature in their institutions can ensure sustained open access to scholarly publications into the distant future by an extensive audience. Generally, open access publications are those which are freely made available online anywhere, to anyone, without access charges imposed.

(Budapest Open Access Initiative, 2002), describes OA to literature as "it's the free availability on the public internet permitting users to read, download, copy, distribute, print, search, or link to the full text of these articles, crawl them for indexing, pass them as data to software, or use them for indexing, pass them as data to software, or use them for any other lawful purpose, without financial, legal or technical barriers other than those inseparable from gaining access to the internet itself". It states that "the only constraint on reproducing and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited". http://www.budapestopenaccessinitiative.org/read

(The Bethesda Declaration, 2003) defines: Open Access, where "The authors(s) and copyright holders(s) grant(s) to all users a free, irrevocable, worldwide, perpetual right of access to, and a license to copy, use, distribute , transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship as sell as the right to make small numbers of printed copies for their personal use". (The Bethesda Declaration, 2003) further states that "establishing open access as a valuable process necessitates dynamism and commitment of every producer of scientific knowledge and holder of cultural heritage. Contributions to Open Access include original results from scientific research, raw data and metadata, source materials, digital representations of pictorial and graphical materials and scholarly multimedia material".

Open Access as defined by (Harnad, 2007) is "Information, which is free, immediate, permanent, full-text, online and accessible," He suggests three main justifications of OA; "to maximize the uptake, usage, applications and impact of the research output of your university; to maximize the uptake, usage, applications and impact of the research output of your university (research metrics) and, to collect, manage and showcase a permanent record of the research output and impact of your university".

Open access literature is described by (Suber, 2011) as, "digital, online, free of charge, and free of most copyright and licensing restrictions". Suber specifies that OA contents are not limited only to peer-reviewed research articles; they can be in any formats from texts of data to software audio, video and multi – media. While the open access movement is focused on peer reviewed research articles and their preprints, OA applies only to non-scholarly content, like movies and novels, and music even if these are not the priorities of most open access activists.

EMERGENCE AND DEVELOPMENT OF OPEN ACCESS

The emergence and development of OA can be described as "An old tradition and a new technology which have converged to make possible an unprecedented public good" (Chan et al., 2002). The open access movement started in the 1990's when access to the World Wide Web became extensively available and online publishing became the standard. According to (Jain, 2012), the "Open Access movement increased impetus in 1994 when Stevan Harnad set fire in the academic and publishing world through the Subversive Proposal, which called authors to deposit their work on internet File Transfer Protocol (FTP) servers". The OA movement however, began as a response to address the problem of increasing costs of scholarly and scientific journals, which had made their access restrictive.

The Open Access movement started formally through the Budapest Open Access Initiative in 2001. The leading motivations for Open Access initiatives were: subscriptions rates which were high and difficult to afford, large price difference between institutional subscription rates and that of individuals. Several countries, organizations, institutions and foundations grouped themselves to support and recognize Open Access. A report from (UNESCO, 2015) presents a list of some of the OA initiatives that make up the emergence, history and evolution of OA:-

- ➢ Budapest Open Access Initiative, February 2002
- ➢ Bethesda Statement, April 2003
- ➢ Berlin Declaration, October 2003 & May 2004, February 2005, March 2006.
- ➢ Welcome Trust, October 2003, May 2005, 2006.
- ➢ UK Parliamentary inquiry, 2004.
- ➢ US House Appropriations Committee, July 2004
- ➢ Research Councils UK, 2006
- ➢ Academy of Science of South Africa, 2006

- ➢ US Public Access to Federally Funded Research Act of 2006.
- ➢ Ukrainian Law 2007.
- ➢ Bill & Belinda Gates Foundation

(**Budapest Open Access Initiative, 2002**), a few groups joined the BOAI to propagate OA in the BOAI in 2001, where the term "open access" was coined and the two approaches of Green Open Access (self-archiving) and Gold Open Access (open access publishing) were devised (Poynder, 2011). The golden road of open access publishing refers to journals which provide open access to their articles by changing (either the author's institution for publishing outgoing articles instead of changing the user's institution for accessing incoming articles; or by making their online edition free). 'Green road' of open access means self-archiving, that is, where authors provide open access to their own published articles, by making their own e-prints free for all. (Harnad, 2007).

(**The Bethesda Declaration, 2003**) has described Open Access publishing and has continued to promote a gradual transition to open access publishing within the scientific community. It states that "open access will be an essential component of scientific publishing in the future and that works reporting the results of current scientific research should be as openly accessible and freely accessible as possible. Publishers and libraries should make all necessary effort to accelerate this transition in a manner that will not disrupt the systematic dissemination of scientific information". (Bethesda Statement on Open Access Publishing, 2003).

(**The Berlín Declaration, 2003**) The Berlin Declaration of 2003 lays emphasizes on Open Access to Knowledge stating that "Our mission of disseminating knowledge is only half complete if the information is not readily available and widely made open to society. New opportunities for knowledge dissemination should be made not only through the standard form but also through the new open access paradigm". Another significant endeavour shaping the open access initiative is the International Federation of Library Associations and Institutions (IFLA) Statement on Open Access to Scholarly Literature and Research Documentation.

The Brazil Salvador Declaration (Declaration, 2005). In 2005, Brazil announced the Declaration on Open Access at the Ninth World Congress on Health and Information Libraries and insisted that governments should make open access a priority and appealed to all international stakeholders to work in synergy to make scientific information open and freely

accessible to everyone (Declaration, 2005). Thus open access movement has its impetus from diverse international organizations.

TYPES OF OPEN ACCESS

The Budapest, Bethesda and the Berlin declarations of open access recommend two complementary approaches and types of open access. Self-archiving (Green OA) and the open access journal (Gold OA)

(Burtle, 2017) proposes three main types of open access: Green, Gold, and Hybrid.

Green OA or *Green Route*, also referred to as self-archiving. The researcher or author deposits a copy of her/his research article (post-print or pre-print) in an open access repository, thereby making the article freely available in the repository. In the green route open access, the author can self-archive at the time of submitting the publication, whether the publication is grey literature, a peer-reviewed conference proceedings paper, a peer-reviewed journal publication, or a monograph. Green route OA is not itself publishing, it makes publications available and free in parallel with any publication systems,

Gold OA or *Gold route*. They are academic articles in an open access journal. Gold route refers to journals in which all articles and content are open access – available to anyone on the internet without any subscription fees. Here the author or author's institution can pay a fee to the publisher at publication time. The publisher will thereafter makes the material available and free at the point of access (which is the gold route). These two are not, of course, incompatible and can co-exist.

Both the green and gold routes to Open Access refer to two different ways in which readers can access journal articles free of charge. The green/gold distinction is about venues or delivery vehicles, not user rights or degrees of openness (Suber, 2011). All of the main definitions used in the OA movement, such as the Budapest Open Initiative and the Bethesda Statement on Open Access Publishing, concerns and covers both the issue of access and of re-use of the material included in the articles:

The Hybrid route is sometimes called Paid Open Access This refers to subscription journals with OA to individual articles usually when a fee is paid by the author to the journal, the publisher, the author's organization, or the research funder. Some libraries and universities

have available funding for hybrid journal publications; sometimes funding is inscribed in their applications for OA grants in hybrid journals. Some examples of hybrid OA include: - iOpenAccess by Taylor Francis, Online Open by Wiley, or Sage Open by Sage.

New expressions like Toll access and the terms '*gratis*' Open Access and '*libre*' Open Access have been coined by (Suber, 2012) to describe different types of user-rights and permissions in open access. Toll access refers to either work that is not open access, or work that is available only for a price. In 'gratis' Open Access, price barrier is removed but permission is limited to reading the article and any further re-use of the article is not allowed. 'Libre' Open Access, on the other hand, provides limited permission barriers for the re-use of the article.

ACADEMIC LIBRARIES AND OPEN ACCESS INITIATIVES (OAI)

Academic libraries are leading the Open Access (OA) initiative, determined to control and succeed to manage the serial crisis. Shifting from the conventional mode of scholarly communication to open access is a symbolic and revolutionary move (Joshi et al., 2012).
Due to stagnant and dwindling budges, inflation, and the high cost of journals and books, academic libraries are incapable to fulfil their parent institutions' information and research needs fully and they keep on evolving to provide customer-focused services. Open access is becoming very popular and it is the most popular and most recent initiative to support research activities in institutions by providing information at very low cost and time, effectively in the right format, at the right time (Jain, 2012). In case of Academic libraries where the main mandate is to support teaching, learning, research and training, open access has been a great booster to scholarly creations, productions, publications, distribution and usage.
Open Access repositories is one of the major initiatives of the movement. OA repositories from around the world can be found using the OpenDOAR service. At present (fig 1), the Directory of Open Access Repositories (DOAR) has over 3519 listings around the world.
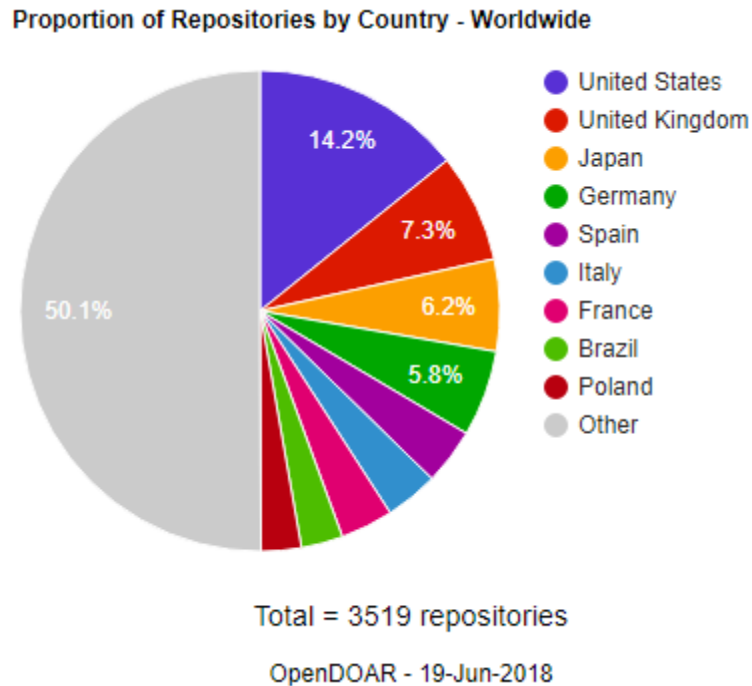
Proportion of Repositories by Country - Worldwide

Total = 3519 repositories

OpenDOAR - 19-Jun-2018

Figure 1. Proportion of Repositories by country. Figure 1 displays the proportion of repositories by country worldwide.

An attempt has been made (figure 1) to highlight the growth of repositories by country worldwide, in one of the OA initiatives, the DOAR. According to figure 1- Directory of Open Access Repositories (DOAR) statistics, there are a total of 3,519 OA repositories in the world, and the top ten countries contributing the highest number of repositories as of June 2018 are: The United States contributing 501 repositories (14.2%), the United Kingdom 257 repositories (7.3%), Japan 217 repositories (6.2%), Germany 204 repositories (5.8%), Spain 133 repositories (3.8%), Italy 126 repositories (3.6%), France 125 (3.6%), Brazil 99 repositories (2.8%), Poland 95 repositories (2.7%).

Figure 2 below shows the Directory of Open Access Repositories (DOAR) statistics, indicating world repositories distributed by continent.
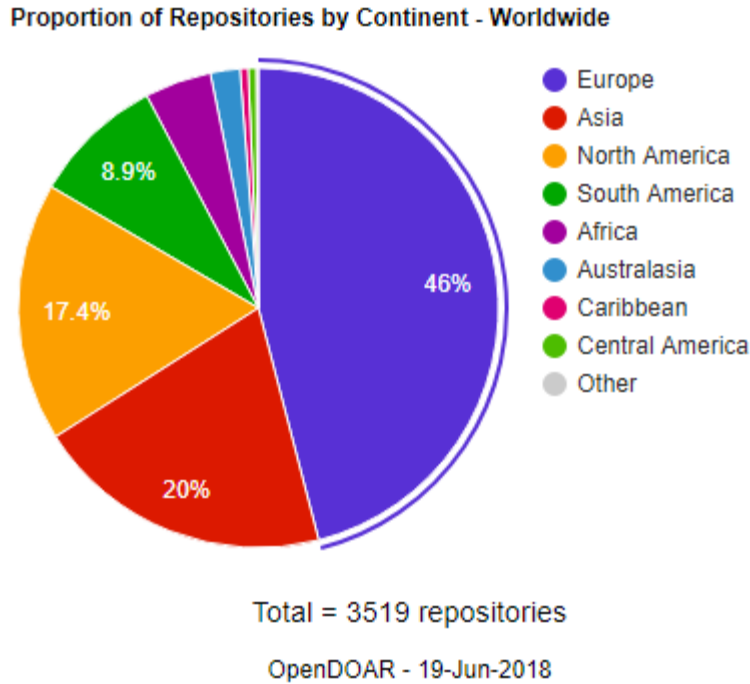
Proportion of Repositories by Continent - Worldwide

- Europe
- Asia
- North America
- South America
- Africa
- Australasia
- Caribbean
- Central America
- Other

46%

20%

17.4%

8.9%

Total = 3519 repositories

OpenDOAR - 19-Jun-2018

Figure 2 Proportion of Repositories by Continent

According to figure 2 - Directory of Open Access Repositories (DOAR) statistics, indicates repositories distributed by continent, of which 1,617 (46%) belong to Europe, 705 belong to Asia (20%), 614 to North America (17.4%), 312 to South America (8.9%), and 158 (4.5%) to Africa with one to Cameroon. The total number of OA repositories continue to rise significantly even though slowly in Africa. According to the growth chart of DOAR, the total number of repositories has increased from 2,618 repositories in 2013 to 3,519 repositories in June 2018.

(DOAJ, 2018) The Directory of Open Access Journals (DAOJ) is an online directory that provides access to high quality OA peer-reviewed journals. It is the leading OA research initiative where a great number of journals are available online. Countries across the world are contributing journals content to OA in DOAJ. The Directory of Open Access Journals (DOAJ), has enlisted more than 11,408 OA journals from 126 countries in different disciplines, with more than 3,063,581 articles on May 14 2018. By nature, these journals are digital, online, free of charge, and free of most copyright and licensing restrictions.

A study on the major contributors to DAOJ was made (Table 1). Countries contributing the highest number of journals in 14 May 2018 were selected, these formed the top 10 list.

Country	# of journals

United Kingdom	1343
Indonesia	1309
Brazil	1248
United States	617
Spain	613
Poland	514
Iran	380
Romania	308
Italy	308
Colombia	294
Others	4476

(Table 1, top 10 contributors to DOAJ in May 2018)

Table 1 shows the top ten countries contributing to journals in DOAJ, 14 May 2018. These countries have contributed more than 250 journals each. There is no African country among these top ten. Cameroon ranks at the bottom position with one journal which shows that the perception and acceptance of OA concept among Cameroonian authors and academics is still very low. However, the growth of OA journals indicated in DOAJ is a positive trend in the field of OA.

DOAJ has contributions from various parts of the world with a total of 11,408 journals available through it. New journals are being added to it every day. The pie chart below shows the contribution of those countries who have registered more than 250 journals in DOAJ in May 2018.

Countrywise distribution of journals in DOAJ 14 May 2018
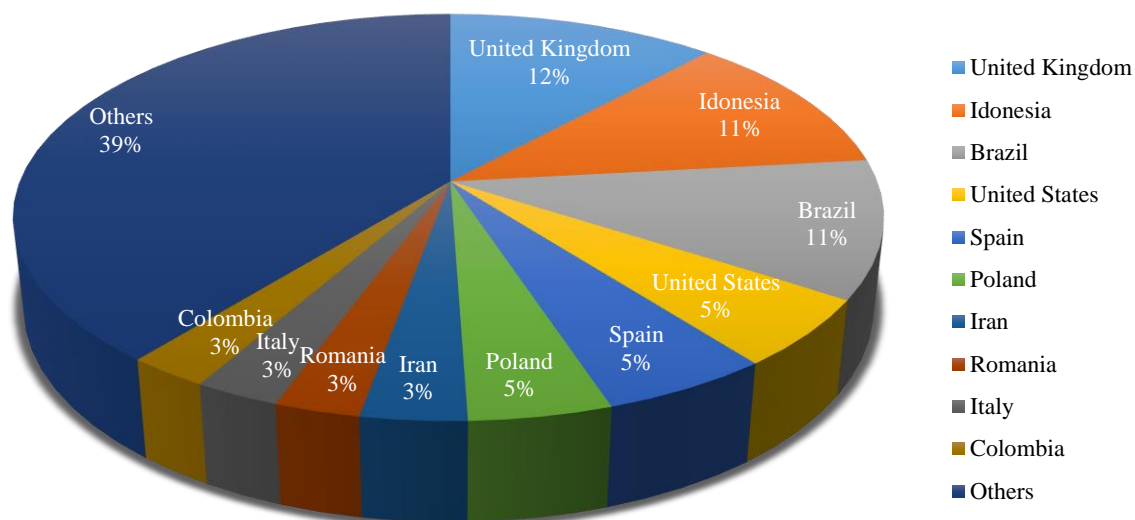
The United Kingdom has the highest contributions with 1343 (12%) journals followed by Indonesia with 1309 (11%), Brazil with 1248 (11%), United States with 617 (5%), Spain with 613 (5%), Poland with 514 (5%), Iran with 380 (3%), Romania with 308 (3%), Italy with 308 (3%), Colombia with 294 (3%) and others 6934 (39%).

The graph clearly shows that the United Kingdom (UK) has contributed the greatest share of 1343 journals. The United Kingdom being one of the most developed countries, is the major contributor of the DOAJ. Its scientific research receives the highest thrust. This a clear indication that OA has been taken up as a major vehicle for communicating research results in the UK. Interestingly, the United States which had the highest number of journals in 2013 now ranks fourth. There are many more countries contributing to DOAJ, the details of which can be got from www.doaj.org.

The Directory of open access Books (DOAB) is another OA initiative to provide metadata of OA books, to increase discoverability of OA books. www.doab.org

WorldWideScience in an OA initiative which enables you to search across a number of national scientific databases and portals. It can be assessed in http://worldwidescience.org

OPEN ACCESS INITIATIVES IN CAMEROON

Cameroon is located in Central Africa. It has a population of about 22 million inhabitants, eight public universities, more than 100 private institutions of higher education and about 700 laboratories. Students and faculty are involved in research intense projects.

Ten years ago, Open Access was not well known in Cameroon but today, the paradigm shift in scholarly publications and access has made open access movement unavoidable. Librarians have become great advocates of the concept of Open Access and work hard for its promotion by sensitization of researchers, publishers and policy makers.

The ministry of Higher Education and the university authorities in Cameroon are supporting the Open Access movement. The Inter-University Centre for Information Resources (IDRC) and the Inter-University Centre for Information Technology (CUTI) are two separate facilities that have been created by the ministry of Higher Education to facilitate and promote the sharing of documentary and online resources between Cameroonian universities to support scientific research activities. These services assist and encourage university libraries to digitize theses and publications and make them available for researchers, students and general public.

The ministry of Higher Education in Cameroon supports the creation and sustainability of open access journals. An example, the "Journal of the Cameroon Academy of Science" was created in 1990 with the goal of promoting the progress of science and technology for the economic, social and cultural development of Cameroon, and has as objective to promote research and technology.

Researchers from Cameroon publish articles in Open Access journals. For example, as of April 2018, 2,799 articles by Cameroonian authors have been published with BioMed Central (BMC) – an STM (Science, Technology and Medicine) publisher which has pioneered the Open Access publishing model. Among them are highly accessed (most viewed) articles published by researchers from Banso Baptist Hospital, Bonassama Hospital, Care International in Cameroon, Cameroon Psychology Forum, Fondation Chantal Biya, CNPS Hospital, Centre Pasteur du Cameroun, Douala General Hospital, Holy Trinity Foundation Hospital, Institut National de Cartographie, Institute de Recherche pour le Développement, Institute of Medicinal Plants Studies, Organisation de Coordination pour la lutte contre les Endémies en Afrique Centrale, Protestant Hospital, Research Foundation for Tropical Diseases and the Environment, St. Mary Soledad Catholic Hospital, Tropical Medicine Research Station, University of Buea, University of Douala, University of Dschang, University of Ngaoundere,

University of Yaoundé I, University Hospital Center and Virology Laboratory CRESAR/IMPM/IR.

174 articles from Cameroonian authors have been published in Public Library of Science (PLoS) International Open Access Journals: PLoS Bilogy, PLoS Medicine, PLoS Genetics, PLoS Computational Biology, PLoS Neglected Tropical Diseases, PLoS Pathogens, and PLoS Currents.

The ("African Journals Online (AJOL),") is the world's largest online library of peer-reviewed, African-published scholarly journals. As of April 10, 2018, AJOL hosts 521 journals including 245 Open Access journals, with 150.339 full Text Articles for download of which 93,159 are open access. Cameroon has eight journals featuring in African Journal Online (AJOL), four of which are Open Access Journals. The four open access journals are: African Anthropologist, Clinics in Mother and Child Health, International Journal of Biological and Chemical Sciences and, Journal of the Cameroon Academy of Sciences.

As of June 2015, there is one open access journal published in Cameroon which is indexed in the DOAJ. In addition, one other journal has been added to ROAD in 2015 titled Cameroon Journal of Studies in the Commonwealth.

OMICS International is an Open Access publisher and international conference organizer, which owns and operates more than 700 peer-reviewed journals and hosts above 3000 scholarly conferences per year in diverse fields.There are currently 88 open access articles and 85 conference proceedings from Cameroon which are indexed in the OMICS database as of April 2018. Four institutions from Cameroon are represented in OMICS. They are Cameroon Christian University, Catholic University of Cameroon, Centre Pasteur of Cameroon, and University of Ngaoundere. OMICS Group International was established in 2007 and aims to make the research information on Sciences and Technology "Open Access" to all through a platform. It integrates open access publications and international science events for the benefit of the global scientific community. The group OMICS organizes more than 3000 International Conferences annually in the world, during which knowledge transfer takes place through round table discussions, debates, workshops, poster presentations, symposia and exhibitions, getting support from more than 1,000 scientific societies. It publishes more than 700 open access journals which contain over 50.000 eminent personalities, reputed scientists as editorial board members. https://www.omicsonline.org/

There is currently one open access repository created in Cameroon (Eprint-campuce) and listed in the Directory of Open Access Repositories (OpenDOAR). It is a great initiative from the private sector and the only digital repository created in Cameroon that is listed by OpenDOAR. The repository interface is available in English, French and German and provides research output of academics based in African countries. In October 2012, during the open access week, CamPuce launched 'MarouCamp 2012' and informed participants about open access opportunities.

The Consortium of Cameroon Universities and Research Libraries (COCUREL) works in partnership with the International Network for the Availability of Scientific Publications (INASP), the national library association (ABADCAM), national and international institutions (Ministry of Higher Education, Public and private universities, publishing houses, cultural centres, embassies) and had received assistance from Electronic Information for Library (EIFL) to promote Open Access in Cameroon.

In 2011 COCUREL organized a national seminar on Digital libraries using Invenio software (Free Open Source Software or document software that was originally developed by CERN) for building digital libraries.

In 2014, the first Open Access Week was celebrated in Cameroon on the theme "Generation open". It was organised by COCUREL in partnership with the Ministry of Higher Education, the Advanced School of Mass Communication (ASMAC), the Training Institute of Research and Demography (IFORD) and the University of Yaounde I. During this international week, an open ceremony, a study day and two workshops were organised. At the end of the workshop, a project related to the preparation and adoption of a national Open Access policy in Cameroon was initiated.

In 2015 the second edition of Open Access Week was celebrated under the theme "Open for collaboration" in partnership with the University of Yaounde I, Goethe Institute of Yaounde and the NGO IT KOLA. During this week, an opening ceremony, a study day and two workshops were organised. Researchers, Librarians, Lecturers, students, editors and policy makers took part in these activities.

In 2016 students of the department of Library and Information Science from the Advanced School of Mass Communication (ASMAC) organised a conference during Open Access Week with the support of the Administration of the institution. This conference brought together graduates, undergraduates and post graduate students of ASMAC, including lecturers,

researchers and library professionals from then main library of the University of Yaounde I. A lot of sensitization on types and benefits of open access was done. Links to open access resources, including demonstrations of how to access open access and exploit journals was made.

In December 2017, the faculty of Letters and Social Sciences of the University of Yaounde I, under the patronage of the dean of the faculty, organized a two day conference on OpenCon. The theme was "The challenges of scientific research in Cameroon in the age of ICT: reflection on the OPEN perspective". Focus was on examining ways to make faculty's scientific publications open and accessible.

IMPACT OF OPEN ACCESS ON ACADEMIC LIBRARIES

Open Access has recorded tremendous impact on academic libraries. The most remarkable impact of OA on libraries is the increased access to scholarly resources without affecting their budgets. As a result, the research output of the institutions have increased and the value of the institution improved.

Academic libraries can now go about their activities to publish scholarly material in many ways, among which are developing and managing their institutional repositories and electronic journals. Institutional repositories present a single point of access search and organisation of scholarly materials within the institution.

A significant and revolutionary move which has impacted the academic library from an economic perspective is the paradigm shift from the traditional model of scholarly communication to OA model. Evidently, there is increased access to open access scholarly material irrespective of insufficient and decreasing library budgets. The shift towards OA will likely reduce library budgets in several institutions and countries. Subscriptions have reduced and sometimes cancelled. As a result, academic libraries particularly in developing countries, are searching for alternative means to access OA resources.

The OA movement has altered collection management processes and made it more complicated especially for academic libraries. Access point of electronic resources has changed and should be determined by librarians since patrons cannot use resources which they cannot find. Librarians now need to liaise with colleagues of other institutions and other scholars of their institutions to share best practices and lessons learned. There has also been a remarkable

increase in consortia to better negotiate and manage costs in licences. Licensing content across consortia will be needed to share resources. Consortia will benefit from negotiated paid licenses from International Non-Governmental Organizations (NGOs).

OA movement has attracted several International NGOs like the International Network for the Availability of Scientific Publications (INASP), and Electronic Information for Libraries (EIFL) just to name a few. These NGOs are visibly providing support to academic libraries in developing countries particularly in Africa by negotiating with publishers for reduced subscription rates and sometimes substituting high costs to ensure academic libraries can access open access journals.

To Libraries and librarians: Academic libraries with reduced budgets or without budgets can still satisfy their user needs unlike before OA. This is because scholarly communication has changed from publishing model where readers pay for access to one where authors either decide to pay for publications or self-archive their publications in repositories. Libraries which want their own open access journals or build their IRs will face technology problems.

The impact of open access is mostly felt on academic libraries because of the close relationship they have with university faculties. The faculties are the ones who contribute the most to scholarly journals and who have strong needs for access to these journals. OA has reduced the proximity academic libraries have to the world of scholarly communication.

The impact of OA on universities is the immediate increase in the visibility of research outputs from faculties, reduced costs for journals and advances in their mission to share knowledge.

Impact on Publishers: The very high prices of academic journals which eroded academic libraries buying power has reduced and in some cases no longer exist. There is a significant drop in purchase, consequently a drop in revenue. So the revenue of publishers who have enjoyed the role as champions of academic scientific editions in the world will gradually diminish.

Impact on researchers: Works of authors who publish on open access are more visible in the international scene, thereby bridging the gap of digital divide and institutional repositories. OA has provided a platform for researchers in the global economy to gain access to African scholarly journals which hitherto have made little impact in the international scene. This means that researchers have immediate, online, free access to research results from all over the world.

OPEN ACCESS BENEFTITS TO ACADEMIC LIBRARIES

Open access serves the interest of many groups including academic libraries. The three Bs open access statements and associated literature have provided major benefits of OA as follows:

The primary benefit to Universities and academic libraries is the solution to crisis in the cost of journals. It provides removal of access barriers to scholarly research, as there is no cost associated with subscription or online access.

Libraries can give their users access to barrier-free access to the literature they need for their research, unconstrained by the library's budget. Readers reach and retrieval power of library patrons is increased.

There is no access restriction to open access model, leading to bridging knowledge divides between developed and developing countries - the global North and South.

Academic libraries will give a huge sigh of relief to their collection budgets as publishers adopt supplementary business models that change the cost of subscription from institutional subscribers to a system where fees is paid by the author's institution, the funding agency supporting the work or the author.

The collection of online literature is vast and free to satisfy research needs of faculty making libraries realise on of their objectives.

Universities benefit from increased visibility of their scholarly research output giving them global presence. Contents are outreached globally, accessed and appreciated by global communities.

Universities expenses for journals will reduce, and their mission to promote and share knowledge will be enhanced.

OA works benefit from increased citations. Contents offer a window for receiving constructive feedbacks, comments, opinions and critical reflections.

OA gives room for increased collaboration at both institutional levels and individual level.

According to (Swan, 2012) OA "increases research output, facilitate interdisciplinary research, contribute to a better management and assessment of research and allow the generation of new knowledge from existing research findings, through ICT enabled data and text mining".

Authors benefit from increased global visibility, increased accessibility, citation, and increased article level metrics. Studies have proven that research made available on OA is cited more than research in non OA journals. An element of benefit here is rapid knowledge transfer from research institutions to industry. This makes research literature easily available to the commercial sector.

(Willinsky, 2009)W, (Suber, 2011). Benefits to nations, "open access integrates local research into all interoperable networks of global knowledge; increases impact of local research, providing new contacts and research partnerships for authors; removes professional isolation and strengthens economies through developing a strong and independent national science base". Research is accessible at no cost, without access restrictions for readers around the world, especially those in economically underprivileged areas where access to research was difficult (Antelman, 2004).

CHARACTERISTICS OF OPEN ACCESS.

(Walters & Linvill, 2011) describes the characteristics of Open Access as "Information which is free, immediate, permanent, full-text, online and available". According to Walters, there are three main justifications of Open Access: "to maximize the uptake, usage, applications and impact of the research output of your university; to measure and reward the uptake, usage, applications and impact of the research output of your university (research metrics); and, to collect, manage and showcase a permanent record of the research output and impact of your university".

(Joshi, Vatnal, & Manjunath, 2012) summarizes some of the characteristics of open access as:

- It is free availability of scholarly publications
- It is free of copyright and licensing restriction.
- Materials are available online or on the internet
- Efficient archiving and availability
- Metadata can be harvested
- Guaranteed sustainable storage and accessibility
- Provision to link publication to any research dataset used in producing the paper
- Material can be accessed by anybody from anywhere without any discrimination

- The contents of Open Access can be in any format from texts to data to software, audio video and multi-media scholarly articles and their pre-prints.

Open Access journals perform peer review like their conventional counterparts and then make approved contents freely available to the world.

CHALLENGES OF OPEN ACCESS IN ACADEMIC LIBRARIES IN CAMEROON

The OA initiative has emerged as a booster to combat serial crisis in academic libraries, Although Open Access gains support and a boost with the support of librarians, funding agencies, institutions, academics, and other International NGO's, like IFLA, EIFL and INASP, today many challenges have been identified that remain financial, cultural, political, and technological.

One of the major challenges of Open Access is inadequate budgets of academic libraries. Many activities that can boost Open Access will need financial resources for their launching. The creation of an institutional repository, an Open Access journal or a digital library cannot be supported by the budget of academic libraries, especially in developing countries. It requires funding from external institutions. Academic libraries are not enthusiastic about establishing Institutional Repositories because funding is absent to acquire infrastructure and state of the art technology. The organization of activities like conferences, workshops, study days, seminars and a host of other OA related activities to create awareness and engage stakeholders to require sufficient financial resources.

The second challenge of Open Access is cultural. According to Dr. Ernesto Priego, lecturer in Library Science in the City University of London, culture is the biggest challenge of Open Access: Open Access has to bridge the gap between academics' hunger for quality reputation and positive assessment and distribution model. Researchers and scholars in parts of Africa especially developing countries need to change their minds set about publishing in OA and making their work accessible. They should adopt the culture of sharing knowledge. The cultural characteristics of authors in Cameroon is not favourable to the Open Access movement. A lot of sensitization of all stakeholders need to be done. OA is new to conventional library services. Librarians need to redefine their role, in order to better apply research and instruction expertise to facilitate and instruct library users in accessing and evaluating quality articles. Librarians involved in collection development will face the challenge to keep track of OA resources, given the exponential rate at which of OA resources are produced and made available out there.

Challenging issues like privacy, copyright, censorship and user anonymity is needed for an OA policy.

Open Access movement faces a lot of technological challenges. The absence of inadequate technology and lack of state of the art ICT infrastructure to build and manage sustainable institutional repositories that will enable free access to research and publishing are major technological challenges. Poor internet penetration and connectivity, unstable electricity supply, low bandwidth for access to, and download of resources are some major challenge in academic libraries in developing countries especially in Cameroon. The promotion of Open Access implies access to internet by researchers, librarians and publishers. But this is not the case in some African countries. (Christopher, 2015) indicates that "the percentage of access to internet in 28 African francophone countries is less than 10%. In 2015, only 15% of Africans had access to internet. This shows that the number of persons who have access to internet has increased by at least 14%. In 2015 penetration rate in Africa stood at 27.5% which is also the lowest in the world." The reasons of this could be the absence of policy of computerisation of libraries, access to electricity in some zones, and high internet costs.

The change of the economic model of journals from paper to electronic is a challenge to most academic libraries. There is an urgent need for previous paper print journals to be digitized, and the skills, finance, equipment and infrastructure needed for these are absent.

The absence of institutional repositories in academic libraries in Cameroon is a disturbing challenge which calls for urgent solutions. Building, updating and managing sustainable Institutional Repositories implies state of the art technology, training of librarians involved in the project, computerisation of library resources, acquisition and mastery of appropriate software that has been chosen, the procedure of creation, a budget and infrastructure. The institution that creates a repository has to ensure its sustainability. Financing and competence are needed to insure all of these. Presently none of the academic libraries among eight state universities in Cameroon has an institutional repository. The University of Buea library is in the process of finalizing the project.

The lack of OA policies and legislation are major challenges to academic libraries. This is absent in academic libraries in Cameroon. The systematic acquisition of data to build sustainable institutional Repositories, where researchers and students are encouraged to self-archive is absent in most African countries. (UNESCO, 2015), as in Cameroon.

A disturbing challenge of Open Access is advocacy for the adoption of a national and institutional Open Access policy. There are 31 Open Access policies in Africa listed by Registry of Open Access Repositories Mandatory Archiving Policies (ROARMAP, 2018) distributed as follows: 17 from East Africa, 9 from South Africa, 3 from North Africa, and 2 from West Africa (roarmap.org). Most of them come from Anglo-Saxon countries like South Africa and Kenya. There is no Open Access policy in Cameroon listed by ROARMAP as well as in Central Africa. Librarians in these countries and other developing countries have to work hard for the adoption of an Open Access policy in their institutions and at the national level. Electronic Information for Libraries (EIFL), African Digital Library Support Network (ADSLSN) and the International Network for the Availability of Scientific Publications (INASP) are Non-profit making International Organizations that are helping academic libraries in developing countries through training workshops and sharing knowledge and best practices, to develop policies of open access.

Information literary is a challenge to successful OA movement in Cameroon. Young researchers and students need required skills to research the internet for open access journals for research. Learning to use ICTs for effective research in AO journals is an urgent need for librarians and researchers, especially those in the old school who have been affected by the paradigm shift of ICT usage.

CONCLUSION

Open access has provided the academic library with new challenges and presented a plethora of exclusive promising opportunities to give them the deserved value. Easy and wide spread availability of quality research output and publications will give value and improve the quality of the library's institution and will provide a trajectory for the visibility of their collections and output. Therefore, academic libraries in developing countries should continue to promote Open Access in all possible ways to increase visibility to their resources, their users, their institutions, and should put up strategies to influence policies towards building sustainable Institutional Repositories in their universities and engage in advocacy to change the mind sets of researchers and decision makers. There are many benefits of OA. OA triggers the creation of new knowledge, facilitates information dissemination and helps libraries meet increasing demand for information, subscription costs and managing difficult negotiations with publishers. In spite

of several positive indicators however, developing countries are still lagging behind in achieving the full objectives of OA.

The noble objective of OA has to be realized and the academic librarian should encourage its community and all its stakeholders to become both active consumers and active contributors of OA resources but not "passive contributors" - reading research works and publications by researchers and scholars from developed countries published in the OA journals. Then the OA movement will fulfil its motto of free access to scholarly literature. Academic libraries and librarians in Cameroon should take advantage of the open access movement to invest in potential new roles, assert themselves, and create value to optimize accrued benefits from open access.

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