Panel on open access in Africa and in the Caribbean: progress and prospects

Open access: benefits for Africa

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Abstract:

As Africa moves beyond the digital divide and acquires significant Internet connectivity, the movement for open access to knowledge is gathering steam there. The advantages of open access for universities and authors and for African development as a whole are explored in this survey, which concludes with an illustrated overview of the many Open Access and Access to Knowledge initiatives currently being undertaken in South Africa and other African countries.

Keywords: open, access, A2K, ICT, Africa, benefits, projects

Introduction

As time is limited, I will just give a brief introduction to Open Access, its history, its benefits and how scholarly authors can become more visible on the global stage. But first, an overview of the coming African ICT explosion!

As you all know, there is a huge digital divide between developed countries and developing countries, particularly in Africa. African countries depend heavily on research, educational, recreational and other published material from developed countries. They are net importers of intellectual property, and pay huge amounts to purchase or gain access to global information and knowledge, including having to buy back African research, because it is published in foreign fee-based journals with few open access options.
The Digital Divide

- Africa depends on developed countries for educational, recreational and other material.
- Net importers of intellectual property.
- Africans have to buy back their own published research at a price – few open access options

Internet Users in the World 2010

Internet Users in the World
Distribution by World Regions - 2010

Asia 42.0%
Europe 24.2%
North America 13.5%
Lat Am / Caribb 10.4%
Africa 5.6%
Middle East 3.2%
Oceania / Australia 1.1%

Source: Internet World Stats - www.internetworldstats.com/stats.htm
Basis: 1,666,514,816 Internet users on June 30, 2010
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As technology develops, so African countries need to find more efficient ways of accessing information in order to gain knowledge, and be able to participate and contribute to the global society. They need technology and resources to assist them in accelerating development.

Africa is the second-largest and second most-populous continent after Asia. Yet, its internet usage is only 5.6%, compared to other largely populated areas of the world. (http://www.internetworldstats.com/stats.htm)

According to the 2010/2011 Global Information Technology Report, sub-Saharan Africa is still lagging behind the rest of the world because of underdeveloped infrastructure, inefficient markets, opaque regulatory environments, inadequate educational standards, and widespread poverty. These are powerful obstacles against a more extensive and efficient use of new technologies, for increased development and prosperity in the region. (http://www3.weforum.org/docs/WEF_GITR_Report_2011.pdf - pg. 27).
To develop, Africa has to participate in and contribute to the global economy. But, without unrestricted access to global knowledge, it will always be at a disadvantage, thus perpetuating its dependence on developed countries.

The global economy is currently skewed in favour of the ‘information-haves’. The current pattern of the globalisation process leaves behind the multifaceted intellectual ‘wealth’ and ‘natural resources’ of Africa and other regions, which are often regard as ‘information have-nots’. http://www.inderscience.com/www/pdf/ijtmv45n12_oainafrica.pdf

Africa is often called the ‘silent continent’, because her abundance of knowledge, research and practice does not reach far beyond its local audience. For years, lack of bandwidth and extremely slow satellite connections have arrested development on the continent and has constrained Africa from achieving her full potential. (http://nairabytes.net/nigeria/re-africa-s-largest-undersea-internet-cable-to-land-this-month-april-2011).

ICT and collaborative communication now offer new and exciting possibilities for giving Africa a voice across the globe. (http://www.gray-area.co.za/category/open-education)
Since 2009, the capacity of Africa's fibre optic cable connections has expanded almost 300-fold. The SEACOM cable system was launched to support East and Southern African countries with inexpensive bandwidth. And, last month, the West Africa Cable System fibre optic line arrived near Cape Town. The cable from London will connect 15 points along Africa's western coast, including South Africa.

This will link Internet providers directly to Europe’s servers, and boost the bandwidth of the world's least-connected region. The new link is the latest in a series of submarine cables that hold the promise of an Internet explosion for Africa. (http://nairabytes.net/nigeria/re-africa-s-largest-undersea-internet-cable-to-land-this-month-april-2011)

Digital and particularly, mobile technology provides huge potential for research, learning and teaching purposes in Africa. A convergence of historical circumstance and an increase in innovative mobile applications may make Africa the first post-PC continent. (http://www.computerworlduganda.com/articles/2011/04/05/africa-banking-mobile-be-first-post-pc-continent).
Why? Because the majority of Africans don’t have the luxury of PCs, laptops, iPads, Kindles and the like. The mobile phone is likely to become the main mode of communication for millions on the continent. Although there is huge potential for Africans in the digital world, copyright and other barriers hamper the process. Traditional copyright balance has been severely eroded, especially in the digital arena, where content providers use restrictive licences to override statutory copyright exceptions and limitations, and where technological protection measures lock up content (sometimes indefinitely) and affect access and fair use in ways that are unprecedented in the modern era. (http://edge-op.org/grouch/schools.html)

Open Access

Acquiring appropriate and up-to-date information in Africa for teaching and research purposes is becoming very expensive, as rightsholders continue to find new ways of protecting digital information.
Fortunately, there is an alternative way of finding and producing information - that is Open Access. There are many definitions for Open Access, but in a nutshell, it means that the contents of peer-reviewed scholarly works and other material are accessible permanently, in full-text on the Internet, and can be downloaded, copied, distributed, printed, searched, data-mined and referred to, free of charge and publicly, all without any financial, legal or technical barriers (except for having to have Internet access). The costs are borne by the producers and not by the users. (http://www.umm.uni-heidelberg.de/bibl/zielgruppen/openaccessmodelle_en.html)

The Open Access Movement traces its history of sharing information back to at least the 1960s, but became much more prominent in the 1990s with the advent of the digital age. (http://en.wikipedia.org/wiki/Open_Access_movement)

The Open Access movement was founded by the Open Access Initiative and the Scholarly Publishing and Academic Resources Coalition (SPARC). Commencing with the first preprint services at American higher education establishments in 1999, the Open Access movement conquered the European scientific community in 2001 with the Budapest Open Access Initiative. (http://www.ma.uni-heidelberg.de/bibl/zielgruppen/openaccessmodelle_en.html)
In 2003, the Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities reached Germany's scientific establishment. In the same year, in the USA, the Bethesda Statement on Open Access Publishing was declared, stating two conditions, now internationally-accepted, for Open Access publication, namely:

- The author and/or copyright holder grants to all users a free, irrevocable, worldwide, perpetual right of access to, and a licence 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 well as the right to make small numbers of printed copies for their personal use.

- A complete version of the work and all supplemental materials, including a copy of the permission as stated above, in a suitable standard electronic format is then deposited immediately upon initial publication in at least one online repository that is supported by an academic institution, scholarly society, government agency, or other well-established organization that seeks to enable open access, unrestricted distribution, interoperability, and long-term archiving. ([http://www.earlham.edu/~peters/fos/bethesda.htm](http://www.earlham.edu/~peters/fos/bethesda.htm))
Since then, open-access journals, publishers and platforms have been offering their electronic contents for free use. Open access is an evolving process, with more and more international institutions supporting it as a more user-friendly and immediate way of disseminating research results and scholarly publications globally.

To maximise the dissemination of the research they fund, the grant conditions of many international funding organisations increasingly require peer-reviewed research outputs to be made freely available in full, on an open access platform at the earliest possible date. The European Commission, Wellcome Trust, the U.S. National Institute of Health and the Australian Research Council are just a few examples of such funders. (http://www.sherpa.ac.uk/juliet/)

For Africa, Open Access is a very positive means of showcasing domestic and regional research, whilst enabling researchers and other information users to access information from around the world, which normally would have been locked up in subscription-based journals or e-databases. It also allows cross-border exchange of information and research outputs in an unrestricted and cooperative environment.
In Botswana in November 2007, the Open Access Leadership Summit was co-hosted by the Southern African Regional Universities’ Association (SARUA) and the African Access to Knowledge Alliance. At this Summit, Vice-Chancellors of tertiary and research institutions in the 15 Southern African Development Community (SADC) countries committed themselves to promoting Open Access publishing and institutional repositories in their institutions.
For higher educational institutions, there is an ethical argument that research funded by the public should be made available to the public. Since research is an international activity, this crosses national boundaries.

Open Access, through permanent institutional repositories, helps to maximise, measure and reward the uptake, usage, applications and impact of a university’s research output, and showcases it on the global stage. (http://digital-scholarship.org/digitalkoans/category/digital-repositories/page/6/)

The more scholarly works available on Open Access, the less institutions will have to pay for expensive e-licences, journal subscriptions and copyright fees.

Today’s researchers and students are likely to search Google before any other resource. So, if they are not on Google, they don’t exist!
Open Access and authorship

As publisher Tim O’Reilly says - “Obscurity is a far greater threat to authors and creative artists than piracy”.

Cory Doctorow, award-winning U.S. author, says that “the majority of ideal readers who fail to buy his latest book will do so, because they have never heard of it, not because someone gave them a free electronic copy. In fact, it is because he puts his books in full-text on Open Access the same day they are published, that his hard copy sales have increased considerably. (http://boingboing.net/2006/02/14/why-publishing-shoul.html)

The Human Sciences Research Council in South Africa has also experienced a huge increase in the sale of its hard copies, since placing its research reports on Open Access.

The bottom line is that Open Access gives visibility and accessibility to scholarly and other works around the globe. If works are not accessible, they won’t be read. If they are not read, they won’t be cited. If they aren’t cited, how will this affect their impact factors and scholarly reputation?
There are about 2.5 million annual research articles published in 25,000 peer-reviewed journals in all scholarly and scientific disciplines, worldwide. (http://www.ulrichsweb.com/ulrichsweb). Most of these articles are only accessible by a fraction of potential users, because they are tied up in expensive publications and databases, many of which are not affordable to libraries in Africa.

So what’s the choice for Africa - Open Access or Obscurity?

Some of the advantages of Open Access for science and scholarship are:-

- Greater visibility and impact, resulting in more citations and collaborative projects;
- It moves research along faster and enables better management and assessment of research;
- It provides the material on which the new semantic web tools for data-mining and text-mining can work, generating new knowledge from existing findings.

All this - by maximising research accessibility! (http://www.openoasis.org/index.php?option=com_content&view=article&id=130&Itemid=390)
Open Access publishing

![Publishers' copyright policies](image)

You will probably ask – what about copyright implications and publishers’ contracts? Well, believe it or not, many international and local publishers now allow authors to place preprints, post-prints and even final PDF versions on institutional repositories. The final PDF versions can be hyperlinked to the publishers’ website, thus giving publishers more exposure as well.

If you want to know if your publications can be deposited on an institutional repository, check the SHERPA/ROMEO website for publishers’ copyright policies. Otherwise write to your publishers asking them for permission.

Creative Commons’ licences have also made it easier for authors to publish and for users to use, copy, remix or make derivative works from online publications.
Copyright law gives authors exclusive rights over their works as follows:-

- to reproduce their work in any manner or form
- to publish the work if it has not been published before
- to perform the work in public
- to broadcast the work
- to cause the work to be transmitted in a diffusion service
- to make an adaptation of the work (this includes modification and translation)

(all the above acts also relate to adapted works as well)
Authors need more control over your works. They do not have to sign over all your rights to a publisher. They should always read the small print on a publisher’s form before signing. Where possible, they should only give the publisher a ‘non-exclusive licence’ to publish. All other rights should be retained by the authors, so that they can use their works for teaching purposes, or for placing in an institutional repository, or on a personal blog.

Scholarly authors should be encouraged to attach an Authors’ Addendum to the publisher’s form, specifying exactly what rights they assign and what rights they retain. For an example, see the SPARC website given in the above slide.

Authors also have moral rights, which give them the right to be named as the authors of the works, and to protect their work from distortion or mutilation. Moral rights cannot be transferred, even though other rights can be transferred to a third party.

Authors in Africa have the power to change the way information is disseminated and shared on the continent. The sooner they adopt Open Access, the sooner the doors of global research and knowledge will be opened to them.
There are many Open Access and Access to Knowledge initiatives in South Africa and other countries in Africa. I shall conclude my presentation with information about some of these projects.

Open Access is the only way forward for Africa.

The tipping point for African research, innovation and development will not be merely the ability to fully access and use the new abundance of global knowledge and ideas - but to also make an active and significant contribution to its creation.

A survey of Open Access and Access to Knowledge Initiatives in Africa
**OA Initiatives in Africa (1)**

- **Botswana Libraries Consortium**
  - Open access repository of the University of Botswana

- **Burkina Faso: Conseil Africain et Malgache de l'Enseignement Supérieur**
  - Articles of the Revue pharmacopée et médecine traditionnelle Africaines (Journal of Traditional African Pharmacopeia and Medicine) and the theses and dissertations of the universities and research centres;
  - Université Polytechnique de Bobo-Dioulasso—research reports and theses and dissertations

**OA Initiatives in Africa (2)**

- **Consortium of Cameroon University and Research Libraries (COCUREL)**
  - An open access project with the Ministry of Public Health on the issue of reproductive health (santé de reproduction): 845 thesis from the Universities and other research institutes in Cameroon, will soon be on open access;

- University of Buena and the University of Yaoundé plan open access repositories
OA Initiatives in Africa (3)

Consortium of Ethiopian Academic and Research Libraries (CEARL)
- 2 open access institutional repositories:
  - International Livestock Research Institute, Ethiopia - [http://dspace.iirrl.org:8080/jspui](http://dspace.iirrl.org:8080/jspui)
- 6 open access journals:

OA Initiatives in Africa (4)

- Egypt: 7 open access repositories:
  - British University in Egypt,
  - Cairo University,
  - Bibliotheca Alexandrina
  - Digital Assets Repository (DAR),
  - University of Mansoura, Institutional Digital Repository for Library and Information Department at Faculty of Arts, Menofia University,
  - American University in Cairo
  - Digital Archive and Research Repository
- 10 open access journals at ARLIS (Arab Repository for Library and Information Studies), Helwan University;
- 200+ open access journals, Hindawi Publishing Corporation, academic publisher - [http://www.hindawi.com](http://www.hindawi.com)
**OA Initiatives in Africa (5)**

- **Consortium of Academic and Research Libraries in Ghana (CARLIGH)**
  - Open access repository at KNUSTSpace - [http://dspace.knust.edu.gh/](http://dspace.knust.edu.gh/)
  - Installation and troubleshooting of Dspace repositories:
    - University of Cape Coast; University for Development Studies;
    - University for Education, Winneba; Pentecost University and Ashesi University
  - 4 open access journals:

**OA Initiatives in Africa (6)**

- **Kenya Libraries and Information Services Consortium (KLISC)**
  - 2 open access repositories:
    - Sudan Open Archive (SOA) - [http://www.sudanarchive.net/](http://www.sudanarchive.net/)
    - International Livestock Research Institute (ILRI),
  - 10 open access journals:
    - African Journal of Food, Agriculture and Development;
    - East African Orthopaedic Journal;
    - African Journal of Health Sciences;
    - African Journal of Science and Technology (AJST);
    - KCA Journal of Business Management;
    - The East African Medical Journal;
    - The African Journal of Biotechnology;
    - African Journal of Science and Technology
    - The Journal of Food Technology in Africa;
    - Thought & Practice
**OA Initiatives in Africa (7)**

- **Lesotho Library Consortium (LEUCO):**
  IFLA Paper calls on AU to adopt Open Access -

- **Consortium Malien des Bibliothèques (COMBI)**
  - 2 open access journals:
    - Recherches africaines - [http://www.recherches-africaines.net](http://www.recherches-africaines.net)

**OA Initiatives in Africa (8)**

- **Cote d’Ivoire (Ivory Coast):**
  - 3 open access journals:

- **Malawi Library and Information Consortium (MALICO)**
OA Initiatives in Africa (9)

Nigerian University Libraries Consortium
- Open access repository: DSpace at University of JOS - http://dspace.unilos.edu.ng
- 10 open access journals in Bioline International - http://www.bioline.org.br/journals
- 12 open access journals in African Journals Online:
  - African Journal of Clinical and Experimental Microbiology
  - The Annals of Ibadan Postgraduate Medicine
  - The African Journal of Applied Zoology and Environmental Biology
  - The Journal of Agricultural Extension
  - International Journal of Health Research
  - African Journal of Physiotherapy and Rehabilitation Sciences
  - OGIRISI: a New Journal of African Studies
  - Edo Journal of Counselling
  - Jos Journal of Medicine
  - Journal of Surgical Technique and Case Reports
  - Journal of the Nigerian Optometric Association

OA Initiatives in Africa (10)

- Consortium des Bibliothèques de l’Enseignement Supérieur du Sénégal (CODESS)
  - Open access repository: Rênes Cultures Africains, l’IFAN - http://bca.ucad.sn/spc4
  - Open access journals: 10 journals published by CODESTRIA

- Consortium for Tanzania Universities and Research Libraries (CTUUL)
  - 3 open access journals in Bioline International and DOAJ:
    - 3 open access journals in African Journals Online:
      - The Tanzania Veterinary Journal (The Tropical Veterinarian);
      - The Western Indian Ocean Journal of Marine Science;
      - Dar Es Salaam Medical Students’ Journal
OA Initiatives in Africa (11)

- **Zambia Library Consortium (ZALLCO)**
  - 1 repository is being set up at Copperbelt University

- **Zimbabwe University Libraries Consortium (ZULC)**
  - 2 open access repositories:
    - NUST: [http://library.nust.ac.zw/ssdl/cgi-bin/library](http://library.nust.ac.zw/ssdl/cgi-bin/library)
    - University of Zimbabwe: [http://iru.z.ac.zw:8080/ispul/](http://iru.z.ac.zw:8080/ispul/)

(Source of most of the above initiatives: [http://www.eIFL.net](http://www.eIFL.net))
**African A2K/OA initiatives (12)**

- African Access to Knowledge Alliance (partnering with ACA2K) - [http://www.col.org/SiteCollectionDocuments/Copyright_Alliance_article.pdf](http://www.col.org/SiteCollectionDocuments/Copyright_Alliance_article.pdf)
- African Copyright & Access to Knowledge (ACA2K) Project - [http://www.aca2k.org](http://www.aca2k.org)
- African Digital Commons - [http://www.commons-sense.org](http://www.commons-sense.org)
- Publishing and Alternative Licensing Model of Africa (PALM) - [http://www.idrc.ca/ccaa/ev-117012-201-1-DQ_TOPIC.html](http://www.idrc.ca/ccaa/ev-117012-201-1-DQ_TOPIC.html)
- SADC Centre for Distance Education - [http://www.sardc.org.bz](http://www.sardc.org.bz)

**Various African A2K/OA Initiatives (13)**

South African OA Initiatives (14)

- South African National Library and Information Consortium (SANILC)
  - 22 open access repositories - IRSpace - Search South African & African research repositories
- SciELO South Africa (funded by Dept. of Science & Technology):
  - 31 OA journals published by Open Journals: [http://openjournals.net](http://openjournals.net)
- South African Open access to books:
  - HSRC Press has a dual-stream publishing strategy with open access full text online and print copies for sale - [http://www.hsrcpress.ac.za](http://www.hsrcpress.ac.za)
- Open educational resources:
  - Most tertiary institutions are adopting DER strategies and have/are setting up institutional repositories. The University of Cape Town launched its Open Content Initiative in February, 2010. The University of Stellenbosch was the first SA institution to sign the Berlin Declaration.

South African A2K/OA initiatives (15)

- Creative Commons/Commons (South Africa) - [http://www.icommons.org](http://www.icommons.org)
- Shuttleworth Foundation – [http://www.shuttleworthfoundation.org](http://www.shuttleworthfoundation.org)
- African Virtual Open Initiatives and Resources (AVOIR) - [http://avoir.uwc.ac.za/](http://avoir.uwc.ac.za/)
- Human Sciences Research Council (South Africa) - [http://www.hsrc.ac.za](http://www.hsrc.ac.za)
More SA A2K/OA Initiatives (16)

- CSIR Research Space - http://researchspace.csir.co.za/dspace/
- African Digital Library Centre - http://africaeducation.org/adl
- AVOIR - http://avoir.uwc.ac.za/
- OER Africa (SAIDE) - http://www.oerafrica.org/
- Wits Link Centre - http://link.wits.ac.za/
- Library Information Association of SA (LIASA)/FAIFE – http://www.liasa.org

Some useful A2K books/resources

- Access to Knowledge in the age of intellectual Property - http://www.oznebooks.org/Articles/KRIK_ASuch
- Report on the implementation of open content licenses in developing and transition countries - http://bit.ly/dTaN1