

The Centrality of Collaborative Online Tools to the Modern Scholar and the Commercial Sector's Appropriate Role in Creating Those Services

Kurt Sanford
Chief Executive Officer
ProQuest

At present, approximately half of the most popular websites in the world have as their primary mission either the discovering or sharing of information (“The Top 500 Sites,” n.d.). The vast majority of these sites were created by and are maintained by for-profit interests. Academics are among the masses whose online expectations are being set by the products of companies such as Google (receiving more than one billion queries per day) (Efrati, 2011, June 21); Facebook (utilized by 700 million users per day) (Constine, 2013, July 24); and countless start-ups that often quickly fall by the wayside or never receive significant name recognition. It is in the context of these modern web companies that the groundwork has been laid for what could be the fastest rate of improvement ever seen in scholarly collaboration (Daniels & Feagin, 2011; Anderson, 2011, February 3).

One could imagine an environment in which all of the world’s most popular websites and services for sharing and discovering information would not be commercial, and in fact some individuals, including some prominent faculty and some of the world’s technical experts on big data, advocate for just such an approach (Anderson, 2011, February 3; Wagner, 2003; Hartley, 2011, February 7). But, the challenges to doing so extend beyond the daunting perspective of raising capital. In this approach, a clear mission that can properly be overseen by a non-commercial interest may often be in conflict with operational behavior that is driven by the cold reality of the financial models needed to support the service. Importantly and often forgotten, the long-term maintenance of a web service – one that must continue to innovate or become irrelevant – is more substantial than ever (Chowdhury, 2012, July 3). As a result, the majority of the most successful new projects focusing on web-based scholarly communication require foundation (“Building a Sustainable Zotero Project,” 2010, January 6), government (“USDA Agencies to Join VIVO,” 2010, October 5), or venture capital (Fowler, 2013, June 4; Shah, 2013, January 24) support to get off the ground and remain financially viable while they build a sustainable model. Over time, they all require universities to make financial commitments to them in order for them to be sustained, whether it is via memberships or subscriptions, blurring the differences between non-commercial and commercial ventures.

Many new collaborative tools aimed at scholars combine content that is under copyright along with newly created content. Although there are pockets of open information, most of the highly desired content is the restricted intellectual property of those who produced it. Publishers like ProQuest undertake the work of negotiating with the rights holders to package and market content in the manner that will be most optimal for the scholar and content producer. While the Open Access movement is gaining momentum in academia (with more than 8,000 open access journals in existence and growing government support for open access to the content produced by research funded by government grants) (Suber & Cuplinskis, 2012, December 3), researchers want a single point of access that encompasses open and proprietary content. There are other data types to consider, including raw research results and biographical data – both of which may need to be licensed from the rights holder. At ProQuest, we see an emerging role in serving the

scholarly community by marrying these varied sources of content and supporting it with tools that foster collaboration. Among our focus areas are meeting user expectations and embracing new opportunities brought by the online environment.

Meeting Users' Expectations

Today's websites must be easy to use, stocked with instantly updated data, and have minimal barriers of access. Further, they must be supported by steady investment that enables the service to evolve with user expectations. Pivot™, a web-based resource that identifies active sources of funding and matches them with researchers in one step, is a prime example of an intuitive web portal that combines public and private data to create a unique service for researchers. The service is continually updated and enhanced to respond to user feedback. For example, the service's "recommender service" initially met with acclaim for its ability to identify the best funding opportunities for the institution and then match them with researchers and collaborators. However, user feedback pointed to an opportunity to increase the precision of the recommender service with facets, ultimately enabling the university research office to tune Pivot™ more finely to their environment and make it easier to win grants and awards (ProQuest, 2013 August 15). Pivot™ is not an isolated example; when ProQuest creates a new web product, it puts forward a five-year plan for the resources, knowing that a changing web landscape will render certain aspects of the site outmoded during the initial five year term. This planned investment works in concert with collaboration with the users and scholars. The ProQuest model of learn-prototype-pilot-experiment-iterate is supported by a decades-long partnership with scholars, enabling us to hone services that evolve with their needs. For example, in the case of the Pivot™ recommender service, its base is three million pre-populated scholar profiles that have been curated by ProQuest over many years of working with scholars and is now matched with public information.

Embracing New Opportunities

Through the advent of sites like figshare, which allow collaboration on content creation and sharing data sets, there is reason to be optimistic that the end result will be a stronger and more inclusive academic community with new tools and flexibility to address our world's largest challenges. As these concepts have been put into practice, the methods of science and principles of academia have been challenged to adapt. Academia has stepped into this new era of networked collaborative research to support a new environment of larger, more globally dispersed teams of researchers (Hede, n.d.). At ProQuest, we are facilitating collaboration and sharing through the new service RefWorks Flow™. This workflow tool builds on the pioneering RefWorks suite of citation management services, expanding it to address two significant needs of researchers: first, a collaborative work environment and second, a secure, easy to access a "personalized library" to house research articles, notes, etc. In simplest terms, RefWorks Flow™ collects, manages and organizes research papers and documents, aiding collaboration with friends or colleagues by sharing collections of articles. Reading articles from the researcher's library as well as annotating can be done collaboratively as part of Flow™, while still maintaining the RefWorks bibliographic strength that has been part of the resource since its inception. The broader impact of the service is its ability to streamline research by removing barriers to collaboration. Time to complete research is reduced and the path to new findings and insights is shorter, enabling institutions and researchers to be more productive in an increasingly competitive global environment.

The impacts of this tectonic shift on the way that scholarship is conducted is still playing out, but its effects can already be felt at the universities seeking to increase collaboration via the redefinition of tools, increased access to library information, and greater sharing. ProQuest looks forward to continuing to create tools and resources that combine content from a rich and varied set of sources and that further enhance scholarly research and collaboration.

References

- Anderson, Kent. (2011, February 3). Will reference books and journals survive? A debate. *The Scholarly Kitchen*. Retrieved from <http://scholarlykitchen.sspnet.org/2011/02/03/will-reference-books-and-journals-survive-a-debate/>
- Building a sustainable Zotero project. (2010, January 6). [Web log post]. Retrieved from <https://www.zotero.org/blog/building-a-sustainable-zotero-project/>
- Chowdhury, A. (2012, July 3). The true costs of launching a start-up. *Fast Company*. Retrieved from <http://www.fastcompany.com/1841912/true-costs-launching-startup>
- Constine, J. (2013, July 24). Facebook's Q2: Monthly users Up 21% YOY to 1.15B, dailies up 27% to 699M, mobile monthlies up 51% to 819M. *TechCrunch*. Retrieved from <http://techcrunch.com/2013/07/24/facebook-growth-2/>
- Daniels, J. & Feagin, J.R. The (coming) social media revolution in the academy. *Fast Capitalism*, Issue 8.2., 2011. Retrieved from http://www.uta.edu/huma/agger/fastcapitalism/8_2/Daniels8_2.html
- Efrati, A. (2011, June 21). Google notches one billion unique visitors per month. *The Wall Street Journal*. Retrieved from <http://blogs.wsj.com/digits/2011/06/21/google-notches-one-billion-unique-visitors-per-month/?mod=e2tw>
- Fowler, N. (2013, June 4). 'Facebook for scientists' ResearchGate confirms \$35m new funding led by Bill Gates and Tenaya Capital. *VentureVillage*. Retrieved from <http://venturevillage.eu/researchgate-bill-gates-35-million>
- Hartley, Matt. (2011, February 7). Open source alternatives to Google. *Linux Today*. Retrieved from <http://www.linuxtoday.com/infrastructure/2011020701035OPBZNT>
- Hede, Karyn. (n.d) Thriving in an era of team science. The Burroughs Wellcome Fund. Retrieved from <http://www.bwfund.org/career-tools/thriving-era-team-science>
- ProQuest (2013, August 15). ProQuest tunes up the precision of Pivot™ to make winning university research grants more efficient [Press Release]. Retrieved from <http://www.proquest.com/about/news/2013/ProQuest-Tunes-Up-Precision-Pivot-Winning-Research-Grants.html>

Shah, S. (2013, January 24). 'In The Studio,' Academia.edu's Richard Price is a founder on a mission. *TechCrunch*. Retrieved from <http://techcrunch.com/2013/01/24/in-the-studio-academia-edus-richard-price-is-a-founder-on-a-mission/>

Suber, P. & Cuplinskas, D. (2012, December 3). Open access to research can save lives. *The Chronicle of Higher Education*. Retrieved from <http://chronicle.com/article/Open-Access-to-Research-Can/136065/>

The top 500 sites on the web. (n.d.). Retrieved from <http://www.alexa.com/topsites>

USDA agencies to join VIVO. (2010, October 5). Retrieved from <http://www.vivoweb.org/blog/2010/10/usda-agencies-join-vivo>

Wagner, R. P. (2003) Information wants to be free: Intellectual property and the mythologies of control. *103 COLUM. L. REV.* (995). Retrieved from <https://www.law.upenn.edu/fac/pwagner/wagner.control.pdf>

Warden, Pete. (2011, October 27). Why we need an open-source geocoding alternative to Google [Web log post]. Retrieved from <http://petewarden.com/2011/10/27/what-can-you-use-for-geocoding-instead-of-google-maps/>