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RESHAPING ARL STATISTICS TO CAPTURE THE NEW ENVIRONMENT

The *ARL Statistics 2005–06* describe a familiar picture for research libraries in North America. The rising cost of serials is outpacing general inflation, the cost of monographs is hovering close to inflation, and salaries are increasing moderately more quickly than inflation. As seen in Table 1 and Graph 1, the numbers of reference and circulation transactions have fallen from their levels of 10 years ago, but more users participated in instructional services offered by the library. Librarians are becoming more involved in the instructional process and are increasingly an integral part of the teaching and learning infrastructure at their institutions.

Historically, the perceived strength of a research library has been manifested in the size of its research collection—number of volumes held, volumes added, and serial subscriptions have been key indicators of quality as well as quantity in the eyes of some stakeholders. In a world where the basic unit of research information was the printed word, it was a plausible notion that the more you have of these things, the better equipped you may be in supporting high-quality research. One could argue that this is still the case. However, with the introduction of digital information and the dramatic changes in the nature of content, measuring the size of library collections cannot be what it used to be.

For example, in 2005–06 ARL libraries spent 43% of their materials budget on electronic resources—a total of $431 million out of $1.1 billion. This measure indicates the quantity and complexity that libraries are dealing with, but ultimately these figures cannot offer much when it comes to describing the quality of research, teaching, and learning at an institution. We need new measures to do this. ARL is beginning to address this need with important changes and additions to the ARL Statistics.

FROM SERIAL SUBSCRIPTIONS TO SERIAL TITLES

The unit cost of a serial subscription that ARL has tracked becomes relatively uninformative in a world where research libraries are increasingly offering access to the same serial title via multiple subscriptions and interfaces. The impact of electronic publishing on research library investment in serials was one of the forces behind a recommendation to move away from tracking serial subscriptions and towards tracking serial titles.\(^5\) The *ARL Statistics 2005–06* is the last time ARL will publish a unit cost for serial subscriptions (see Table 2).

The ARL Statistics and Assessment Committee determined that a new way of counting serials based on titles rather than subscriptions would better reflect the true scope of the serial content provided by research libraries and recommended that ARL transform the serial counts from subscriptions into titles. With the revised definitions for survey year 2006–07, ARL libraries are now asked to report

\(^1\) This article first appeared in *ARL: A Bimonthly Report on Research Library Issues and Actions from ARL, CNI, and SPARC* 256 (February 2008): 9-11.

unduplicated counts of serial titles. Dual-format titles will be reported as electronic-only in the ARL Statistics 2006–07, reflecting the current transition from print to electronic formats.⁶

The process of deriving serials title counts was tested over the period of a year and, although not perfect, it is feasible and practical in the short-term and much more meaningful in the long-term. ARL reported extensively on the testing done at Texas A&M University and a detailed process for implementation is documented in the ARL Statistics Webcast, which is available on the ARL Web site.⁷ Issues have emerged related to ISSN standardization practices, serials with no ISSN assignments, branch and department libraries that are independent from one another and hard to deduplicate, and difficulties regarding the implementation of new procedures. Collaborative discussion on how to address such issues is taking place through postings on the Library Assessment Blog⁸ and during in-person conversations at ARL Survey Coordinators workshops and meetings. ARL also provides an ARL Statistics FAQ online to help member libraries move into the new paradigm of counting serials.⁹

**FROM COLLECTIONS TO EXPENDITURES**

In an environment where collections are morphing into terabytes, petabytes, exabytes, zettabytes, and yottabytes of information, it is questionable whether the units of volumes held, volumes added, and serial subscriptions can continue to offer the utility they had in the past. As shown in Table 3 and Graph 3, it is now much more common for items to be loaned and lented between libraries than to be purchased.

The challenge of measuring collections in new ways gave rise to the work of the ARL Task Force on New Ways of Measuring Collections.⁰ During its two-year investigation, the task force systematically collected qualitative feedback through one-on-one interviews with each ARL library director and, during the second year of its operation, the task force deployed two top researchers in qualitative and quantitative methodologies, Yvonna Lincoln and Bruce Thompson. Two reports were produced for the ARL community: “Research Libraries as Knowledge Producers: A Shifting Context for Policy and Funding,”¹¹ documenting the results of the qualitative inquiry, and “Some Alternative Quantitative Library Activity Descriptions/Statistics that Supplement the ARL Logarithmic Index,”¹² documenting the results of the quantitative inquiry. Based on these reports, the task force forwarded a set of recommendations to the ARL Board of Directors that formed the following action agenda for the ARL Statistics and Assessment Committee during 2007:

1. Reserve use of the current Membership Criteria Index for those occasions when it is needed for consideration of membership issues.
2. Implement an Expenditures-Focused Index.

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3. Use the new Expenditures-Focused Index for any public reports, such as in the *Chronicle of Higher Education*.

4. Begin to develop a Services-Based Index that combines the following three factors: collections, services, and collaborative relationships.

5. Revise definitions for collections-related data categories currently collected and experiment with a variety of new measures, including usage data, strength of collections, and service quality measures to develop a richer set of variables for potential inclusion in the three-factor Services-Based Index (see above).

6. Collect qualitative data to develop a profile of ARL member libraries.

The issue of fluctuating rankings in the ARL Membership Criteria Index previously published in the *Chronicle of Higher Education* gave rise to the systematic investigation of the nature of the five variables included in this Index: volumes held, volumes added (gross), serial subscriptions, total expenditures, and professional staff plus support staff. Through the quantitative analysis performed on the existing variables, alternative approaches were proposed. The first implementation was the development of an ARL Expenditures-Focused Index composed of four variables: total expenditures, expenditures for library materials, expenditures for professional salaries, and total professional staff plus support staff. As can be seen in Table 4 and Graph 4, the expenditures variables are much less prone to “spikes” in any given survey year, compared to the serial data shown in Graph 2.

Thus, for the first time this year, the *Chronicle of Higher Education* published the new ARL Expenditures-Focused Index. The Expenditures-Focused Index calculates principal component scores and the analysis is based on all university member libraries’ data (as compared with the Membership Criteria Index, which is based on the 34 founding members of the Association). The Expenditures-Focused Index is a summary measure of relative size of the investment made by ARL university members’ parent institutions in their libraries. It has been calculated retrospectively beginning with data from 2002–03.14

Although similar to the ARL Membership Criteria Index in reflecting the investments made in research libraries, the ARL Expenditures-Focused Index is less affected by the rapidly changing context of library collections.

**DEVELOPING NEW INDICATORS**

The new Expenditures-Focused Index is only the first step in reshaping the *ARL Statistics*. ARL’s historical descriptive statistics are being re-examined and adjusted to reflect this changing context of collection access and ownership.

The ARL Statistics and Assessment Committee is currently engaged in developing new quantitative and qualitative indicators and indices to describe research library collections and services and their contribution to research, teaching, and learning. In particular, the notion of a three-factor index describing collections, services, and collaborative relations is a viable proposed construct as tested with the existing variables. Yet more work is needed to develop robust variables that withstand the passing of time and allow us to describe the nature of libraries into the future. For example, collaborative relations currently are being measured with two variables: interlibrary borrowing and lending. Other new ways of

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