Promoting Open Digital Scholarship - A Canadian Library Perspective

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Abstract

Librarians at York University have developed a stepwise approach to promote open access among faculty. Recent policy by the Canadian Institutes of Health Research requiring public access to outputs arising out of funded research has provided the impetus for librarians to engage with faculty on these issues. In this paper we describe approaches used to introduce researchers to self-archiving and publishing options to meet funding requirements. Promotional strategies are explained and future directions are outlined. The changing role of librarians in research support is discussed.

Keywords

Funding policies, open access archives, Canadian Institutes of Health Research, institutional repositories, role of librarians.

Introduction

Open access (OA) has created new opportunities for library involvement in promoting the digital dissemination of research and scholarship at the university. In a recent publication by ARL (Association of Research Libraries) the research library's role in digital library services is discussed. While looking at strategic issues and trends, the policy environment is considered as one of the areas which will impact ARL and its member libraries. Among other things, the report envisages that 'requirements for management and access to content that arises from funded research will shape repository content and services.' With regard to intellectual property the report states, 'institutions will have to create policies to assist faculty and researchers in managing content they create.' (Association of Research Libraries 2009).

Public access mandates in Canada and elsewhere have provided a need for institutional repositories to become the central depositories for academic research. In Canada, CIHR (Canadian Institutes of Health Research) supports the work of researchers in universities, teaching hospitals and research institutes across Canada. CIHR policy on research outputs requires published papers based on funded research to be made freely accessible within six months of publication. This can be achieved by publishing in an open access journal or in a journal which provides open access within the stipulated period or by self-archiving the final peer-reviewed manuscript in a designated repository. Among open access advocates, publishing in an open access journal is commonly called the gold route as opposed to the green route for self-archiving. Institutional repositories created by members of CARL (Canadian Association of Research Libraries) are designated locations for self-archiving of the final accepted manuscripts of authors who are CIHR grantees. In addition, NRC-CISTI (National Research Council's Canada Institute of Scientific and Technological Information) in partnership with CIHR and NLM (National Library of Medicine) will launch PubMed Central Canada which will be developed on similar lines to UK PMC (UK PubMed Central). This will form part of the PMCI (PubMed Central International) network in which national versions of PubMed Central can share content. PubMed Central Canada will be the national archive for life science and medical literature. This national archive will be available to other research organizations besides CIHR. SHERPA (Securing a Hybrid Environment for Research Preservation and Access) is a UK-based consortium which provides support services for open access institutional repositories. According to SHERPA/JULIET, a service which summarises research funders' open access policies, there are to date eight other research funders in Canada, most of them health-related, with open access archiving policies. Three of these also make provision for open access publishing, that is, they will accept articles published in open access journals or in hybrid journals which may require payment for making the article open access on publication.

Research organizations in Europe, Australia and the United States have also initiated public access requirements to research in their countries, encouraging self-archiving with a network of institutional repositories. To date there are 41 research funder mandates and 7 proposed in ROARMAP (Registry of Open Access Repository Material Archiving Policies). The number of institutional repositories in higher education institutions has also been growing worldwide. In the UK, strategies for encouraging open access among higher education institutions include making provision for deposit in institutional repositories as well as funding of author publication fees. This two-pronged approach is popular with funding agencies such as the Wellcome Trust, with publication fees covered by grants. A recent guide from Research Information Network in the UK covers guidelines for payment of open access publication charges. OAD (Open Access Directory) has a list of institutions which provide funding for author fees but few policies on how they are applied.

Funding Agency Policies for Open Access – an Opportunity for York Librarians

In our experience we have found that faculty researchers generally have little knowledge of recent changes in scholarly communication and need to be informed of prevailing practices. These include an understanding of the concepts of open access, acceptable routes to provide open access to research outputs and author rights. This is particularly important when research funding policy dictates public access to research results. A recently completed study presented at the 2009 Public Knowledge Project (PKP) conference looks at open access supports for researchers in Canadian universities by surveying both libraries and research offices. The study by Greyson and Taylor finds a lack of coordination and collaboration between the two parties and that they may have different views of their roles with regard to funder mandates. Moreover, librarians had a firmer grasp, or knowledge, of open access than did university research office respondents.

At York University, we are working with research officers to promote faculty awareness of the role of our digital repository YorkSpace in archiving research publications in response to funder policies. Librarians have embraced OA and are cognizant of the need for OA to provide more equitable access to research publications. They also have a heightened awareness of new models of scholarly publishing since this has direct consequences for library collections. Therefore they are a natural fit for promoting OA on campus. In the

following sections we describe how librarians at York University have been involved in faculty research support as part of library strategic planning and how we see a continuing role for librarians in education and outreach on the university campus.

The CIHR policy providing open access to research outputs was announced in September 2007 and was applicable to all grants awarded after January 1, 2008. As outlined in the previous section, the policy in its essentials embraces both the green and gold routes. It also indicates that the costs of publication for the latter are an eligible expense for grant funding. While the policy indicates that research data needs to be retained for a period of 5 years, it leaves it to researchers to decide where it is to be archived, citing only bioinformatics and crystallography which have structured disciplinary repositories for data. When the policy was introduced, York University Libraries saw this as an opportunity to inform the faculty about OA and the role the library can play in helping researchers comply with CIHR policy. It was important to understand who the main players were in order to develop a comprehensive strategy. This turned out to be a gradual process.

Promotional strategies

Initially, we felt the need to announce the policy in order to start a conversation on open access with faculty on campus. At a meeting of the Senate Committee for Libraries and Information Technology the subject was first introduced. This is the Committee which has a mandate for to formulate policy recommendations and report to Senate on matters pertaining to libraries and information technology in support of teaching, learning and research. Its membership includes faculty, librarians, the Chief Librarian and the Director of Computing and Network Services. It reports to University Senate and librarians are sometimes invited to present new initiatives. CIHR policy and library support was considered an appropriate subject for presenting to the membership of this committee. Members were unfamiliar with open access and were not particularly receptive. The need to promote a conceptual understanding of OA was apparent.

The next step was to make contact with the CIHR Delegate for York University and get his input on how we could become part of the research process. He was most supportive and extended an invitation to attend grant information workshops on campus. This allowed us to gain an insider's view of the grant application process and the strategies used for successful applications. It also provided us with an understanding of the peer-review process and the success rate of grant applications. Moreover it enabled us to meet with researchers from across the campus as the grants are awarded to both scientists and social scientists.

As part of our overall strategy to promote an understanding of open access among faculty and particularly among CIHR researchers, we needed to work with other members of the Scholarly Communications Committee. This is a library committee which has been active on campus promoting open access and author rights by hosting talks given by prominent speakers. It has also developed an ongoing relationship with the Faculty of Graduate Studies and the Office of Research Services providing a platform for discussion of emerging issues in scholarly communication with graduate students. Two of us are members of this committee and were assigned the task of preparing information for CIHR researchers for posting on the website. A blog provides the latest news on pertinent topics. The website is linked to other digital initiatives such as Information for CIHR Recipients (Fig. 1) and is accessible from the library homepage. It has also been included in the ARL Spec. Kit 311 on public access policies published in August 2009.

Scholarly Communications Initiative

Fig. 1: Scholarly Communications Initiative website at York University

Every Faculty at the university has a research officer whose role is to keep abreast of funding opportunities, help find sources of funding, and work with faculty on grant proposals More recently we have been involved in conversations with research officers and have initiated workshops for CIHR grant recipients to help them comply with grant requirements. For CIHR grant recipients the relevant Faculties at York are the Faculty of Health and the Faculty of Science and Engineering. Liaison with research officers can provide a conduit to researchers who otherwise have little time to attend library workshops and rarely visit the library. Working with the Research Officer for the Faculty of Health we were able to organize an information session for Faculty providing essential information on complying with CIHR open access policy.

The session was comprised of three parts and was presented by librarians whose responsibilities intersected with these areas. Two of us are science librarians and the third is a metadata librarian. We decided to concentrate on key information which was both practical and easy to understand.

Fig 2: CIHR Session Agenda

In the first part of the session we covered CIHR policy highlights and an overview of the eligible options for providing open access (Fig. 2). The CARL/SPARC Author Addendum prepared by CARL (Canadian Association of Research Libraries) in association with SPARC (Scholarly Publishing and Academic Resources Coalition) was promoted as a way for authors to reserve the right to self-archive their work instead of signing over exclusive rights to publishers (Fig. 3).

Fig 3: CARL/SPARC Author Addendum

The second part of the information session covered sources for finding eligible open access journals, searching sites such as DOAJ (Directory of Open Access Journals) or Journal Info site created by Lund University. We discussed embargoed OA journals explaining the concept of delayed open access and hybrid journals which offer open access on payment of a fee. This is shown below (Fig. 4).

Fig 4: Free Access to Research using the Gold route of publication

York University Libraries has institutional memberships with BioMed Central and Public Library of Science for subsidizing author fees, and we were able to promote this initiative as well. Faculty were also interested to

know about other opportunities to publish in subject specific journals and still comply with CIHR policy on Open Access to research, so the Hybrid Journal Open Access Options were explored (Fig. 5).

Other option to make article OA
Hybrid Open Access Journal

- Publish in **Hybrid Open Access Journal**. Also called OA by the Article, Optional OA, Paid Option for OA, or Author Choice, etc
- This refers to a journal where only some of the articles are Open Access. This status typically requires the payment of a publication fee / processing fee to the publisher
- Processing fees covered by CIHR Grant

Fig 5: Publishing in Hybrid Open Access Journals

The third part of the information session covered the concept of self-archiving and how to determine publisher policies on self-archiving using the SHERPA/RoMEO website (Figs. 6 and 7). RoMEO (Rights MEtadata for Open archiving) is one of the services provided by SHERPA for checking publishers' policies.

Option#2 Author Self-archiving

- (Green Route): Grant recipients must archive the **final peer-reviewed** full-text manuscript upon publication in a digital archive such as the YorkSpace institutional repository OR
- PubMed Central Canada (in process)

Fig 6: The Green Route to Open Access - Self-archiving

Publishers have specific requirements on what version of the paper can be deposited in the institutional repository. Faculty may also need more information on copyright policies of journals and SHERPA/RoMEO serves as a portal to fulfill this purpose (Fig. 7).

Fig 7: Interpreting the Results of a SHERPA/ROMEO search

The process of depositing manuscripts into the York University institutional repository YorkSpace was demonstrated. Some pertinent examples are shown below (Figs. 8 and 9).

Fig 8: Filling in metadata requirements in a typical YorkSpace record

The YorkSpace template was populated with selected metadata fields after considering the funder and publisher policies that need to be fulfilled during deposit of an article. For example, faculty members may need to enter the funding reference number and link to the journal home page as per publisher requirement.
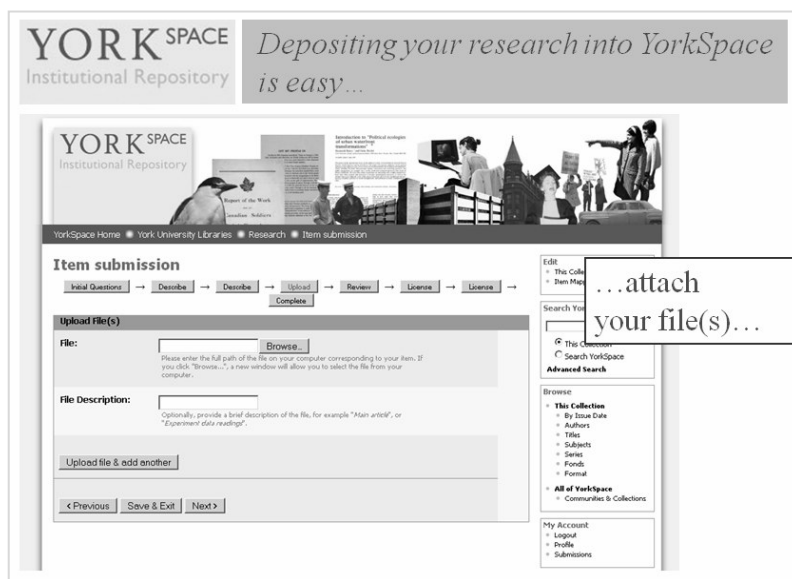
Fig 9: Depositing an item into YorkSpace

What we learned from researchers

During the workshop we were gratified by the positive responses from faculty. We were told that they would like to share the information with colleagues and we would be contacted if they had questions. The most encouraging feedback we received was from the Research Officer who asked us to repeat the workshop for those who were unable to attend. She also fully endorsed the workshop by placing a link to our presentation on the Faculty of Health website.

Faculty often have questions related to publisher policies and deposit of post-prints in YorkSpace. They have also inquired if the libraries and/or librarians can help them in depositing their papers in YorkSpace. To demonstrate the value of archiving in YorkSpace we helped a faculty member deposit her papers in the institutional repository, after checking for publisher copyright policies and compliance using the SHERPA/RoMEO website. However we plan to encourage authors to self-archive and will be prepared to train graduate students to deposit papers on their behalf.

Participants were interested in the range of article processing fees charged by various publishers. Faculty have also informed us of the need for wider promotion of York University Library's institutional memberships covering article processing fees. Allocating author fees as a grant expense was considered doubtful as it could use up funds best spent elsewhere. When asked if conference presentations could be deposited in YorkSpace we had to remind them that for some publishers this could constitute prior publication. Common difficulties included finding an appropriate open access journal in specialized fields and the possibility of publishers not complying with the author addendum. There were also questions about permanency in YorkSpace and how best to format their publications for self-archiving.

Future plans

The positive response obtained has enabled us to seek out other faculties, most notably the Faculty of Science and Engineering. We have planned a presentation for them later in the year, organized by the Research

Officer of this faculty. With each successive reiteration we hope to include more relevant information. For example, we are now able to point out the range of article processing fees requested by publishers to provide open access, as BioMed Central has a webpage showing article processing fees arranged by publisher.

The proposed launch of PubMed Central Canada during Open Access Week in 2009 will also provide us with an opportunity to showcase this development. The new research data portal at Research Data Canada and the Ontario Council of University Libraries data portal ODESI are other resources which need to be promoted among faculty and graduate students. We believe that this in the best interests of researchers. At present the CIHR policy only requires the deposit of bioinformatics, atomic and molecular coordinate data in appropriate public databases on publication and the retention of original data sets for a period of 5 years.

We are monitoring the utilization of our institutional memberships covering article processing fees to see who uses them and the annual uptake. In response to faculty requests, we are considering broadening our memberships to include Hindawi Publishers. We have publicized these memberships through the Libraries' newsletter for faculty and through Y-file, York University's online daily news bulletin. We intend to send updates to Research Officers to be incorporated into newsletters for their researchers. We plan to use the Scholarly Communications Initiative website for future announcements.

Web of Science and Scopus have introduced new functions which serve as research measurement tools allowing one to search for funded research by department and subject. We plan to use the advanced features in Web of Science and Scopus database to follow faculty publications in Open Access journals. We will continue to monitor these sources to understand faculty behavior, especially that of CIHR grant recipients towards open access journal publishing versus self-archiving.

Discussion

There is an ongoing debate on the suitability of deposit in subject or central repositories versus institutional repositories. Disciplinary culture has already been shown to be successful in the case of the physics and economics communities with the ArXiv and RePEc repositories. A recent article has revived this debate by calling for 'macroscopic academic settings' rather than a network of institutional repositories (Romary, L and Armbruster, C. 2009). On the other hand, Harnad has been consistent in advocating for the institutional repository as the 'natural and optimal locus of deposit' to be filled by both institutional and funder mandates, which can then be harvested centrally (Harnad 2009). Within the European context, Bernard Rentier of the University of Liege is in agreement with this approach providing support for institutional repositories (Rentier 2009). The CIHR policy for open access to research outputs embraces both options leaving it to researchers to decide what works for them. For this reason we intend to provide information on both options and provide training and support for researchers who wish to use the YorkSpace archive.

York University Libraries' memberships subsidizing article processing fees is not of recent origin. BioMedCentral membership was initiated in 2005, whereas PLoS membership offering discounted fees was introduced in 2009 after looking at the number of York faculty publishing in PLoS journals. Hindawi membership will be next and we will continue to assess the uptake for all our memberships annually. At this point, the Library's approach has been to use collection funds as a commitment to new ventures in scholarly communication, much as we have supported the Stanford Encyclopedia of Philosophy and Bioline International. In the future we may need to fine tune this commitment depending on the response. In a recent article in PLoS Biology, Stuart Shieber provides a rationale for supporting open access publishers who operate at a disadvantage with respect to traditional publishers with subscription income streams. He argues that institutions and funding agencies already underwrite the latter through institutional subscriptions. Extending support towards article processing fees charged by open access journals would 'level the playing field' and allow risk-taking by publishers (Shieber 2009).

Concluding Comments

The content policies of our digital repository YorkSpace are directed at unique materials reflecting scholarship at York University. In general, faculty research post-prints have not been considered a priority except in support of mandated deposit as in the case of CIHR. When PubMed Central Canada is launched we can expect it to be the choice of many York authors. However, we believe that showcasing YorkSpace through workshops, promotional materials and newsletters will help faculty gain an understanding of the role that a digital repository can play in research dissemination and in the process extend its use to non-funded research publications.

The role of librarians is in flux especially in academic and research libraries. While each library may have different priorities depending on local needs and expertise, librarians are certainly being challenged to develop new roles to enable full participation in academic endeavours. York University Libraries in its academic plan has identified as one of its priorities the adoption of 'a leadership role in educating our community on current issues which directly impact their research, fostering sophisticated information literacy competencies and raising awareness around scholarly communication issues.' In exploring opportunities provided by research funder open access policies we are seeking a larger role in creating awareness of issues concerning faculty and graduate student research.

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