Scholarly communications and data

Level: Awareness

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Web link: www.ands.org.au/guides/scholarly-communications-awareness

Who should read this?

This is likely to be of interest to all those associated with the creation and management of data and the administration of research.

What do we mean by scholarly communications?

The term scholarly communications covers all the activities associated with research: from the collection and analysis of data (including published information) through its transformation into publications or other outputs, and its dissemination and preservation for subsequent use by others. Throughout the scholarly communication process a number of people play a role including researchers, publishers, librarians and data managers.

Scholarly communications are more than just publications. Recently, there has been recognition that data, techniques, algorithms and software, referred to as non-traditional research outputs (NTRO) are key components of research. Both nationally and internationally, NTRO are increasingly being regarded as ‘first-class’ outputs of research and in some disciplines, data is the primary research output and access to it is being required by funders, publishers and institutions.

Why is it important to get scholarly communications right?

Scholarly communications can help raise the profile of researchers and research institutions as well as contribute to the growth of the nation. In December 2015 the Australian Government released two related initiatives, the National Science and Innovation Agenda (NISA) and the Public Data Policy Statement (PDPS).
“Australia’s capacity to remain competitive in the digital economy is contingent upon its ability to harness the value of data.” (Public Data Policy Statement, 2015)

The underlying premise of the new policies is that data which has been paid for using public money is now to be considered an asset with potential benefits for researchers, business and beyond. NISA has many references to data and the opportunities around its clever reuse. The PDPS also recognises those benefits cannot be fully realised without proper data management, standards, licenses, repositories and services, to ensure the data, including both the data behind the administrative functions of government as well as the data that comes from publicly funded research, can be discovered, shared and reused effectively. This will ultimately benefit:

- the researcher by potentially proving their scholarly impact and reach through discovery and attribution
- the research community by facilitating access to data for verification and reuse
- the Australian and global economies.

**Best practice in scholarly communication**

There are a number of initiatives which are designed to improve scholarly communications.

- **Data:** Access to data to enable reuse, verification or checking has government and institutional support through initiatives designed to improve data management and storage. There are increasing requirements from researcher funding bodies or from journal publishers for data to be made public, or at least its existence known. Attribution of data outputs is made possible where unique identifiers such as Digital Object Identifiers (DOI) are attached to the data collection. There are sometimes legitimate reasons for data not to be made available, which include privacy, ethical, security or commercial concerns.
- **Connectivity:** Linking all stages of the research process through identifiers such as Grant ID, DOIs, and ORCIDs aids discovery, reuse and attribution. This ultimately provides the researcher with an effective tool to gauge scholarly impact through tracked metrics and altmetrics.
- **Publications:** Researchers are being encouraged to make their publications open access ensuring online access with minimal restrictions. The significant benefit for researchers in making their work available this way is the potential increase in citation rates. There are many publication models which allow for open access, while still maintaining quality control through peer review; these include:
  - self-archiving of journal articles in institutional repositories
  - original publication in journals which permit open access, either because the journal is available without subscription or because the author has paid for the article to be made available as open access in a commercial journal
  - original publication of monographs through an electronic press which supports open access. One example is the ANU Press, supported by the University and designed to facilitate staff publishing.
  - finding novel ways to promote research outputs such as through social networking sites (SNS). Altmetrics track the number of article views, number of downloads, and social media ‘likes’ and recommendations. These can be early indicators of the impact of data, before the long tail of formal citation metrics can be assessed.
- **Copyright and intellectual property issues** are being addressed through developments such as Creative Commons. Creative Commons licenses allow the creators of copyright to make their content available to others under conditions which cover attribution, use for noncommercial or commercial purposes, and the creation of derivative products and their use. The more open the license the more reusable the product.
Addressing concerns in scholarly communication

If the scholarly communication system is not working effectively it could have an impact on the productivity and efficiency of the research effort. Below are some considerations:

1. Cost: Costs are incurred if an individual is required to pay for using data, copyright-protected material or the storage and preservation of data as the research community works towards a more open culture these costs may start to reduce. Researchers can work with their institution to get the most cost effective storage solution while still providing open access.

2. Access: In order for scholarly communications to proceed unhindered, researchers need to be able to find and freely access all the resources they need in a timely manner. Currently access may be limited due to poor curation of datasets, costs associated in accessing third party data, time taken to find data, or ethical or privacy reasons. Many of these issues can be address by storing research outputs in an appropriate open access repository that ensures the collection is well described to facilitate discovery, access and reuse.

3. Copyright: Researchers often are not aware of how best to manage their copyright. Many scholarly journals ask researchers to transfer their copyright to the journal owner, which can prevent the reuse of the material in other forms. Creative Commons licenses allow researchers to prescribe the terms and conditions to which their publications and data can be used and how it should be attributed.

4. Quality: It is important to researchers that the information resources they use are trustworthy and of high quality. The main mechanism for quality control of publications is peer review, whereby journal articles are subject to assessment by other researchers or experts in the field. In the case of monographs, publishers and editors have an important role to play. In the case of datasets, data integrity is maintained through good curation and management. Data must be well described and not corrupted in any way to ensure reliability and this can be managed by using an appropriate data repository.

For further information

There is much written about the scholarly communications lifecycle and the issue of open access.

Open Access to Scholarly Communication in 2016: Status and Benefits Review, UNESCO
Themes from the Literature and Implications for Library Service Development, ARL.

Feedback?

We welcome your feedback on this guide. Please email contact@ands.org.au with any comments or questions.
About ANDS

The Australian National Data Service (ANDS) makes Australia’s research data assets more valuable for researchers, research institutions and the nation.

ANDS is a partnership led by Monash University in collaboration with the Australian National University (ANU) and the Commonwealth Scientific and Industrial Research Organisation (CSIRO). It is funded by the Australian Government through the National Collaborative Research Infrastructure Strategy (NCRIS).

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