JISC

Open Access

Briefing Paper Version 3: September 2008

The web has provided the means for researchers to make their research results available to anyone, anywhere, at any time. This applies to journal articles regardless of whether or not a reader's library has a subscription to the journal in which the articles were published, as well as to other types of research output such as conference papers, theses or research reports. This is known as Open Access.

Researchers publish their results to establish their own claim to the research and to enable other researchers to build upon them. In the case of journal articles, only very well-resourced institutions have been able to afford subscriptions to a significant proportion of all the scholarly journals published and so learning about and accessing such articles has not always been easy for a majority of researchers. Open Access changes all this.

What Open Access is

The Open Access research literature is composed of free, online copies of peer-reviewed journal articles and conference papers as well as technical reports, theses and working papers. In most cases there are no restrictions on their use by readers. They can therefore be used freely for research, teaching and other purposes.

What Open Access is not

There are various misunderstandings about Open Access. It is not self-publishing, nor a way to bypass peer-review and publication, nor is it a second-class, cut-price publishing route. It is simply a means to make research results freely available online to the whole research community and to other potential users of the research literature.

How is Open Access provided?

Open Access can be provided by various means. A researcher can place a copy of each article on the web via an Open Access archive or repository or can publish articles in one of the many Open Access journals. In addition, a researcher may place a copy of each article on a personal or departmental website or a wiki. Whilst all these routes to Open Access ensure that far more users can access such articles than if they were only available in subscription-based journals, the first two constitute much more systematic and organised approaches than the last two and maximise the chance of other researchers locating and reading articles.

Open Access archives or repositories are digital collections of research articles that have been placed there by their authors. In the case of journal articles this may be done either before (preprints) or after publication (postprints). This is known as 'self-archiving'. These repositories expose the metadata of each article (the title, authors and other bibliographic details) in a format compliant with an international protocol, making cross-searching of repository content easier. Access to the contents of these repositories may be via Google or via one of the specialised search services for a more focused search. Making research papers available in repositories on an Open Access basis allows for systematic harvesting of repository content worldwide, forming a database of current global research. Open Access repositories may be multidisciplinary and located in universities or other research-based institutions, or they may be centralised

Open Access is a means to make research results freely available online to the whole research community and to other potential users of the research literature

and subject-based, such as the one covering certain areas of physics and related disciplines, called arXiv. The number of Open Access repositories is growing and by the summer of 2008 there were 112 Open Access repositories in the UK, and more universities and research institutes are planning to launch their own. A list of Open Access repositories in the UK is maintained by the Directory of Open Access Repositories (OpenDOAR) and by the Eprints.org site at Southampton University. If your institution does not have a repository, extensive information on how to set one up can be found at the Repositories Support Project. If your institution is yet to establish an Open Access repository you can deposit your research paper in the Depot, a shared cross-disciplinary repository for all UK researchers maintained at Edinburgh University.

Self-archiving is becoming more commonplace and is an international movement in scholarly communication. Some grant funders such as the medical research organisations funding UK PubMed Central have now established central repositories to house the articles of their grant-holders. The Wellcome Trust and several of the UK Research Councils now require their grant-holders to deposit a copy of any publications resulting from the research they fund in an appropriate repository. Research funders' Open Access policies are available through the Securing a Hybrid Environment for Research Preservation and Access (SHERPA) Information Environment for IT (JULIET) website. A number of universities have also introduced policies of this kind and a list of institutions requiring their researchers to deposit in a repository is available in the Registry of Open Access Repository Material Archiving Policies (ROARMAP) at the Eprints.org site.

In most cases journal publishers' licensing and copyright restrictions do not prevent researchers from self-archiving their articles. Current publisher policies on self-archiving and copyright are detailed on the SHERPA project website at Nottingham University. Authors can use a 'licence to publish' to retain the rights to support self-archiving. In collaboration with the Dutch SURF Foundation, the Joint Information Systems Committee (JISC) is developing a Copyright Toolbox to assist authors in managing copyright.

Open Access journals are peer-reviewed journals whose articles may be accessed online by anyone without charge. In many cases they may also be published in print. Some, mainly those published from a university

department or with substantial subsidy, make no author or page charges. Others levy a charge for publishing an article, turning on its head the traditional model where a library pays for access to the contents of a journal through a subscription; in most cases this is financed by a research grant or institutional funds. Your institution may already have taken the decision to pay for Open Access articles to be published, or your grant-awarding body may have adopted this as one of its policies. A list of grant-awarding bodies that explicitly permit funds to be used for this purpose is maintained on the BioMed Central website. The Full Economic Costing Model in use in the UK allows publication charges to be included in the calculation of the indirect cost of research in the same way as journal subscriptions paid by libraries. Many publishers now offer their authors the option of paying a publication charge to make a particular article Open Access, even if the remainder of the journal is only available on subscription. Growing interest amongst publishers in an Open Access business model that is proven to be sustainable has been matched by interest from academic groups and librarians in finding a model which provides the benefits for readers and researchers from higher use of journal literature as well as enabling high-quality journals to continue publication with price rises occurring at a lower rate than under the present journal business model. Currently the largest initiative of this type is SCOAP3, the Sponsoring Consortium for Open Access Publishing in Particle Physics.

A comprehensive list of Open Access journals in all subject areas is maintained by the University of Lund. In the summer of 2008 this list contained over 3,300 journals. Many of these Open Access journals have impact factors and are indexed by the Institute for Scientific Information for its Web of Knowledge/Web of Science service.

Why should authors provide Open Access to their work?

There is accumulating evidence that shows that research articles that have been self-archived are cited more often than those that have not. A bibliography of studies on 'The effect of Open Access and downloads ("hits") on citation impact' is maintained by the Open Citation Project. More citation data has to be collected but across most subject areas the evidence to date shows an average twofold increase in citation rate. In some subject areas it is even higher.

Making research publications Open Access means that research has greater impact than has been achieved in the past. Moreover, the research cycle – where work is published, read, cited and then built upon by other researchers – is enhanced and accelerated when results are available on an Open Access basis. Open Access makes it easier to discover previous relevant research, not only avoiding duplication in future research but also assisting future researchers to build upon past studies. Innovative collaborations between publicly funded and commercial research organisations can develop when research papers from academic organisations are openly available.

Academic institutions are also finding Open Access repositories valuable in generating management information and reports on their research programmes and in raising awareness of their research profile. When authors deposit copies of their research papers in an institutional repository, the repository acts as an advertisement for the institution. Studies are also underway on the wider economic impact of Open Access to research publications following initial research by John Houghton and Peter Sheehan of Victoria University, Melbourne.

Further information on JISC's Open Access initiatives

JISC's **Repositories and Preservation programme** is evaluating and exploring different mechanisms for the sharing of access to and preservation of institutional resources
www.jisc.ac.uk/reppres

The JISC **Scholarly Communications Group** looks at the way research and teaching outputs can be used effectively by researchers, teachers, learners and other innovators
www.jisc.ac.uk/aboutus/committees/working_groups/scholarly_comms

The JISC **Journals Working Group** includes in its work programme activities relating to both subscription and Open Access journal models
www.jisc-collections.ac.uk/workinggroups/journals

The first version of this paper was written by Alma Swan of Key Perspectives Ltd on behalf of JISC and changes were incorporated by Frederick Friend in July 2008. It has been produced and edited by Dicky Maidment-Otlet and the JISC Communications and Marketing Team.

Alternative formats of this briefing paper can be found at: www.jisc.ac.uk/publications

Further Information and Resources

Open Access archives or repositories

OpenDOAR Directory, a list of Open Access repositories in the UK
www.opendoar.org

Eprints.org
www.eprints.org

Repositories Support Project
www.rsp.ac.uk

The Depot
http://depot.edina.ac.uk

UK PubMed Central
http://ukpmc.ac.uk

Research funders' Open Access policies, available from the SHERPA JULIET website
www.sherpa.ac.uk/juliet

ROARMAP registry of institutional archiving policies
www.eprints.org/openaccess/policysignup

Publisher policies on self-archiving and copyright
www.sherpa.ac.uk/romeo.php

JISC and SURF Foundation Copyright Toolbox
http://copyrighttoolbox.surf.nl/copyrighttoolbox

Open Access journals

List of grant-awarding bodies that make funds available for the payment of publication fees
www.biomedcentral.com/info/about/apcfaq

BioMed Central, the largest Open Access journal publisher
www.biomedcentral.com

SCOAP3 consortium
www.scoap3.org

List of Open Access journals in all subject areas
www.doaj.org

OAIster, an Open Archive search engine
www.oaister.org

Citebase, another Open Archive search engine
http://citebase.eprints.org/cgi-bin/search

SHERPA project
www.sherpa.ac.uk

Permissions policies by publisher
www.sherpa.ac.uk/romeo.php

Permissions policies by journal
http://romeo.eprints.org

The Public Library of Science
www.plos.org

Open Access citation and impact studies

The Open Citation Project's bibliography of studies into the effect of Open Access and downloads
http://opcit.eprints.org/oacitation-biblio.html

'Free online availability substantially increases a paper's impact' by Steve Lawrence
www.nature.com/nature/debates/e-access/Articles/lawrence.html

'Worldwide Use and Impact of the NASA Astrophysics Data System Digital Library' by Michael Kurtz
http://cfa-www.harvard.edu/~kurtz/jasist1-abstract.html

'The Bibliometric Properties of Article Readership Information' by Michael Kurtz
http://cfa-www.harvard.edu/~kurtz/jasist2-abstract.html

'Comparing the Impact of Open Access (OA) vs. Non-OA Articles in the Same Journals' by Harnad and Brody
www.dlib.org/dlib/june04/harnad/06harnad.html

'The Economic Impact of Increased Access to Research Findings' by John Houghton and Peter Sheehan
www.cfses.com/documents/wp23.pdf

Other Open Access resources

The Scholarly Publishing and Academic Resources Coalition (SPARC)
www.arl.org/sparc

SPARC Open Access Forum
www.arl.org/sparc/soa/#forum

American Scientist discussion forum (mainly for researchers)
http://amsci-forum.amsci.org/archives/American-Scientist-Open-Access-Forum.html