

The Value of Electronic Resources: Measuring the Impact of Networked Electronic Services (MINES for Libraries®) at the Ontario Council of University Libraries

**Catherine Davidson, Associate University Librarian,
Collections, York University**

**Martha Kyrillidou, Senior Director, Statistics and
Service Quality Programs, ARL**

Measuring the Impact of Networked Electronic Services (MINES for Libraries®) is an online, transaction-based survey that collects data on library-user demographics (patron status and discipline affiliation), the purpose of use (funded or non-funded research, teaching, coursework, patient care and other), and the location of the user at point of use (on campus, in library or remote).¹ The survey attempts to capture the value and impact of digital content; determine how specific populations apply digital content to their work; identify where library use originates to tailor services accordingly; gather usage data on digital collections to justify funding and inform collection development decisions; and assess the impact of networked electronic resources and services on teaching, learning, and research. MINES for Libraries® can be implemented both at individual libraries and at the consortium level; the ability to compare data across libraries makes consortial implementations extremely useful as they inform decision making both within and across institutions. This article discusses such an implementation by the Ontario Council of University Libraries.

The Ontario Council of University Libraries (OCUL) is a consortium comprised of 21 member libraries that work cooperatively to enhance information services through resource sharing, document delivery, and other activities and services.² OCUL implemented the MINES for Libraries® methodology to demonstrate the value of the electronic resources that the

consortium made available in 2004–05 and again during 2010–11. Scholars Portal—created in 2001—serves as OCUL’s information infrastructure for delivering digital content and services to support research, teaching, and learning endeavors within the province’s 21 universities.³ The consortium’s user base is extensive, with over 400,000 FTE users, and Scholars Portal provides a wide array of content: e-resources alone now number over 17 million articles from over 8,000 e-journals as well as 240,000 e-books. The size of the consortium affords unique opportunities to demonstrate the value of electronic resources by collecting data on the use of e-resources licensed both by the consortium and by individual member libraries.

In 2004–05, OCUL implemented the MINES for Libraries[®] survey to measure use of over 7,000 e-journals locally loaded on their Scholars Portal platform. Key outcomes pursued at that time were:

- Capturing in-library and remote web usage of Scholars Portal in a sound representative sample
- Identifying the demographic differences between in-house library users as compared to remote users by status of user
- Identifying users’ purposes for accessing Scholars Portal electronic services (funded research, non-funded research, instruction/education use, student research papers and course work)
- Developing an OCUL infrastructure to make studies of patron usage of OCUL networked electronic resources routine, robust, and integrated in decision making⁴

OCUL found MINES for Libraries[®] to be an effective means of providing data on the use of e-resources and member institutions were able to use the data locally to argue for resources and demonstrate the relationship of resources to outcomes. OCUL determined that the study should be repeated in 2010–11. In February 2010, OCUL launched MINES for Libraries[®] a second time. In addition to querying the *who, what, where* and *why* of e-resource usage to provide longitudinal comparability, key issues to be explored in 2010–11 include:

- Methodological best practices as to whether such a survey should be mandatory or optional
- Survey implementation issues introduced by using an open-URL resolver
- Potential characteristics of the non-respondents of web-based, intercept surveys

- Understanding the use of both consortially acquired products and locally licensed content

Point-of-Use Web Surveys

MINES for Libraries® is implemented as a point-of-use survey when a user attempts to access a particular resource. In 2004–05, the survey was implemented in the established mandatory fashion for all 16 participating libraries within a two-hour randomly selected monthly time slot for a period of 12 months.⁵ The 2010–11 OCUL MINES for Libraries® methodologies vary significantly from those used in 2004–05. The current delivery mechanism by which the user encounters the survey is via the Ex Libris SFX open-URL resolver; consequently, the e-resources measured reflect *only* what is in the SFX knowledge base, in addition to the locally loaded e-journals that were measured in 2004–05. Also, the survey is presented randomly once in every 250 instances during the 12-month period, as opposed to being presented to every user within a given time period as it was in 2004–05.

Obtaining permission from institutional ethics review boards to run the mandatory version of the survey proved more challenging in 2010–11 than in 2004–05—only 5 of the 20 schools were approved for the mandatory version, while 15 were required to run it in optional mode. The 5 schools that obtained permission to run the survey in a mandatory fashion are implementing an experiment where half of their survey instances are mandatory and the other half are optional. The experimental data will allow informed decisions to be made about the differences in the sampled data regarding mandatory versus optional point-of-use web-survey data. Are students and faculty responding differently, for example, to mandatory and optional surveys? If yes, in what ways? Are users who primarily access the electronic resources for research purposes eager to respond to point-of-use web surveys whether they are mandatory or optional? This information is critical as libraries need well-established ways to secure reliable information about the users who no longer cross their physical doorstep but increasingly access their electronic resources remotely. The outcomes of this experiment will be one of the primary areas of focus upon the completion of the survey in February 2011.

E-Resources Being Measured

The scope of e-resources being surveyed is directly related to what is (and is not) included in the SFX knowledge base, which is an important consideration when comparing 2004–05 and 2010–11 data.

Preliminary observations of data captured from the survey between February and June 2010 illustrate the expansion in surveyed content:

2004–05

Consortial only:

- Locally loaded e-journals

2010–11

Both consortial and individually licensed content:

- E-journals
- E-books, (NetLibrary, ebrary, but not books locally loaded on Scholars Portal*)
- Abstracts and indexes
- Dissertations
- Library catalogs
- Reference materials
- Institutional repositories
- Other services (e.g., interlibrary loan, Ulrich's, Journal Citation Reports, RefWorks)

*Work is underway to create SFX targets for e-book collections loaded on Scholars Portal.

Survey Findings: Highlights from 2004–05 results

From May 2004 to April 2005, a total of **20,293** usable cases were collected from the MINES for Libraries, survey from 16 institutions. Analysis revealed that:

- The majority of the uses of the Scholars Portal resources are from the sciences and the medical health field
- Close to half of the use made of the Scholars Portal resources is by undergraduate students (**46%**)
- Almost half of the use made of the Scholars Portal resources is from off-campus locations (**45%**)
- The largest portion of the use of the Scholars Portal resources is for purposes of coursework (**42%**) with sponsored research representing an important second-highest category of use (**26%**)

OCUL institutions have used the results of the 2004–05 survey to justify budget allocations within and across institutions, for peer-group comparisons, and for understanding how MINES for Libraries® data relate to external

measures of institutional investment such as sponsored research revenue per faculty. The data can be interpreted in a way that allows understanding of resource allocation across different departments as well as across different publishers and platforms. Peer-group comparisons have proven useful not only within the consortium but by comparing institutions of similar academic purpose across different consortia as Scigliano compared similar OCUL and OhioLINK institutions.⁶

Ultimately a longitudinal interpretation of the data may be possible as the 2010 study is reaching completion, though technical considerations need to be taken into account as some elements have changed over time.

Preliminary Survey Findings: Highlights from June 2010 Data

In June 2010, a snapshot of data was collected, comprising **15,359 optional** responses and **1,750 mandatory** responses. Analysis revealed that:

Optional:

- Half of the use made of the Scholars Portal resources is by undergraduate students (**50%**)
- Over two-thirds of the use made of the Scholars Portal resources is from off-campus locations (**68%**)—up sharply from 2004–05
- The largest portion of the use of the Scholars Portal resources is for purposes of coursework (**55%**) with sponsored research representing an important second-highest category of use (**18%**)

Mandatory:

- Over half of the use made of the Scholars Portal resources is by undergraduate students (**53%**)
- Two-thirds of the use made of the Scholars Portal resources is from off-campus locations (**66%**)
- The largest portion of the use of the Scholars Portal resources is for purposes of coursework (**60%**) with sponsored research representing an important second-highest category of use (**18%**)

Conclusion

The MINES for Libraries® data provide a critical link between electronic resources and the value derived by users. The data have been used by library administrators to demonstrate the value of e-resources to the various departments within institutions so that, in tight financial times, the library can continue to support the particular resources that are highly valued by users. The data can be used to demonstrate that those users who gain the most value from e-resources are those users who are attracting grants and producing more research output. Making the link between use of e-resources and other desired outcomes (e.g., higher GPA, retention, graduation, job placement) is within our reach. The protocol has been implemented in an anonymous fashion and the demonstrated value has been articulated at the departmental level, yet more granular studies may be pursued that link e-resource use to individual performance.

The possibility of expanding the MINES for Libraries® protocol to extend the value and return-on-investment studies pursued through the Lib-Value project is a promising area of investigation in the coming years. A companion article by Mays, Tenopir, and Kaufman in this special issue of *RLI* articulates some of the Lib-Value activities. Studies that relate use of electronic resources to personal attainment and characteristics need to be implemented with great caution and attention to the highest ethical and professional guidelines to ensure that users' privacy is protected appropriately. Yet, if use of the content that libraries deliver is tracked electronically, libraries are probably a much-preferred, trusted, third party to secure ethical and professional use of such information compared to other entities that may have stronger commercial, marketing, and entrepreneurial interests.

¹ For details on the research foundations of MINES for Libraries®, see: Brinley Franklin, "Academic Research Library Support of Sponsored Research in the United States," in *Proceedings of the Fourth Northumbria International Conference on Performance Measurement in Libraries and Information Services* (Washington DC: ARL, 2001); Brinley Franklin and Terry Plum, "Networked Electronic Services Usage Patterns at Four Academic Health Sciences Libraries," *Performance Measurement and Metrics* 3, no. 3 (2002): 132–133.

² Ontario Council of University Libraries, <http://www.ocul.on.ca/>.

³ Scholars Portal, <http://www.scholarsportal.info/>.

⁴ Martha Kyrillidou, Toni Olshen, Brinley Franklin, and Terry Plum, "MINES for Libraries™: Measuring the Impact of Networked Electronic Services and the Ontario Council of University Libraries' Scholars Portal, Final Report" (Washington DC: ARL, 2005): 10, http://www.libqual.org/documents/admin/FINAL%20REPORT_Jan26mk.pdf.

⁵ An excellent follow-up study extending the original report is available by Marisa Scigliano, "Measuring the Use of Networked Electronic Journals in an Academic Library Consortium: Moving beyond MINES for Libraries® in Ontario Scholars Portal," *Serials Review* 36, no. 2 (2010): 72–78.

⁶ Ibid.

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To cite this article: Catherine Davidson and Martha Kyrillidou. "The Value of Electronic Resources: Measuring the Impact of Networked Electronic Services (MINES for Libraries®) at the Ontario Council of University Libraries." *Research Library Issues: A Bimonthly Report from ARL, CNI, and SPARC*, no. 271 (August 2010): 41–47. <http://www.arl.org/resources/pubs/rli/archive/rli271.shtml>.