research information network

Getting your feet wet: An introduction to Open Access

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Introduction

Creating, using, sharing and accessing information is an integral part of the research process. Technological change has brought – and continues to bring – profound changes in the roles that researchers, research institutions, publishers, libraries and other intermediaries play in disseminating and providing access for researchers to information resources of various kinds, in their goals and expectations, and in the services they provide and use.

Researchers now have 24/7 access to greater volumes of research literature than ever before; but we are still far from a position where every researcher who needs it has ready access to all the literature that may be relevant to their research. And the current economic difficulties bring with them the risk that library budgets will be cut, and that some of the advances in access over recent years will be reversed. Hence we are seeing a continued growth of interest across the world in the moves made in recent years to stimulate an 'open access' environment, where all research outputs will be available to everyone free of charge at the point of use.

What is open access?

The key goals of the open access movement have been set out in a series of statements starting with the Declaration of the Budapest Open Access Initiative in 2002, then the Bethesda Statement on Open Access Publishing, and then in 2003 the Berlin Declaration on Open Access to Knowledge. Though there are minor differences between these statements, the key points are the same: open access (OA) means that scholarly literature is made freely available on the internet, so that it can be read, downloaded, copied, distributed, printed, searched, text mined, or used for any other lawful purpose, without financial, legal or technical barriers, subject to proper attribution of authorship.

In the UK, the OA movement developed momentum with a report published in 2004 by the House of Commons Science and Technology Committee which recommended that the Research Councils review their policies. Following statements from Research Councils UK in 2005 and 2006, individual research councils began to require researchers to deposit articles published in journals or conference proceedings in an appropriate repository, from where they could be accessed by anyone who wished to do so. Many other research funders in the UK, including the Department of Health, have developed similar policies, and the Wellcome Trust has been particularly active in promoting open access publishing. The EU has instituted an open access pilot for much of the work to be funded under the FP7 programme. Details of individual research funders' policies can be found on the JULIET website (www.sherpa.ac.uk/juliet).

Routes to open access

There are two basic routes through which researchers can make their work freely available: the **gold route** or the **green route**.

Following the **gold route** means that researchers publish their articles in journals that offer 'open access' publishing, by making articles available free of charge to readers immediately on publication, usually in return for the payment of a fee – sometimes called an 'author-pays' fee. Some journals, such as those published by the Public Library of Science (PLOS) and BioMedCentral (BMC) operate wholly on an OA basis. Other publishers have a 'hybrid' model, where journals continue to operate on the traditional subscription-to-read basis, but authors have the option to pay a fee, in which case their article will upon publication be made freely available to all.

Following the **green route** (also known as self-archiving) means that researchers deposit in an institutional or subject-based repository copies of the articles they publish, whether in an open access journal or a traditional journal that requires a subscription from readers or their libraries. The repository will then make those copies available to anyone who wants to read them, either immediately upon publication or after an embargo period (usually of 6-12 months) designed to cushion the impact on the journal's subscription revenues.

Most universities in the UK have now set up institutional repositories. Subject-based repositories have also been established, for instance UK PubMed Central in the life sciences and arXiv in physics. Relatively few institutional repositories are as yet well-stocked with journal articles; but open access advocates hope that this will change as individual institutions begin to introduce policies that require their researchers to deposit their articles.

Payment of author-side fees

To help researchers cover the cost of publishing via the gold route, some funders such as the Wellcome Trust provide researchers with additional funding on top of their grant. For researchers funded by one of the UK research councils, there is the possibility of covering the costs of publishing either as 'directly incurred costs' in their grants or as institutional 'indirect costs' under the full economic costing regime.

The arrangements adopted by different funders and institutions vary considerably, however, and you can find more information in the RIN/UUK publication 'Paying for open access publication charges' (www.rin.ac.uk/files/Paying_open_access_charges_guide_March_2009.pdf)

> 'Open access publishing, accompanied by the need to pay publication fees, is a significant and growing part of the research communications landscape'

So why should you publish in an open access journal or deposit your work in a repository?

The RCUK statement in 2005 sets out four principles. The first of these is that 'Ideas and knowledge derived from publicly-funded research must be made available and accessible for public use, interrogation and scrutiny, as widely, rapidly and effectively as practicable'. Open access is a means of putting that principle into practice: anyone who has access to the internet, anywhere in the world, can get access to researchers' findings.

A number of studies have indicated that open access leads to more people reading your work, and to a greater likelihood that it will have an impact, both within the research community and more widely. That means that other researchers, and also people and organisations in society at large, can learn about and build on your work, increasing the efficiency and effectiveness of the research process as a whole. For you personally, there is also evidence that open access leads to more (and more rapid) citations. The evidence is not yet conclusive, since there are suggestions that at least some researchers tend to put only their best work into institutional repositories. Nevertheless, making your work OA will certainly make it available to more people, more quickly, than if it remains behind a subscription barrier.

Open access and peer review – does one exclude the other?

The second of the RCUK principles is that 'published research outputs must be subject to rigorous quality assurance, through effective peer review'. Some researchers are concerned that open access means by-passing the peer review process. But that is not so. Quality assurance through peer review is at the heart of scholarly publishing, and that will remain the case. Some research communities, notably in physics and economics, have for many years circulated pre-prints and working papers, and these are rigorously commented on and checked before they are formally published. Repositories are setting up systems to make clear which of their contents have been subject to peer review and which have not.

Have your say

The Research Information Network aims to increase the understanding and awareness of changes in the information and scholarly communications landscape, to enable libraries, publishers, universities, funders and others to develop efficient and effective services for researchers. To do this, we need your support and input: how are the changes in information services affecting you? What are your thoughts on the Open Access movement? How will it directly affect your own work? We would like to hear from you.

If you'd like to keep up with our latest work, sign up to our monthly e-news by emailing contact@rin.ac.uk and you can follow us on Twitter at research_inform or branwenhide. We run a programme of events throughout the year; visit www.rin.ac.uk/events-menu for the latest details.

Resources

Open Access Statements and Papers

Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities
www.zim.mpg.de/openaccess-berlin/berlin_declaration.pdf

Bethesda Statement on Open Access Publishing
www.earlham.edu/~peters/fos/bethesda.htm

Budapest Open Access Initiative (BOAI)
www.soros.org/openaccess

House of Commons Science and Technology Committee Scientific Publications: Free for all? Tenth Report of Session 2003 04
www.publications.parliament.uk/pa/cm200304/cmselect/cmsctech/399/399.pdf

JISC Open Access Briefing Paper Version 2 – Briefing paper on open access
www.jisc.ac.uk/publications/documents/pub_openaccess_v2.aspx

Open Access and Scholarly Communication, Jennifer Crow, San Jose State University
http://infosherpas.com/ojs/index.php/openandlibraries/article/viewFile/18/30

Open Access Publishing and Scholarly Societies, Open Society Institute, July 2005
www.soros.org/openaccess/pdf/open_access_publishing_and_scholarly_societies.pdf

Scientific publishing in transition: an overview of current developments, Mark Ware Consulting September 2006
www.stm-assoc.org/2006_09_01_Scientific_Publishing_in_Transition_White_Paper.pdf

Mandates and Guidelines

Department of Health Open Access Policy Statement
www.nihr.ac.uk/research/Pages/Research_Open_Access_Policy_Statement.aspx

ERC Scientific Council Guidelines for Open Access
http://erc.europa.eu/pdf/ScC_Guidelines_Open_Access_revised_Dec07_FINAL.pdf

JULIET – Research funders' mandates and guidelines www.sherpa.ac.uk/juliet/index.php

Open Access Pilot in FP7 ftp://ftp.cordis.europa.eu/pub/fp7/docs/open-access-pilot_en.pdf

Paying for open access publication charges (RIN 2009)
www.rin.ac.uk/openaccess-payment-fees

RCUK Access to Research Outputs www.rcuk.ac.uk/research/outputs/access/default.htm

RCUK position statement on access to research outputs (RCUK, 2005)
www.rcuk.ac.uk/research/outputs/access/2005.htm

ROARMAP - Registry of Open Access Repository Material Archiving Policies
www.eprints.org/openaccess/policysignup/

ROMEO – Publishers' copyright & archiving policies www.sherpa.ac.uk/romeo

The Wellcome Trust, A Guide to Open Access
www.wellcome.ac.uk/stellent/groups/corporatesite/@policy_communications/documents/web_document/wtx030576.pdf

Repositories and Directories

arXiv – repository covering physics, mathematics and computer science http://arxiv.org

DOAJ – Directory of open access journals www.doaj.org

Open AIRE – Open Access Infrastructure for Research in Europe www.openaire.eu

OpenDOAR – worldwide Directory of Open Access Repositories www.opendoar.org

Repositories Support Project (RSP) – A JISC initiative to support the development and growth of the UK repositories network
www.rsp.ac.uk

SHERPA Search – simple full-text search of UK repositories www.sherpa.ac.uk/index.html

UKPMC – free online digital archive of full-text, peer reviewed research publications for the life sciences based on PubMed Central (PMC)
http://ukpmc.ac.uk

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Open Data Commons www.opendatacommons.org

Open license www.opendefinition.org/guide

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