

Open Access in Australia

The Australian scholarly community has not embraced orthodox Open Access, in terms of free and unrestricted availability of peer-reviewed journal literature, with great alacrity so far. There is, however, considerable support for a broader interpretation which encompasses all research outputs not just publications. There has been strong support for Open Access (as the term has been used in this volume) from the library profession and some individual scholars, most academics generally remain either unaware or unconvinced of the concept, or they are unable or unwilling to participate.

Acceptance has been affected also by indifference on the part of key national funding authorities and scholarly associations. The most prestigious Australian academies do not have Open Access policies even though the National Academies Scholarly Communications Forum has promoted scholarly communication issues including Open Access. The Australian Vice-Chancellors' Committee and the major government research funding agencies (Australian Research Council and the National Health and Medical Research Council) likewise make no public show of support. Even those organisations which have developed Open Access statements tend to hide them in the deep, dark recesses of their websites (Council of Australian University Librarians, 2004; Group of Eight, 2004; Department of Education, Science and Training, Australian Research Information Infrastructure Committee, 2004).

Open Access has yet to be regarded as a systemic priority by Australian policy and funding agencies. There has been a tendency to regard it as a 'library issue' due to an initial association with the escalating cost of journals. The continuing focus on journal articles reinforces that notion and may be inhibiting opportunities for more pervasive change in the way in which scholarly information and ideas are communicated.

Like their colleagues elsewhere, Australian academics are expected to disseminate their research through refereed international publications as a benchmark of quality and as an indicator of individual and institutional performance. This is unlikely to change in the short term and a proposed revision of the Australian research quality assessment process maintains the hegemony of traditional publishing formats. The Research Quality Framework proposal does not signal any intent to mandate Open Access to publicly-funded research outcomes. International rankings of universities, such as the World University Rankings published in the Times Higher Education Supplement, and the Academic Ranking of World Universities by Shanghai Jiao Tong University, also reinforce the role of traditional publication. Acceptance of Open Access would be enhanced if research assessment rankings included criteria recognising the contribution and impact of Open Access.

There are thirty nine Australian universities of which two are private institutions. All of the universities, however, receive some government funding and the majority of their research funding originates from the public purse. There are four significant research agencies which are also publicly funded: the Commonwealth Scientific and Industrial Research Organisation (CSIRO); the Australian Institute of Marine Science; the Defence Science and Technology Organisation; and the Australian Nuclear Science and Technology Organisation. In addition, there is considerable applied

research undertaken by government departments and agencies. The majority of scholarly publishing, however, is associated with the universities.

Australia does not have a large scholarly publishing industry. CSIRO has a commercial press which publishes monographs and a range of journals. A number of universities and societies also undertake publishing through a mix of formal imprints and more ad hoc arrangements. The bulk of refereed publication, however, occurs through international scholarly societies and commercial publishers.

Many Australian academics now have personal websites which often include details of their publications but few provide links to the full-text. The time involved in providing full-text, especially of older publications, is not generally perceived to be worth the effort. The barriers are reduced where central support is provided for authors to use an institutional repository. Barriers are reduced further once repository statistics reveal the extent of use (see Sale, this volume).

Fourteen universities currently have publicly available repositories containing digital versions of journal articles authored by their staff. These repositories contained over 9,000 items in January 2006. The bulk of items (7,000+) were concentrated in three repositories where considerable author support has been provided to assist deposit. What is significant is that over 40% of the repositories have been implemented within the last twelve months and that more are planned. To date, only the Queensland University of Technology has mandated Open Access to a range of published research outputs.

The establishment of institutional repositories and the implementation of Open Access have been delayed by a range of factors. These include the availability of staff expertise, access to appropriate technical infrastructure, acceptance by the academic community and uncertainty about the long-term sustainability of repositories. Some of these issues have been addressed by initiatives funded by the federal Department of Education, Science and Training. Others will be resolved as individual institutions reach a state of readiness or external pressures are applied through government requirements such as the research quality assessment process.

There is growing support among academics and research funding bodies for the provision of facilities which apply the Open Access ethos to a wide range of scholarly outputs not just journal publications. This approach is perceived to meet national and individual needs more appropriately. It has the potential to provide an holistic view of research endeavour by providing access to the data supporting research as well as the outcome synopsis represented by the journal article or other publication.

In 2002, the Australian Federal Government adopted and funded an innovation programme related to excellence in research, science and technology: Backing Australia's Ability. Part of the programme funding was reserved to support the development of research information infrastructure components at a systemic level including:

- improved access by Australian researchers to the information need to carry out research;
- facilities to make the results of Australian research widely available and easily accessible.

Funding has been made available to support a number of projects aimed at providing Open Access, in its broadest sense, to Australian research. Projects were chosen for their potential to:

- develop principles to increase the accessibility of research information;
- promote standards-based approaches to information discovery, storage and sharing;
- demonstrate practical integrated information management solutions;
- promote cross institutional, cross sectoral and trans-national cooperation in research information management
- improve access to key information resources, including major research data sets and databases of research publications
- advocate the advantages offered by an improved information infrastructure.

Projects were also assessed to determine their capacity to support the Open Access Statement developed by the Australian Research Information Infrastructure Committee (Department of Education, Science and Training, Australian Research Information Infrastructure Committee, 2004). Although criticised in some quarters for its lack of orthodoxy, the Statement reflected the need for a broad policy foundation to underpin investment in systemic infrastructure supporting the maintenance, dissemination and preservation of research information created by Australian scholars. It also reflected a perceived need to support more innovative approaches to scholarly communication if Australian research were to improve its level of international impact.

The universities and the two major research funding agencies support the storage and retention of relevant data for at least five years after the publication of research results. The agreed guidelines advocate, “Wherever possible, original data must be retained in the department or research unit in which they were generated. Individual researchers should be able to hold copies of the data for their own use. Retention solely by the individual researcher provides little protection to the researcher or the institution in the event of an allegation of falsification of data.” (National Health and Medical Research Council and Australian Vice Chancellors' Committee, 1997). Systematic adherence to the guidelines has rarely been enforced and there is increasing awareness that the non-availability of data relating to previous research can require unnecessary duplication of effort.

Of the projects supported by the Department of Education, Science and Training from systemic infrastructure funds, six are directly related to developing facilities which will enable universities to provide Open Access to their research outcomes:

- Australasian Digital Thesis Program (ADT)
- Australian Partnership for Sustainable Repositories (APSR)
- Australian Research Repositories Online to the World (ARROW)
- Dataset Acquisition, Accessibility and Annotation e-Research Technology (DART)
- Open Access to Knowledge Law (OAK Law)
- Regional Universities Building Research Infrastructure Collaboratively (RUBRIC)

Twenty eight universities currently provide open access to research higher degree theses through the Australasian Digital Thesis Program which is a program of the Council of the Australian University Librarians. A total of 5,391 full text files were available in mid-January 2006 with bibliographic details provided to a further 11,687. By the end of 2006, access to the bibliographic records of more than 130,000 theses will be provided. Several universities are in the process of scanning microfilm copies of older theses which will increase the full-text corpus significantly. To date, ten institutions have mandated the inclusion of new theses but implementation of the mandate has been of varying success.

The ARROW and APSR projects have been focused on demonstrating the feasibility of using open source software to establish institutional repositories capable of providing Open Access to a broad spectrum of digital objects which are likely to be produced, or required, as part of the research process. The RUBRIC project has been funded to support smaller universities to establish institutional repositories using products tested or developed by ARROW and APSR.

All of the repository projects build on earlier initiatives and take advantage of, and contribute to, international activities. Not 're-inventing the wheel' is regarded as essential if optimal use is to be made of limited funding. Selection of projects has included consideration of the extent to which the outcomes of prior or concurrent projects are utilised. Funding is generally not granted for the development of new repository software but has been made available for contributing to software refinement as part of international collaborations.

The universities which have implemented institutional repositories have used a mix of software solutions (see AUSE Access University Policies). The initial adopters used the Eprints software but there are now installations using FEZ-Fedora, VTLS-Fedora, DSpace, and Digital Commons@ as well as other proprietary content management systems.

As part of the ARROW project, a national resource discovery service has been developed which is capable of searching across Australian institutional repositories irrespective of their operating software, providing they comply with the OAI-PMH.

The OAK Law project will develop a set of legal protocols and generic licenses that can be used across universities to facilitate and break down barriers to Open Access to copyright material. The project will also develop best practice guides for managing copyright issues and a Rights Expression Language that can be used to enhance technologically Open Access to existing and proposed electronic stores of research and other data.

Complementary to the repository projects, is MAMS (Metadata Access Management System), which aims to provide the integration of multiple solutions for managing authentication, authorisation and identities. The project also seeks to bring together common services for digital rights, search services and metadata management.

An interpretation of Open Access based on the content of institutional repositories is likely to dominate in Australia well into the future. Monash, Sydney and the Australian National Universities have already established e-presses to facilitate the

publication of repository content. Swinburne and the University of Technology Sydney are among those universities which are using repository content to publish online Open Access journals.

The broader interpretation of Open Access is not without its difficulties. Establishing repositories of this kind requires skills and resources currently not available at every university. It is also significantly more costly than an e-print archive. The successful implementation of a national system of institutional repositories will require continued collaboration within and between institutions nationally and internationally. It will also require continued support from government to ensure the provision of a robust national information infrastructure and support for changes in institutional intellectual property policies.

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