

Increasing Access to Research Results

“Advances in information and communication technologies are disrupting traditional models of scholarly publishing, radically changing our capacity to reproduce, distribute, control, and publish information. The key question is whether there are new opportunities and new models for scholarly publishing that would better serve researchers and better communicate and disseminate research findings.”

– John Houghton et al.¹



There is currently an opportunity to work with the research community within and outside the federal government to increase the benefits flowing from research funded by the federal government and its partners.

Several recent federal commitments support increasing access to research results:

- The 2007 Federal S&T Strategy included a commitment to increase accountability to Canadians by improving measurement and reporting on the impacts of federal expenditures on research. A follow-up study concluded that it would be useful to have externally-funded researchers report impacts as a matter of course.
- The federal academic research granting agencies adopted as a guiding principle in 2010 that publicly funded research should be as accessible as possible in order to maximize the economic, social, cultural and health benefits for Canadians.
- The March 2011 Open Government announcement included a commitment to making government information easier to find and more accessible for Canadians.

The Canadian research community is exploring new ways of making its research results available to other researchers, Canadians generally and the world at large.² A 2011 synthesis paper funded by the Social Sciences and Humanities Research Council as part of its support for research in digital economy offers a broad vision of how to renovate the research process and describes Canadian innovations in digital academic publication.³ The paper also provides examples of how the federal granting agencies are developing policies and programming that support open access to the results of research.

Similar discussions and initiatives are underway in other countries: see, for example, discussions on the London School of Economics blog (LSE)⁴, “Impact of Social Sciences”.

Researchers led by John Houghton from Australia have been exploring the costs and benefits of alternative approaches to publishing research results. Various approaches have been systematically compared to the status quo for the cases of the UK, the Netherlands, Denmark, Germany, and the US. To ensure that meaningful comparisons could be made, all of the approaches explored included the peer review, certification, and quality control functions necessary for formal scholarly publishing.

To illustrate, the US study investigated the costs and benefits of requiring researchers funded by Washington to post the final text of any resulting journal articles to the Internet for free access within six months of publication of the article. That study concludes, based on some preliminary modeling, that the incremental benefits would exceed the costs by around 8 times, with two-thirds of these benefits accruing to the US, and the remaining benefits spilling over to other countries. The results of sensitivity analysis presented in the study suggest that the incremental benefits would exceed the costs over all plausible values for the input data and model parameters.

More generally, their **results suggest that the benefits of a well-designed initiative for increasing the accessibility of research results would exceed the costs by a considerable margin in a variety of countries (large and small)**. The key appears to be making it easier for users to access research results.

Some doubts can be raised with the studies. For example, they do not appear to have been subjected to systematic peer review. Secondly, questions can be asked about specific assumptions. For example, the proportion of time researchers spend reading and writing journal articles may either underestimate or overestimate the proportion of the stock of knowledge captured in them.

Caveats aside, the work of Houghton and his colleagues deserves careful consideration, further to recent federal commitments and activities by the Canadian academic community and the granting councils. These developments beg the question of what more the federal government and the academic community could do to increase the accessibility of research results.

References

Canada. March 18, 2011. [*Expansion of Open Government*](#).

Canada. 2007. [*Mobilizing Science and Technology to Canada's Advantage*](#).

Policy Research Initiative. 2010. [*Improving the Measurement, Reporting and Assessment of Federally Performed Science and Technology: Demonstrating Results for Canadians*](#).

Canada. 2010. [*Access to Research Results: Guiding Principles*](#).

[Centre of Strategic Economic Studies website at Victoria University](#), which provides links to reports and models.

Houghton, John. 2010. [*Economic Impacts of Open Access in Europe and the US*](#). Presentation to the Annual Munin Conference, University of Tromsø.

Lorimer, Rowland et al. 2011. [*Digital Technology Innovation in Scholarly Communication and University Engagement*](#). Canadian Centre for Studies in Publishing.

Notes

¹ John Houghton et al. 2009. *Economic Implications of Alternative Scholarly Publishing Models: Exploring the Costs and Benefits*. A Report to the Joint Information Systems Committee. Page IX. The second sentence is a quote from John Houghton and Graham Vickery. 2005. *Digital Broadband Content: Scientific Publishing*. OECD.

² [ResearchImpact](#) is a collaborative effort by York University, the University of Saskatchewan, the University of Guelph, l'Université du Québec à Montréal, the University of Victoria and Memorial University to connect university research with research users in Canada and to facilitate research informing decision-making. Yaffle.ca is an online initiative at Memorial University designed to connect research results with community concerns and interests.

³ Examples from Canada provided in Lorimer et al. (2011) are Synergies, Érudit and the Canadian Research Knowledge Network (CRKN).

⁴ [London School of Economics blog](#) (LSE).

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