



Scholarly Communication: Science Librarians as Advocates for Change

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Abstract

Science librarians are in a unique position to take a leadership role promoting scholarly communication initiatives and to aid in making scientific information more accessible. This article outlines steps and identifies resources that science librarians can employ to become scholarly communication advocates on their campuses.

Introduction

The trend in dramatically rising subscription costs for scientific, medical, and technological (STM) journals began more than 30 years ago, and for some time was seen primarily as an economic issue. Prices rose, for some titles more than 20% per year, and library budgets remained flat. No science librarian escaped the hard decisions and difficult choices each time serial cuts and cancellations were mandated.

As this trend dragged on, it gave birth to a broader set of issues beyond serial prices. What we once saw as purely a "journal" crisis became to be viewed, in a broader context, as a crisis in scholarly communication. We began to realize, particularly as new online communication and distribution channels developed, the problem was not only economic, but encompassed a complex set of issues that includes legislation, public policy, authors rights, institutional repositories, access to scholarship, and new publishing models.

The current focus on these issues is crucial to science librarians for a number of reasons:

- journals remain critical to the research and teaching of science faculty;
- science journals remain the most costly;
- science faculty continue to publish extensively in subscription-based commercial and society journals;
- science faculty pursue grant funds from federal agencies that result in peer-reviewed publications to disseminate the research;
- tenure/promotion of science faculty depends to a large extent on journal publishing.

It is our view that the range of issues being addressed under the umbrella of scholarly communication offers tremendous opportunity to expand access to scientific information. As science librarians, it is important for us to be familiar with these issues, and able to act as scholarly communication advocates and agents for change at our institutions. With that goal in mind, the authors will outline steps and identify resources that science librarians can employ to be informed, prepared, and most importantly, committed to work with faculty and administrators to change the landscape of scholarly communication.

Steps to Scholarly Communication Advocacy

Become Familiar with the Issues

Scholarly communication encompasses a wide range of topics, and it is important for science librarians to have a good grasp of the issues. The recent article "Scholarly Communication: Turning Crisis into Opportunity" traces the evolution of scholarly communication and identifies sources for additional information ([Stemper & Williams 2006](#)). Web sites below are useful for tracking current developments and exploring specific aspects of scholarly communication.

Create Change

<http://www.createchange.org/>

Provides resources and tools for libraries to use and adapt in order to facilitate discussions with faculty and administrators

SPARC e-NEWS

<http://www.arl.org/sparc/publications/enews/index.html>

Provides the latest information on SPARC publisher partners and key industry developments that have an impact on scholarly communication.

ARL Summer Brown Bag Discussion Series: Issues in Scholarly Communication

<http://www.arl.org/sc/brownbag/>

Six guides that provide discussion questions and resources as a starting point to holding discussions with library staff and faculty.

ACRL Scholarly Communication Toolkit

<http://www.ala.org/ala/acrl/acrlissues/scholarlycomm/scholarlycommunicationtoolkit/toolkit.htm>

Designed to support advocacy efforts and provide information on scholarly communication for librarians, faculty, and campus administrators. Contains talking points on various scholarly communication issues.

SHERPA-RoMEO Project

<http://www.sherpa.ac.uk/romeo.php>

Provides brief summaries of self-archiving policies from over 300 journal publishers.

OpenDOAR (Directory of Open Access Repositories)

<http://www.opendoar.org/>

Directory of over 900 repositories worldwide. Search and browse by geographic area, subject, content type, and software platform.

Directory of Open Access Journals (DOAJ)

<http://www.doaj.org>

Covers more than 2,700 free, full-text, quality-controlled scientific and scholarly journals. More than 800 of these journals are also searchable at the article level.

Libraries and Scholarly Communication, University of California Libraries

<http://libraries.universityofcalifornia.edu/scholarly/>

A good example of what a large university library system is doing to promote scholarly communication. Includes a case study on creating and implementing a scholarly communication program and outreach toolkits with talking points.

Make it Part of Your Job

Include some aspect of scholarly communication in your annual goals, and work toward making it part of your position description. At the University of Minnesota Libraries, scholarly communication responsibilities are included in the position descriptions of librarians in addition to the usual elements of reference, collection development, instruction and liaison ([Williams 2007](#)). Consider these responsibilities:

- Educate and inform faculty, graduate students, and campus administrators about scholarly communication issues.
 - Help faculty and graduate students to understand their rights as authors
 - Contribute content to copyright and/or scholarly communication web sites
- Advocate for sustainable models of scholarly communication
- Support and promote the Institutional Repository on campus:
 - Help administrators, faculty, and students understand the role of the IR in building and preserving digital collections
 - Work with faculty and departments to promote the IR as an open access tool
 - Assist in content recruitment; Identify digital resources that require long-term preservation and merit sustained access

Be a Role Model

Librarians are typically more familiar with scholarly communication issues than teaching faculty and administrators and are poised to take a leadership position to put scholarly communication ideals into practice. Yet, in a 2005 survey of ten academic research libraries, it was found that library faculty authors don't always practice what they advocate to their university colleagues. "When asked if they considered copyright and intellectual property policies when selecting a journal for article submission, 50 percent of the respondents indicated that their only concern was to have the article published." Only 12 percent indicated that they archived their articles in an institutional repository ([Carter et al 2007](#)). Serve as a role model for others by incorporating these practices:

- Publish your scholarly work in open access journals. Open access journals are peer-reviewed journals that provide free online access to their articles. Currently, there are 78 open access journals listed under Library and Information Science in the [Directory of Open Access Journals](#). Check out other subject areas as well.
- Retain or negotiate your copyright by employing [Creative Commons licensing](#) or the [SPARC Author Addendum](#). The Science Commons has also created the [Scholar's Copyright Addendum Engine](#) which generates a PDF form that can be attached to a publisher's copyright agreement to ensure that certain rights are retained.
- Self-archive your scholarly work in your campus institutional repository or a disciplinary repository, such as [E-LIS](#), the International Archive for Library and Information Science. Check [OpenDOAR](#), the Directory of Open Access Repositories, for other possibilities.

Hold Focus Groups

Faculty focus groups are an excellent forum in which to discuss scholarly communication, and will help to identify which issues are most important to your faculty. Focus groups are best done with no more than five to six faculty who are known to have a strong interest in the library or in scholarly communication issues. At Kansas State University, 90 minute sessions are planned that include a short overview of the issues. A facilitator asks prepared questions, but faculty are encouraged to talk and discuss issues freely. You will learn a lot about how faculty view the scholarly communication system, and they in turn, learn from each other.

Question High-Cost Journals

Identify the high-cost journals in your discipline and determine if high quality open access journals are available as substitutes. Consider cancelling journals whose high costs cannot be justified. Check [SPARC Alternative Publisher Partners](#) and the [Directory of Open Access Journals](#) for journal titles that are published as alternatives to high-cost journals and are freely available or lower cost. Many have citation rates and impact factors that are equivalent to or better than their commercial counterparts. Determine if any open access science journals are being published or

edited on your campus. If so, the editor will likely be a strong ally in promoting scholarly communication issues at your institution.

Encourage Faculty to Publish in Open Access Journals

Encourage your library to subsidize faculty/researcher publishing in open access journals or hold institutional memberships that enable publishing at reduced cost. Many libraries hold institutional memberships to BioMed Central or the Public Library of Science, or subscribe to publications such as the *Proceedings of the National Academy of Science* (PNAS) that offer discounts on author publication fees as a benefit of membership. Find out if your library holds these memberships. If these are available on your campus, publicize this information on a prominent web page and talk to your faculty to let authors know about these benefits. Talk to the library dean or director to suggest that the library offer subsidies for publication fees in order to encourage authors to publish in these journals.

Support New Publishing Models

Many university libraries now offer electronic publishing as part of their scholarly communication services. Suggest that the library publish books, conference proceedings, digital collections or open access journals. Is there a role your library can play in supporting a local open access publisher? Are there special science collections that could be digitized or preserved? Have you explored opportunities to package and disseminate science collections? This involves much collaboration with faculty and library staff and the development of low cost, scalable operations to implement. See the [SPARC](#) list of journal management software and other publishing resources for more information.

Stay Current

Read, follow and support government and private initiatives that require open, public access of research publications, especially those that are a result of federally-funded research. To stay current, read the [SPARC Open Access Newsletter](#) published monthly by Peter Suber. Some examples of recent initiatives include:

- A policy by the National Institutes of Health in 2005 strongly requested that all peer-reviewed articles based on NIH-funded research be deposited in PubMed Central. Recently, the Senate Appropriation Committee approved a bill that would strengthen the NIH policy from a request to a requirement. Full Senate approval is still needed.
- The bipartisan Federal Research Public Access Act of 2006 (FRPAA) was introduced by Senators Cornyn and Lieberman. The bill required that peer-reviewed articles resulting from research funded by the ten largest federal research funding agencies be made publicly available within six months of publication. The bill did not pass, but is expected to be introduced again this year.
- The Howard Hughes Medical Institute announced that effective January 2008 it will require its scientists to publish their research articles in scientific journals that allow the articles and supplementary materials to be made freely accessible in a public repository within six months of publication.

Develop Your Pitch

Focus on a couple of issues that are important to your faculty and have a two- to five- minute "elevator speech" prepared when you happen to see them on campus. You might talk about open access journals that are available in their discipline, why they should retain or negotiate their copyright, or reasons why they should archive their work in the institutional repository. Keep it short and concise, and demonstrate some clearly defined benefits to them.

Attend the ARL/ACRL Institute on Scholarly Communication

The [institute](#) is an intense 2 1/2-day immersion program where you will gain essential training to become an effective advocate for scholarly communication. Participants during the first three institutes (July 2006, December 2006, July 2007) have included teaching faculty, vice provosts, associate and assistant university librarians, IT professionals and librarians of various titles including 27 science librarians. The expected outcomes of the institute include:

- increase your knowledge of scholarly communication issues;
- learn about available resources regarding open access, copyright, advocacy, new publishing models, and repositories;
- learn about faculty roles and successful strategies for engaging faculty;
- start initial planning for a local program for faculty outreach and campus-wide programming. ([Brown 2007](#)).

Conclusion

Scholarly communication encompasses a wide range of issues, and represents a set of traditions and practices that extend back hundreds of years. At the same time, new views on scholarly communication offer hope for increased access to the results of scientific research and an end to the journal crisis that has affected science libraries for decades. Science librarians are in a unique position to help promote new publishing practices among faculty, and to serve as agents of change at their universities. The change will not come quickly or easily, but there are definite steps science librarians can take now to move forward on scholarly communication initiatives.

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