

# Open Access survey of Africa-published journals

Daisy Ouya<sup>1</sup> and Pippa Smart<sup>2</sup>

<sup>1</sup>P.O. Box 67498-00200 Nairobi, Kenya  
E-mail: [daisyouya@mac.com](mailto:daisyouya@mac.com)  
Tel: (+254)-733-615351

<sup>2</sup>Pippa Smart  
International Network for the Availability of Scientific Information (INASP)  
58 St Aldates, Oxford, OX1 1ST, UK  
Email: [psmart@inasp.info](mailto:psmart@inasp.info)  
Web: [www.inasp.info](http://www.inasp.info)

## Abstract

**A survey of African journal editors was undertaken in 2005 to ascertain their awareness and understanding of the Open Access movement, and to discover if their journals would be willing to publish Open Access. The survey showed limited awareness and understanding of Open Access, and caution regarding its suitability for their own publications. There was also reported a high level of fear about journal sustainability. The survey highlighted the need for more information about emerging publishing models and the Open Access movement to be provided to publishers of Sub-Saharan African journals.**

## Introduction

Three hundred and fifty years since the genesis of scholarly publishing, the methods used to access and archive literature have changed forever. The introduction of desktop computers; the so-called “serials crisis” in libraries; and the fast growth of the Internet for information exchange have all affected expectations of how research and academic information can and should be disseminated; the long-established subscription model for journal publishing is now being seriously questioned.

Open Access (OA) publishing (under which a publisher allows unrestricted and unlimited fee-free access to online content) started to gain momentum during the mid-1990s. To support this, innovative economic models have been proposed to cover the costs of publishing, including the ‘author-pays’, ‘funding-body-pays’ and ‘parent-institution-pays’ models. There are also many other hybrid models, e.g. providing free online access but maintaining a printed version with normal subscription. There has been support for OA from funding bodies, for example the Soros Foundation, the Wellcome Trust and various governments.

A landmark meeting initiated by the Open Society Institute in Budapest in 2001 established the Budapest Open Access Initiative and identified two primary ways of closing knowledge gaps in science. The first OA strategy was called self-archiving (and was subsequently also referred to under the terms Institutional Archives/Institutional Repositories) and proposed that copies of *already published* research articles should be archived in the author’s institution and made available to all free of charge. The second strategy was the development of OA journals with alternative funding models that allowed all readers free access, with costs borne by the authors’

institutes or sponsoring organisations. This survey concentrated on the journal publishing model, and not on the self-archiving strategy.

There are at least 400–500 scholarly journals published throughout Africa<sup>1</sup>, the largest proportion emanating from South Africa and Nigeria. Outside of South Africa, the majority are produced in print only and there has been little debate about OA or other access models. Most journals are published by universities and research associations, with the journal editor taking responsibility for the entire publishing process in most cases. Some training of African journal editors in electronic publishing has taken place, mainly by international bodies such as INASP.

The extent to which African journal editors are willing to open up access to their content will influence the global spread and wealth of the OA knowledge base. This survey investigated the opinions of African journal editors on OA publishing in general, and in particular their views on opening up access to their content to the global scholarly community.

In June 2005 questionnaires were sent out to 230 sub-Saharan African journal editors on the African Journals Online (AJOL) database<sup>2</sup>. After two follow-up emails, 48 surveys were returned completed between June and August 2005. The 21-item questionnaire asked questions about the existing journal status, to assess the journals' sources of income, staffing profiles, how they were indexed, and author/subscriber bases. It then asked for understanding of Open Access publishing, and for opinions on how – and if – this model could be introduced to their journals. (The Bethesda Statement on Open Access Publishing<sup>3</sup> was included as a reference for discussion on the OA model.

## **Results I: Basic information and profiles**

### **Geographic and disciplinary spread**

The journals that responded were published in nine sub-Saharan African countries: Nigeria (18), South Africa (13), Kenya (5), Ghana (5), Tanzania (2), Uganda (2), Malawi (1), Senegal (1) and Togo (1). The journals covered a range of disciplines, including health sciences and medicine (14), agriculture and crop science (6), aquatic science and water research (2), African studies, humanities, history, literature, economics, finance and commerce, engineering, development, gender, theology, information management, musicology and basic sciences.

### **Indexing/global exposure**

Journals not included in internationally searchable indexing services are isolated from the global knowledge base, and therefore suffer from low exposure to researchers outside their locale. Of the 35 journals that indicated that they were indexed, nine stated that they could only be found through their online presence on AJOL. Two of the journals (from Nigeria and Tanzania) were not indexed at all. Only three journals (all published in South Africa) stood out as being indexed on multiple, international services such as Current Contents, Chemical Abstracts and CAB Abstracts.

### **Sources of funding**

A journal's sustainability may be judged by its ability to generate its own operational costs primarily from subscriptions, membership fees, page charges, and institutional subsidies. The surveyed journals were asked to provide information about their sources of revenue, but unfortunately less than half the received surveys answered this question. Of the journals that did respond, six were able to generate more than 50% of their operational costs from subscriptions, membership fees or page charges. The other 14 required over 50% support from grants or institutional subsidy (five reported 100% reliance on this funding). Page fees were an income source for only 11 journals, and accounted for less than 35% operational cost for nine. Only two journals (in Kenya and South Africa) reported receiving more than 50% from this source. It should be noted that transaction costs between African countries can be difficult and expensive since bank handling costs can be high. This may hamper increasing this revenue stream.

### **Staffing profile/production**

Much of the editing and production work of the African journals is done by volunteer staff. Save for two journals (in Nigeria and Kenya), where a combined total of 33 editors are paid honoraria, most of the journals had one editor paid an honorarium, and, on average, 4.2 volunteer staff.

**Geographical profile of authors and subscribers** All the journals indicated that their articles came predominantly from African authors. Subscribers were more geographically diverse: the subscriptions of 17 journals came predominantly from Africa; 11 journals had subscribers located predominantly in other (non-African) developing countries; and 8 said that most of their subscribers were from industrialised countries.

## **Results II: Open Access publishing**

Forty-three editors responded to the 'yes/no' question as to whether they had heard of the term 'Open Access': 28 said yes, and 15 said no. Those who had heard about it generally indicated a good understanding of OA publishing as allowing worldwide, password-free and cost-free online access to the full text of journal articles. However, 10 of the 28 understood the concept to also involve: authors submitting articles online; allowing for delayed or limited access to content; a possibility for charging a fee; or all articles being published in a general database with no attachment to a specific journal title. From this it can be seen that there is some confusion about OA journals, and OA repositories. It also became clear from subsequent questions that there was a confusion between OA publishing, and online publishing in general, with several respondents assuming that OA meant publishing online only. Opinions about OA and how it might affect African journals and African researchers came thick and strong. The overall feeling was one of cautious optimism, with many editors saying they faced the dilemma of desiring global visibility while not wishing to risk their journals' survival. Whereas the benefits were clear, funding and sustainability concerns, together with others discussed below, were high.

### **Perceived benefits of Open Access**

The survey asked what benefits the respondents felt that publishing OA would give them.

The African journal editors all agreed that OA would improve their journals' visibility, and possibly raise the quality of published work in the continent.

*'OA will improve the visibility of African journals. Access to current and relevant literature will be readily available to African researchers and this should lead to the production of high-quality research and publications.'* [Nigeria]

Other benefits the editors cited were: more article submissions; the ability to publish according to schedule without 'waiting for availability of printing funds'; and a reduction in print-runs, resulting in savings. One editor from Kenya thought that OA might lead to securing sponsorship: 'with more visibility, and increased submissions, in the long run we may get recognition from a sponsor'. Another respondent thought that online sales would rise, demonstrating an inaccurate understanding of OA publishing. One was not sure of any benefits. The overall benefits of OA to the global research community were expressed succinctly by many editors.

*'In principle I am entirely in favour of Open Access for academic journals. I think it would be to the benefit of scholarship and research generally, and on balance I think would work to counteract existing global financial inequalities, rather than entrench them.'* [South Africa]

### **Concerns about Open Access**

The survey asked what concerns the respondents had about publishing OA. Their responses were gathered and analysed, and several common concerns identified.

Many editors were concerned that OA might put their journals' survival, reputation, quality and identity in jeopardy, or that greater visibility would result in more article submissions than they had the capacity to handle.

*'In an African context, Open Access puts the African publisher in a dilemma. On one hand there is need and obligation to disseminate information to the financially handicapped researcher and student and yet on the other there is the question of sustainability to the publisher.'* [Malawi]

### **Loss of subscription revenue**

Whereas the editors agreed that Open Access was perhaps the only way to disseminate information as widely as possible – and would improve their journals' visibility, impact, and author profiles as well as generate benefits to the global scientific community and the world in general – there was much uncertainty over its implications to the journals' financial health, and therefore sustainability. Many editors felt that OA would result in a fall in their print subscriptions, and therefore an overall loss of income. This threat was cited by 21 (60%) of the 35 editors who responded to this question.

*'Open Access is good if a journal has the resources to continue publishing without necessarily depending on revenue from subscriptions.'* [Nigeria] *'Most African journals depend on page charges and sales of printed copies as the major sources of funds. Unless there are enough institutional grants, African journals will face problems of sustainability.'* [Nigeria]

### **Technological limitation**

Other concerns were that African researchers would not fully benefit from OA journals, given their limitations with ICT. Some editors, particularly those outside South Africa, felt that OA might not be an immediate solution to research access by African scholars.

### **Archiving**

*'The ephemeral nature of the electronic format makes it desirable that hard copies be available, especially to libraries and to those who might not have easy access to the Internet. How would these be funded?'* [South Africa]

### ***Sustainability on the Internet***

Concerns included the possible outcomes of server problems, or if an institution decided to stop publishing a journal. In such an eventuality, 'Who will continue to maintain access?', asked a South African editor.

### ***Blanket approach to Open Access***

Several editors called for sensitivity to the realities of publishing scholarly journals in developing countries/sub-Saharan Africa, and less of a 'blanket approach' to promoting OA.

*'In principle, Open Access is a wonderful idea for researchers. However, I am concerned at how it is being implemented – often aggressively – worldwide. Many developing country journals already operate on shoestring budgets, and they may find themselves really struggling (or be forced to close down altogether) if their meagre sources of income are compromised. African journals are not the ones causing the serials pricing crisis in the West, and I fear that the blanket approach to Open Access would ignore these economic realities.'* [South Africa].

### ***Other issues***

These included loss of copyright control (cited by four journals, from South Africa, Malawi, Ghana and Kenya); lost journal identity; neglect by publishers/owners of the journal; piracy; loss of quality submissions; and loss of reputation. Some of the editors mistakenly assumed that the OA journal could not co-exist with the print edition:

*'Our readers in rural areas will not be able to access our work any more due to lack of Internet connectivity.'* [Tanzania].

### ***A case study***

One of the South African journals surveyed has published OA since 2000, and its editor was able to provide an account for the journal's experience with OA:

*'The Journal went electronic (online, full text, free of charge) in 2000. This resulted in a tremendous boost in exposure worldwide (hits on website) and submissions from outside countries, e.g. an average per year of 130 submissions for the last three years (many submissions from Turkey) with an acceptance for publication of about 35 articles per year ( $\pm 280$  pages). Many submissions are of a poor quality (high rejection) and/or in poor English, putting a tremendous strain on the reviewers and the editor with the final preparation. Articles are placed on the website when ready. This decreases the turn-around time between submission and publication significantly, much favoured by authors. However, the many submissions are resulting in reviewers becoming reluctant to assist in the evaluation of articles. This is worsened by the dwindling number of researchers in Animal Science left in South Africa. This is unfortunately slowing down the turn-around time.'*

The editor stated that after going full-text OA:

*'we have discovered that some subscribers have had to cancel their subscriptions as a result of this. Some wrote to us about this while others just silently stopped subscribing to the print edition. We already experience the financial problems, which have to be weighed against the*

*exposure and improved citation ratings we notice. Open Access gave our journal international exposure which it could never have achieved otherwise. However, subscription [income] for hard copies is dwindling, both from members and libraries, thus putting financial strains on the Society. The Society is investigating possibilities of ... generating income to sustain our scientific journal.'*

Many of the editors are under pressure to make their journals more self-sustaining, giving more weight to this concern.

### **African editors' requirements for OA**

Before they could publish their journals OA, the editors said they would need to develop several capacities, mainly technological (modern equipment, software), human (manpower, technical expertise), and financial (hosting fees for the Web).

*'Without skills and technology (limited in many African countries), African journals will not be able to enter the competition.'* [Ghana]

In addition, they would need to overcome institutional resistance ('convincing the various committees, members of the association, and authors of the change'), and convince customers who would still want paper copies (assuming they ceased printing). One editor was reluctant to 'be expending our resources (staff time, Internet access fees, etc.) yet we are not assured of a return on what we have spent.'

Another editor pointed out the general infrastructure in Africa as a potential stumbling block. *'Maintenance of a functional website is a challenge in the African situation where Internet connectivity is poor and interruption of electricity is the daily order; we would need to upgrade our websites (which has financial implications).'* [Tanzania]

Only 16 of the 30 journals planning to go full-text online had an institutional website that could host their online content. The remaining 14 (47%) did not. Unless these latter journals could find a web host, their arrival on the Internet might be delayed.

### **Sections of the journal to which editors would most readily provide free access**

Free online access to table of contents (TOCs) and abstracts was accepted by all journals, but only 3 of the 28 respondents to this question said they would be willing to put all their full articles free online immediately upon publication. Twenty-three said that they would be willing to put up the TOCs and abstracts soon after publication, but only 9 of these were willing to do so before the printed copy became available. Free access to the full articles was considered acceptable for their journals at six months (2 editors), or 1 year (1 editor), or 2 years (1 editor), or 5 years (1 editor) after publication. The editors indicated they would be happiest to provide free access to their journal, in order of preference, to (1) African researchers, (2) developing-country researchers and (3) the entire world. Out of 33 respondents, 17 said they would chose African researchers and developing country researchers first, and 16 said they would have no bias as to who accessed their journal online.

The editors identified awareness training on Open Access publishing for Africa-based journals as an important activity, in order to put them in a position to make informed decisions. This was

seen to be part of a broader capacity building effort for such journals. *'A lot of research material that needs to be out there and that originates from Africa does not get to be read because of a lack of journals in our region. We must strengthen the existing ones to be able to be heard by the scientific community and policy makers.'* [Kenya]

## **Global perspective: A role for North–South partnership**

Around the world, OA publishing and OA archiving are evolving, with progress varying by region and country. India and Brazil are among the top in the ranking of number of OA journals published per country, ahead of several industrialized countries<sup>4</sup>, and, because they, too, are developing countries, their experience with OA might ring truer to the African journals' situation.

Medknow, a commercial publisher of 30 OA journals in India, has registered increased or consistent income from subscriptions between 2003 and 2005<sup>4</sup>. Bioline International<sup>5</sup>, a non-profit collaboration of the University of Toronto Libraries, Canada and the Reference Center on Environmental Information, Brazil, also reports no loss in subscription income for any of the developing-country journal it publishes OA; indeed, several journals from India have attributed their increase in print subscription to OA availability on Bioline (Leslie Chan, pers. commun., 2006). These real life examples call into question African journals' fears of OA-occasioned revenue loss.

According to Shipp (2006)<sup>6</sup>, the most prestigious Australian academies are still without concrete OA publishing policies. There is, however, considerable support for a broader interpretation that embraces OA of all research outputs, not just publications. Recognition of researchers' contributions to OA journals in performance reviews is not yet well articulated. Such recognition, argues the author, could help promote an OA culture in Australia.

Within the USA there are a number of OA advocacy organizations, including the Alliance for Taxpayer Access (ATA), Open Access Working Group (OAWG), Public Knowledge (PK), and the Scholarly Publishing and Academic Resources Coalition (SPARC)<sup>8</sup>. The Federal Research Public Access Act (FRPPA) of May 2006, if passed, will mandate OA to nearly all federally funded research within six month of publication, signaling a quantum leap in the OA movement<sup>7</sup>.

A recently announced decision by six Research Councils in the UK to mandate open, online archiving of publicly-funded research publications is a major win for OA.

The Public Library of Science (PLoS), the US-based publisher of high impact OA journals, has achieved outstanding success with its flagship titles *PLoS Medicine* and *PLoS Biology*. Started with philanthropic funding, PLoS is pursuing the 'Gold Road' to OA (publishing all articles full text, free access, immediately on publication, plus deposit in full text repositories), and expects to become a self-sustaining publisher. But a recent article in *Nature*<sup>9</sup> says that PLoS will be raising the publishing fees levied on authors (from \$1,500), "to stay afloat". BioMed Central (another "Gold route" OA publisher) last July more than tripled its charges to authors, from \$500 to \$1,700.

Few researchers in sub-Saharan African institutions could afford even a fraction of the fees levied by Northern journals pursuing the “Gold Road” to open access. And there is little capacity (infrastructural and technical) for setting up functional, OAI-compliant institutional archives (the “Green Road”). It appears therefore that, for the foreseeable future at least, the sub-Saharan African OA publishing model will be neither “Gold”, nor “Green” in their pure sense, but will of necessity rely on strategic collaboration with non-profit partners able to provide an online platform for Southern journals.

Such collaboration will allow sub-Saharan African publishers to circumvent the technical, financial and infrastructural inadequacies they are faced with. Bioline International at the University of Toronto and AgEcon Search<sup>10</sup> at the University of Minnesota are just two examples of the growing number of non-profit entities willing to collaborate with and provide an online platform for Southern journal publishers. Through this type of partnership, the journals’ risks are minimized, as there are no fees to pay, and additional demands on staff time or skills are minimal.

African institutions also require the capacity to set up their own institutional repositories, to complement the over 8 million documents on the global OA institutional repositories. The Electronic Publishing Trust for Development (EPT, UK, <http://www.epublishingtrust.org/>) has championed the promotion of the creation of developing-country institutional OA archives. Again, this aim could be achieved through African institutions partnering with organizations already experienced in the creation of OAI-compliant systems, such as E-prints and DSpace.

## **Conclusions and Recommendations**

African journals are running late in catching the electronic publishing/OA boat, but many are beginning to realise that the subscriber-pays-for-printed-copy model is not the only way to publish. Clearly, the editors desire the worldwide visibility that online availability (and Open Access) can offer their journals. Our survey revealed an incomplete/inaccurate understanding of OA, and fears about sustainability; clarity on OA might be a prerequisite to the publishers’ embracing the online publishing model.

With hindsight, the survey’s open-ended questions, while allowing the journal editors to provide many valuable insights, limited conclusive analysis of the results. The above discussion is therefore mainly of trends, not absolutes. It should also be noted that the sample size was too small to be considered a good representation of all sub-Saharan African scholarly journals. The Bethesda Statement on Open Access Publishing<sup>11</sup> was included as a reference in the survey, but respondents were not provided any information on the various OA models.

Although the survey in isolation would be insufficient to support recommendations for future support and development, it endorses current knowledge about this environment. Therefore the following recommendations are proposed.

- Training and information on electronic publishing and new journal publishing models, and opportunities for partnership, should be provided to the African journal publishing community and to the decision-makers that support these publications.

- Practical demonstrations of OA ‘in action’ within the African continent should be supported to provide data and case studies to assist informed decisions.
- There is a need to expand awareness about OA to researchers, publishers and authors in the region, and then to solicit opinions about Open Access selfarchiving in a more closely targeted survey. Some editors made the comment that INASP, PERI and AJOL had been helpful in building the capacity of journal staff and editors, so it would seem there is a role for them in continuing to provide support.

**Acknowledgments:** Grateful thanks to ICIPE (International Centre of Insect Physiology and Ecology, [www.icipe.org](http://www.icipe.org)), for accommodating this survey; Roger Stringer for reviewing and editing the paper; and Leslie Chan, Barbara Kirsop and Subbiah Arunachalam, trustees of the Electronic Publishing Trust for Development (EPT), for pointing out useful reference material and providing valuable inputs. Special thanks to all the journal editors who took their time to respond to the survey, and offered insightful comments and opinions on the subject matter.

## References

- <sup>1</sup> Hussein J. and Priestley C. (2002) ‘Current Status and Challenges Ahead for Scholarly Journal Publishing in Africa’. Seminar on Strengthening Scholarly Publishing in Africa, 1–4 July 2002, Zanzibar. Dag Hammarskjöld Foundation and African Books Collective Ltd. [www.inasp.info/psi/arusha/papers/hussein/index.html](http://www.inasp.info/psi/arusha/papers/hussein/index.html)
- <sup>2</sup> African Journals OnLine (AJOL): [www.ajol.info](http://www.ajol.info)
- <sup>3</sup> [www.earlham.edu/~7Epeters/fos/bethesda.htm](http://www.earlham.edu/~7Epeters/fos/bethesda.htm)
- <sup>4</sup> Sahu, D. K. and Parmar, Ramesh C. (2006) Open Access in India. In Jacobs, N. (Ed) *Open Access: Key Strategic, Technical and Economic Aspects*. Oxford: Chandos Publishing. [http://openmed.nic.in/1599/01/Open\\_Access\\_in\\_India.pdf](http://openmed.nic.in/1599/01/Open_Access_in_India.pdf)
- <sup>5</sup> [www.bioline.org.br](http://www.bioline.org.br)
- <sup>6</sup> Shipp, J. (2006) Open access in Australia. In Jacobs, N. (Ed) *Open Access: Key Strategic, Technical and Economic Aspects*. Oxford: Chandos Publishing. [http://ses.library.usyd.edu.au/bitstream/2123/883/1/Shipp2006\\_Open\\_Access\\_in\\_Australia.pdf](http://ses.library.usyd.edu.au/bitstream/2123/883/1/Shipp2006_Open_Access_in_Australia.pdf)
- <sup>7</sup> Suber, P. (2006) Open Access in the United States. In Jacobs, N. (Ed) *Open Access: Key Strategic, Technical and Economic Aspects*. Oxford: Chandos Publishing. [http://eprints.rclis.org/archive/00006671/01/Suber\\_2006.pdf](http://eprints.rclis.org/archive/00006671/01/Suber_2006.pdf)
- <sup>8</sup> Alliance for Taxpayer Access (ATA): [www.taxpayeraccess.org](http://www.taxpayeraccess.org)  
Open Access Working Group (OAWG): [www.arl.org/sparc/oa/oawg.html](http://www.arl.org/sparc/oa/oawg.html)  
Public Knowledge (PK): [www.publicknowledge.org/](http://www.publicknowledge.org/)  
Scholarly Publishing and Academic Resources Coalition (SPARC): [www.arl.org/sparc/](http://www.arl.org/sparc/)
- <sup>9</sup> Butler D. (2006) Open-Access journal hits rocky times. *Nature*, 44: 914.
- <sup>10</sup> University of Minnesota: <http://agecon.lib.umn.edu/>
- <sup>11</sup> <http://www.earlham.edu/~7Epeters/fos/bethesda.htm>