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## **'Free' access to research findings – reflections for an African context**

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When visiting African universities, I often hear the comment that it is difficult and expensive to access research publications in the latest international journals. This observation is then frequently used as an excuse to explain why many papers submitted by African academics to international journals do not contain substantial numbers of references to the existing research literature.

In response to such arguments, I tend to respond that this is something of a myth, and that it is indeed actually possible to access much research material online – and for free! Indeed, the Internet has opened up a huge wealth of material for academics – the challenge is to know how best to access it, and to judge whether such material is of value or not. To be sure, there remain huge issues of connectivity and bandwidth, but these are gradually being overcome – especially with the arrival of the submarine cable in East Africa, providing very real opportunities for considerably enhanced connectivity.

This short paper is therefore intended to provide a brief introduction to means whereby African researchers can indeed access much of the world's research literature – for 'free'. It is divided into three main sections:

1. Free for all solutions and open research initiatives
2. International initiatives to provide access to researchers in poor countries
3. When all else fails!

However, to begin with there is value in briefly outlining some of the context associated with the differences between traditional journal publication and more recent open access academic publication.

### **Traditional proprietary journal publication and open access journals**

Traditional academic publication has been characterised by the following features:

- academics submit their research papers to peer reviewed journals, published by private companies
- these papers are then refereed (usually anonymously) by people (who are unpaid)

- selected by the editor or editorial board (usually academics)
- authors are not paid for their works
- journal publishers sell the journals to institutions and individuals, thereby gaining profit for themselves, and ensuring dissemination of the research
- these journals were originally made available in hard copy, but subscribers can now access them online

Such a system 'works' because

- academic must publish if they wish to advance their careers, and they generally wish to publish in the most prestigious journals
- academic salaries are paid by the universities for which they work, and so academics do not need to gain additional income from publishing their papers
- journal publishers take the risk, but are generally able to generate a profit over and above the costs they incur in publishing the journals
- quality is meant to be ensured by the peer review process.

The Internet has provided significant opportunities for individual academics to distribute their research findings globally and instantaneously through their own or their institutions' websites. However, the peer review system is still widely seen as being an important guarantor of quality. Hence, most academics continue to publish in traditional peer reviewed international journals for which universities and individuals must pay if they wish to access content.

Some peer reviewed open access journals are indeed beginning to be made available for free, but as yet they have not generally attracted the prestige of the major international peer reviewed journals, and access to much academic research therefore remains through paid subscriptions. Most universities thus continue to subscribe to online journals, usually through block subscriptions whereby they make available a wide range of journals from different publishers to the academics and fee paying students within their institutions.

The problem for many African universities is that such subscriptions are expensive, and they cannot therefore afford to make such material available to their researchers. Three groups of solutions are possible to resolve this:

- accessing material that is indeed freely available on the Web
- reducing the costs of journal subscriptions to poor African institutions
- finding innovative collaborative ways to access relevant publications

## **Free for all solutions and open research initiatives**

Much academic research is freely available either in full or in part to anyone through the Internet. The following opportunities are among the easiest ways in which people can access such information:

- Google scholar (<http://scholar.google.co.uk/>) - provides a simple way to search for scholarly literature across many disciplines and sources: peer-reviewed papers, theses, books, abstracts and articles, from academic publishers, professional societies, preprint repositories, universities and other scholarly organizations. Google Scholar helps users identify the most relevant material across the world of

scholarly research. Often only the abstracts of papers are available, but these can be very helpful in providing an overview of the research contained within the full papers, and they enable users to judge whether it is worth spending further effort on tracking down a particular paper.

- Google Books (<http://books.google.com>) - provides full and partial texts of many of the world's books
- Once one has identified the author and title of a paper, even if the full published text is not available online many academics make available earlier drafts of papers on their own personal or university web-sites, and it is very often possible to gain access to the material through these. Just try checking out whether the person in question has a blog and has included access to their publications on it. Or if that does not work, try contacting their university, and see if they have an open access repository for materials published by their staff.
- OAlster (<http://www.oaister.org/>) - is a union catalogue of digital resources, providing access to these resources by "harvesting" their descriptive metadata (records) using OAI-PMH (the Open Archives Initiative Protocol for Metadata Harvesting). As of June 2009, OAlster currently provides access to 21,984,755 records from 1134 contributors.
- [www.worldwidescience.org](http://www.worldwidescience.org) - WorldWideScience.org is a global science gateway connecting users to national and international scientific databases and portals. It was developed and is maintained by the Office of Scientific and Technical Information (OSTI), an element of the Office of Science within the U.S. Department of Energy.
- Scirus (<http://www.scirus.com/>) - claims to be the most comprehensive scientific research tool on the web. With over 450 million scientific items indexed at last count, it allows researchers to search for not only journal content but also scientists' homepages, courseware, pre-print server material, patents and institutional repository and website information
- OpenDOAR (<http://www.opendoar.org/>) - OpenDOAR is an authoritative directory of academic open access repositories. As well as providing a simple repository list, OpenDOAR lets users search for repositories or search repository contents.
- DOAJ (Directory of Open Access Journals) (<http://www.doaj.org/>) - which includes 3,622 free, full text, quality controlled scientific and scholarly journals, covering all subjects and languages. 1,251 journals are available in full text.

There are many other organisations that also provide free access to material from academic journals – but often this is only the abstract or merely the bibliographical data.

## **International initiatives to provide access to researchers in poor countries**

Recognising that many university institutions in the poorer countries of the world cannot afford to pay journal subscriptions, several important initiatives have been created to facilitate dissemination of quality academic research. This is often achieved by agreeing special collective rates with publishers to reduce the price of journals in poor countries. Some publishers are also willing to make completely separate deals with institutions in poor countries, providing this does not reduce their overall profit and Among the more important of these are:

- INASP (The International Network for the Availability of Scientific Publications) (<http://www.inasp.info/>) - its work focuses on communication, knowledge and networks, with particular emphasis on the needs of developing and emerging countries. It seeks to respond to national priorities for: access to national and international scholarly information and knowledge; capacities to use, create, manage and communicate scholarly information and knowledge via appropriate ICTs; and national, regional and international co-operation, networking and knowledge exchange. It also advises and advocates for improved policy and practice in achieving sustainable and equitable development through effective communication, knowledge and networks.
- AGORA (Access to Global Online Research in Agriculture) (<http://www.aginternetwork.org/en/>) - provides a collection of 1278 journals to institutions in 107 countries. AGORA is designed to enhance the scholarship of students, faculty and researchers in agriculture and life sciences in the developing world.
- Book Aid International (<http://www.bookaid.org/>) - Book Aid International increases access to books and supports literacy, education and development in sub-Saharan Africa. It works in partnerships with other service and organisations to promote a reading culture.
- EIFL (electronic information for libraries) (<http://www.eifl.net>) - is a not for profit organisation that supports and advocates for the wide availability of electronic resources by library users in transitional and developing countries. Its core activities are negotiating affordable subscriptions on a multi-country consortial basis, supporting national library consortia and maintaining a global knowledge sharing and capacity building network in related areas, such as open access publishing, intellectual property rights, open source software for libraries and the creation of institutional repositories of local content.
- Free Medical Journals (<http://www.freemedicaljournals.com>) - aims to make access free to major international medical journals.
- HINARI (Health Internetwork Access to Research Initiative) (<http://www.who.int/hinari/en/>) - The HINARI Programme, set up by WHO together with major publishers, enables developing countries to gain access to one of the world's largest collections of biomedical and health literature. Over 6200 journal titles are now available to health institutions in 108 countries, areas and territories benefiting many thousands of health workers and researchers, and in turn, contributing to improved world health

## When all else fails

The above resources will by no means enable African researchers to gain access to every single item ever published! However, there are various other ways in which even the most obscure items can indeed be accessed. Three solutions are particularly appropriate:

- Research visits – many African universities have partnerships with universities in some of the richer countries of the world, and it is often possible to arrange research exchange visits through which African researchers can access the wealth of resources available to their hosts. Our DeIPHE and EDULINK funded partnerships, for example, provide ideal opportunities for African colleagues to access bibliographical resources in the UK, Denmark and Finland. It is, though, very important to prepare carefully in advance before such visits, so that the benefits of time spent in Europe can be maximised. European universities usually provide access for visitors to all of their library facilities and resources, and so such opportunities can be used to access a huge wealth of bibliographical material that can then be saved to CD-ROM or DVD
- Collaborative research providing access to journal articles – where there are formal collaborative research arrangements in place between African researchers and academics in other parts of the world, it is usually possible for them to access materials that their co-researchers also have access to. Thus if two authors from different parts of the world are working on the same paper, it is perfectly legitimate for them to share the articles and materials on which they are working together. Hence, our DeIPHE and EDULINK partnerships can be used creatively as a means through which we can share such material.
- Finally, if all else fails, most academics are very happy to copy their papers or chapters and send these to colleagues in countries that do not have access to the original materials. For example, I frequently get asked for copies of some of my papers, and even when these only exist in hard copy I am usually inclined to photocopy them and send them off.

## Final thoughts

In the light of the above, I hope it is now clear why I get so frustrated when people say that they cannot get hold of publications! Yes, it might take time, and require some effort in tracking things down – but that's also true here in the UK!!!

The key thing is to recognise that academic research is above all about creatively moving knowledge forward. To do so, it is crucial to have a sound understanding of what knowledge already exists. This requires us all to read a wealth of material, so that we can formulate our research agendas explicitly in the light of existing knowledge.

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Useful additional resources include:

- INASP's workshop handout entitled 'Accessing Information in Developing Countries Workshop'
- INASP's 'Access to scientific information: resources, tools and tips'

These are also available on our Elgg environment