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Joining the Global Research Community – Models for Increasing Visibility and Access to International and National Research Information

Peter Burnett, BA, MA.
Head of Library Development
INASP (International Network for the Availability of Scientific Publications)
Oxford, UK

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Abstract:

Over the last seven years significant progress has been made in demonstrating how the opportunities available via electronic publication can be harnessed to the benefit of researchers in developing and emerging countries. This presentation presents two complementary examples: access to high-quality peer reviewed international literature via deeply discounted country wide licensing, and increased participation in the global research community of journals published from developing and emerging countries via journals online services. These sustainable models pioneered by INASP have enabled researchers in nearly 1000 institutions to access the international literature and for tables and contents and over 25,000 African published journal papers to be visible and accessible to the international community via document delivery.

History of INASP

INASP (www.inasp.info) is the International Network for the Availability of Scientific Publications. It was established by the International Council for Science (ICSU) in 1992 as a direct response to a study on how to meet the information needs of scientists in the developing world. Since 2003 INASP has been a limited company in the United Kingdom and was registered as a charity in 2004.

INASP's remit is to facilitate innovative programmes that address the needs of researchers, publishers, librarians and ICT professionals engaged in research communication in developing and emerging countries. INASP works in Africa, Asia and

Latin America. Funding comes mainly from European Governments, development agencies and, increasingly, from the countries in which we work.

Through our PERI initiative (Programme for the Enhancement of Research Information) which has been described as “the most comprehensive initiative of access to worldwide research” (Chan & Costa, 2005), we support capacity building in the research sector in developing and emerging countries by strengthening the production, access and dissemination of information and knowledge. The second phase of the Programme, known as PERii since 2008, offers a multi-dimensional approach across four areas: information provision, ICT training, library development and publishing. And we work with the key actors in the research communication cycle: researchers, librarians, ICT professionals, international publishers, national publishers, and networks of professional associations, academies and learned societies, research and education networks, sister NGOs, strategy and policy groups

As a small organisation we rely on our extensive network of country coordinators / coordination teams to promote and manage our activities. Coordinators ideally have a deep understanding of end-user requirements, help to evaluate, select and promote required electronic resources, and help build local capacity and aid sustainability of our activities. This approach not only informs and shapes INASP’s practice and strategy, but also enables us to work closely within each country’s national information strategy, while at the same time contributing to the development and enhancement of individual institutional and organisational capacities.

Before discussing the two models, a quick overview of our activities in 2007 will give an idea of the scale of our work:

- 1468 librarians and researchers trained from 327 institutions
- 65 training events held in 14 countries, of which 73% were managed and implemented by local partners
- Over 350 developing country journals (27,000+ abstracts) made available online
- Free and deeply discounted access negotiated to cross-discipline e-journals, e-books and databases from 48 international academic publishers and aggregators
- 989 institutions are currently registered for e-resource access
- Over 2 million full-text research papers were downloaded

Developing countries face a magnitude of problems: widespread poverty, inadequate housing and sanitation, high illiteracy rates, limited education opportunity, foreign debt, natural and man-made disasters, food shortages, heavy disease problems including HIV/AIDS, and high infant mortality. The key to solving many of these problems is acknowledged to be greater diffusion of information and knowledge. The information revolution and the development of ICT does indeed offer the opportunity to transform societal development. “By putting in place digital libraries to facilitate better information gathering, processing, distribution, access and application, Sub-Saharan countries can fill the information gaps in various sectors. By so doing they can gain from globalisation of world economy and speed up the much needed economic, social and political change” (Kavulya, 2007). While improved access to information can indeed contribute

significantly to stronger social and economic infrastructure, there are two problems that severely constrain the ability of researchers to participate fully in the global research environment:

1. Researchers and academics in the developing countries, especially in Africa, are to a large extent isolated from their peers worldwide
2. Their limited ability to communicate research results effectively means that the research that is carried out does not have the impact it might

Model 1: Access to international research

INASP has sought to address the issue of isolation by providing sustainable access, either free or deeply discounted, to international research via cross-discipline e-journals, e-books and databases from over 50 international academic publishers/aggregators on a country by country basis. This programme, originally called PERI (Programme for the Enhancement of Research Information), and now known as PERii, began in 1999/2000.

INASP partners with country coordinators who represent the research and library communities, and who identify the resources required within their country. On their behalf, we negotiate (or support local negotiation) with publishers and other content owners to obtain country-wide access to resources at a price that is appropriate for the recipient countries. Some publishers make their content free to the countries included within this programme; others are obtained for country-wide access at a discount of up to 98% on the normal subscription rates for a single US or UK institution. Following in-country trials and promotion, the coordinating teams make selections based on the needs of researchers and their budget. Promotion, monitoring and evaluation of usage are strongly advocated, so that long-term strategies for sustainability can be established.

Working with our country coordinating teams, we help to identify funds for these subscriptions (through their own government ministry and/or local library consortium), so that the content is all free at point of use.

Nearly all of the resources are available on a countrywide license basis: this means that any educational, research or non-profit institution is eligible to access them.

This Programme already offers over 25,500 e-journals (18,000+ in full text) from c. 50 publishers (including Springer, Taylor & Francis, Wiley-Blackwell) and aggregators (including EBSCO, JSTOR, Project Muse); material from 7 bibliographic and reference database providers; and over 11,000 e-books from 3 e-book publishers. Document delivery is available via the British Library. The available resources are constantly increasing as our country partners request new resources, and as new publishers join the Programme.

To achieve this goal, we have developed strong partnerships with the publishing world. The relationship is mutually beneficial: we offer new routes for the dissemination of their research materials and help them develop a greater understanding of the needs of developing and emerging countries; they for their part contribute significantly to the

programme by providing usage statistics (COUNTER compliant), support and promotional materials and, in the main, are willing to help build local capacity and offer sustainable affordable pricing. The longer term goal for both sides is increased research communication from the countries.

During 2007 a cumulative total of 989 institutions were registered for e-resource access, and a total of over 2.2 million full-text downloads were recorded. The numbers grow steadily each year as the countries improve their Internet connectivity, but also as more librarians and researchers are trained to use the resources and to work in the digital environment.

The key to the success of the programme is training to support activities associated with capacity development and sustainable access to e-resources. To this end INASP spends much time and effort in organising training workshops (either facilitated by external consultants or, increasingly, by local experts) in a wide range of associated areas and directed at different user groups – librarians, ICT professionals, and researchers. Indeed, during 2007, employing a cascaded training methodology, some 65 training events were held in 14 countries, of which 73% were managed and implemented by local partners. A total of 1,468 librarians and researchers from 327 institutions were involved.

Workshops/courses have included:

- Sensitisation – an introduction/induction to PERI
- Monitoring and evaluation of e-resources
- Working together to support research (for researchers and librarians)
- Promotion/marketing of e-resources
- Web page design for library services
- Copyright and licenses for librarians
- Bandwidth management and optimisation – importance of effective use of bandwidth available

We have learnt and continue to discover valuable lessons, namely that every country we work with has different needs in terms of: infrastructure and connectivity; e-resources required; training; funding (donor funding/self-funding) and differing models for sustainability.

We have learnt also that our approach and models have to be adaptable and scalable; that every publisher we work with is different with the length of negotiation varying greatly; and there is an absolute need to cascade availability through as many institutions to as many researchers as possible.

Before PERI/PERii, only a few affluent libraries could afford to subscribe to selected expensive e-resources but now most public university libraries in PERii partner countries are subscribing through a network at a much lower price; as a consequence less affluent libraries are now in a position to afford e-resources.

A recent evaluation of the PERI programme conducted January-March 2008 found that as a result of the programme researchers feel more confident, less demoralised and more “on a par” with their peers abroad, and also that PERI had raised the status and power of libraries/librarians within universities as they now have come to represent the conduit or gateway to powerful and extensive scholarly resources within their institutions. In addition access to these resources has supported improved teaching in university settings and lecturers feel that such access has kept their teaching fresh and current (Centre for International Development & Training, 2008).

“PERI has indeed brought about a dramatic revolution in the availability of resources for research. This has given a great boost to existing researchers, encouraged new and young people to engage in research, pushed the libraries and even network administrators to modernize their outlook, and has laid the foundation of a nationwide consortium of libraries. The usage statistics have surpassed our imagination by a very wide margin.” Abdullah Shams Bin Tariq, Country Coordination Committee, Bangladesh INASP Consortium (June 2007)

While this model successfully facilitates access to international scholarship and participation in the scholarly communication process (i.e. research into the country) it does not necessarily promote the development of local scholarly and scientific journals within the country (i.e. research out). “African authors who wish to publish locally face the problem that there are not many African scholarly journals of good quality” (Britz *et al.*, 2006). The authors also refer to other problems affecting local and regional journals: poor bibliographic control, poor marketing and distribution, level of research not always able to meet the international quality standards set by scientific journals. Ironically, the content produced in local scientific journals may be more relevant and afford more appropriate solutions than those offered in the international arena. It is for this reason that “local content is emerging as an important component in bridging the digital divide within and between countries” (Mutula, 2007). The situation has improved since 2002: “during the year 2002, African-produced content accounted for 0.4% of global web content. Of this 0.4%, South Africa generated 0.38% with the rest of Africa generating 0.02%” (Adagbasa, 2002) – but there is still a considerable way to go. It is for this reason that INASP has played a leading role in efforts to make African knowledge production more accessible.

Model 2: Access to and increase in visibility of national and regional research

INASP collaborates with publishers in developing and emerging countries to build sustainable models for their businesses, and to disseminate their publications more widely. INASP provides advice to journals wishing to publish online, including resource guides and links to suitable technologies and hosting organisations.

From INASP's experience (see below) with *African Journals OnLine* (www.ajol.info), a methodology has been developed for groups of journals to publish on community websites. This enables a cost-effective and secure methodology for online journals, which gives them greatest online visibility and discovery.

To support journals to publish online on a cost-effective, secure, and highly visible website, INASP works in partnership with the Public Knowledge Project (<http://pkp.sfu.ca/>) based at Simon Fraser University, Ontario, Canada, adapting their Open Journals System technology (<http://pkp.sfu.ca/?q=ojs>) to support the creation of websites in developing and emerging countries that can host a number of journals. INASP also works in partnership with CrossRef (<http://www.crossref.org/>), the multi-publisher linking association, to include journals within their linking network and so increase their visibility and discovery.

To develop a Journal OnLine project, INASP runs capacity-building workshops to familiarise editors and publishers with online publishing; and assists them to load their own content and to manage their editorial systems, as well as providing guidance on best use of the technology to undertake the publishing functions. This process might require as many as four separate workshops:

- A short 3-5 day workshop covering publication management issues (production, promotion, editorial management, etc.) and online strategy planning (selection of methodology, practical considerations, etc.), and introduction to the JOL methodology.
- An intensive 3 day workshop covering all aspects of how to load (publish) journal issues on the website, and how to manage a JOL (including decisions on which journals will be included, and responsibilities for administration, advocacy, etc.).
- An intensive 3 day workshop covering editing and editorial office management (selection of reviewers, management of process, etc.), and introduction to the online editorial office system provided by the JOL software.
- A short technology workshop to introduce and train IT staff in management of the system, so that they may take over responsibility of maintaining and developing the system for local needs.

As the system is used by different countries, their differing experience helps to develop the methodology and enrich the programme. Lessons learnt enable us to adapt the methodology to best fulfil in-country implementation. Support is also given to the in-country organisation to help them digitise their content and build the system locally.

Inclusion in the JOLs is free for participating countries. The JOLs are managed by INASP and hosted by PKP for only as long as a suitable host is found in-country. The platform is open source, but the journals themselves do not have to adopt the open access model, although 33 out of 45 journals on the Asia JOLS have chosen the open access route. Journal income comes from a variety of sources including print subscriptions and institutional funding. Immediate full-text indexing by Google, Google Scholar, Yahoo etc leads to increased readership and citations

There are many economic advantages to online journal publication. The journal is immediately available to subscribers and readers anywhere in the world with no distribution, mailing or handling costs. As journals can be published online with or without a print edition, this enables the low cost start up of new journals and facilitates

the growth of both new and existing journals. Online publication involves no associated cost in offering free subscriptions or sample issues, meaning the journal can use these as means of attracting new authors, editors and reviewers to the journal.

A few words about AJOL and our other JOLs:

AJOL was piloted by INASP between 1998 and 2001 and started life as a document delivery service. It was re-launched and expanded 2001- 2005 and transferred to African management in association with NISC SA in late 2005. It moved to full text online in 2007. It currently contains nearly 300 journals covering a full range of academic disciplines, amounting to over 27 000 records; each journal decides their accessibility model (open access or subscription-based) and AJOL respects & accommodates this.

In Nepal INASP has been working with Tribhuvan University Central Library (TUCL) to establish an online platform for Nepal journals called *Nepal Journals OnLine - NepJOL* (www.nepjol.info). Currently there are 23 journals listed, 56 Tables of Contents listing 887 articles. 511 of the articles are available in full text (PDF). For more information see <http://www.inasp.info/file/637/nepal-journals-online-nepjol.html>

In Vietnam, INASP has been working with National Center for Scientific and Technological Information (NACESTI), the Vietnamese Academy of Social Sciences (VASS), and Vietnamese Academy of Science and Technology (VAST) to establish an online platform for Vietnamese journals called *Vietnam Journals OnLine - VJOL* (www.vjol.info). Launched September 2007, it currently contains 18 journals, 42 tables of contents listing 518 articles (338 in full-text). For more information see <http://www.inasp.info/file/636/vietnam-journals-online-vjol.html> .

In Bangladesh INASP has been working with the Editing and Publication Association of Bangladesh (EPAB), the Bangladesh Centre for Scientific and Technical Documentation (BANDSOC), and the Bangladesh Academy of Science (BAS) to establish an online platform for Bangladesh journals called *Bangladesh Journals OnLine - BanglaJOL* (www.banglajol.info). This currently contains 13 journals, 52 tables of contents listing 779 articles (396 in full-text). For more information see <http://www.inasp.info/file/638/bangladesh-journals-online-banglajol.html>.

From our activities in this area we have learnt much: that the editors can be protective over the full-text and are not all willing to make their content freely available. For some of the JOLs, language can be an issue. For instance, with Vietnam Journals Online, the site had to be translated into Vietnamese in order to meet the needs of its target audience and to protect the integrity of the journal content.

Sustainability continues to be an issue and there is a need to explore new economic models. INASP continues to support AJOL financially, though we are working together with them to secure funding and to develop a sustainable business model.

When responsibility for loading content is transferred to the editors it makes it more challenging for INASP to collate statistics and to maintain the overall quality of the site.

We have found that introducing the editors, readers and authors to the JOLS has in many cases made them more aware of other online content.

“We believe that AJOL has greatly enhanced our visibility. Currently, we are receiving manuscripts from international authors. Congratulations for the good work and service you are offering to African journals”. **Dr. Kennedy O. Abuga, For Editor-in-Chief, East and Central African Journal of Pharmaceutical Science.**

Using these two models, backed up by a holistic approach to the development of the supporting library and information infrastructure in the countries in which we work, INASP is contributing significantly to the erosion of the scholarly communication barriers facing the developing and emerging countries.

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