

In Search of New Measures

This article was originally prepared by Martha Kyrillidou, Senior Program Officer for Statistics and Measurements and William Crowe, Vice Chancellor for Information Services and Dean of Libraries, University of Kansas, for discussion by the ARL Board at their February 1997 meeting.

In 1994, a new strategic objective was adopted by the ARL membership to describe and measure “the performance of research libraries and their contributions to teaching, research, scholarship and community service.” This action ratified new directions for the ARL Statistics and Measurement Program to expand beyond measures of “input” (such as collection size, number of staff, expenditures, etc.) and to search for new kinds of measures of library performance and impact. This article documents the progress in meeting this objective.

Old Wine and New Bottles

The seeds for this initiative were rooted in an article in the March 1992 issue of the ARL newsletter by Sarah Pritchard, in which she concluded that, “ARL’s active program of statistical analysis, research and management development” must center on “maintaining the useful approaches of the past and exploring responses to the challenges of the present and the future.”

In October of 1994, there was an ARL membership program on the topic of performance measures as incentives for redesigning library services. William Crowe, Committee Chair from 1992-96, set the stage for the program by quoting from the then recently released Association of American Universities Research Libraries Project task force reports, which state that “there is no likely substitution of new measures for the old measures, but rather an additive function, a balancing function, as we move in this transition period.” ¹

Striking the right balance between measuring the continuing and the emerging realities of the modern research library is at the cornerstone of the ARL Statistics and Measurement Program operations. Research libraries’ traditional realities drive the ARL measures of printed collections, budgets, and staffing. The emerging realities drive ARL’s agenda to seek credible indicators of the steady growth and high demand for the complex mix of new services, consortial arrangements, electronic information, the influence of the Internet, and the ways in which students and faculty interact with each other and these newer channels of information.

Emerging Realities and New Trends

When exploring emerging realities, the first challenge is to pose the questions that most need to be answered in order to describe the transformations underway. How much do libraries spend on electronic resources? On consortia? Electronic serials? Computer hardware and software? On digitization for preservation? Interlibrary loan and document delivery? Are these expenditures made with funds diverted from traditional budget lines or are they newly

appropriated funds? How many libraries are offering “innovative” services? Does the availability of any new services have implications on library use or performance? For example, in libraries that provide electronic reserves or user-initiated interlibrary loan, has use of the services increased faster than in other libraries and/or are the materials available to users faster and/or at less cost? The Program has taken steps to address these issues. A planning document was presented and ratified at the October 1995 membership meeting.² The Program has also been successful in attracting external funding and talented Visiting Program Officers to help refine these questions.³

Although there is a better understanding of the questions that need to be asked in this changing environment, the answers continue to be elusive and/or unstable. For example, Timothy Jewell’s analysis confirms that data being collected about electronic resources expenditures show that most ARL libraries are spending a relatively small portion of their budget on electronic resources.⁴ Although this portion is increasing rapidly, the change is not consistent from year to year nor from member library to member library.

The challenge, then, is not in describing any single change, but rather to develop quantifiable trend analysis in multiple institutions that can be executed from year to year in a consistent way. There is an often unarticulated assumption that change in libraries is moving in one direction. However, data from ARL libraries indicate thus far that change seems to be happening in rather haphazard and chaotic ways, both within individual libraries and across institutions. Some leaders suggest that it is the *rate* of change creating confusion rather than change itself.

To illustrate the complexity of tracking the emerging realities of research libraries and this rate of change, one need only look back to the early 1990s, when many libraries provided access to bibliographic databases by tapeload to campus mainframes or by stand-alone or networked CD-ROMs. More recently, libraries have begun to provide either gateway or direct access to vendor and publisher full-text databases of journal articles and monographs. Libraries are also integrating access to various electronic information resources through a WWW interface, making it possible for the traditional library OPACs to link to various full-text resources. It has been impossible to provide consistent, quantitative indicators of such trends because of the rapidity of the changes and because they are, by their nature, not comparable to previous measures. We are faced with a series of qualitative revolutions, basic “paradigm shifts” that are changing *what* research libraries do and in many respects are changing *how* research libraries fulfill their mission.

Certainly, this environment is not conducive to identifying consistent measures among 121 research libraries. However, in response to those who seek quick answers to new measures, there have been some ideas, although not a widespread acceptance of them (for example, a screen capture could be considered a potential unit of measurement, similar to a library gate count). Various software “counters” tell us, for instance, how many computers accessed a web page, how many bytes were transferred, and how many sessions were established. Are these useful measures?⁵ Some authors argue that they are and have proposed that “a centralized voluntary reporting structure for Web server usage statistics, coordinated by the Association

of Research Libraries' (ARL's) Office of Statistics, would provide a significant service to academic librarians." ⁶

The User's Point of View

Most libraries are aware of the need to measure not only the use of their resources, but also the effectiveness of their library services. In particular, how are library users benefiting from their interaction with the library? To help address this question, the ARL Statistics and Measurement Program initiated a series of training events to help library staff collect information from their users to better inform their management decisions. In the long run, if higher education wants to measure library "impact" we will need to initiate longitudinal studies, for example, by questioning and tracking individuals from grades K-12 through their undergraduate/graduate study and as alumni in order to assess how their lives and work may have been affected by their library experience.

In the meantime, many libraries have found value in conducting user surveys and using the results to assess current and to devise new library programs and services. Some ARL members have used the same survey instrument, offering a possible opportunity for cross-institutional comparisons. ARL showcased how libraries are making use of user surveys as new measures in a 1997 publication and continues to promote this strategy by offering a workshop on the methodology of user surveys. ⁷

The Heritage

A core question that has been posed by some ARL members also helps frame the issue: Should we stop collecting the established annual data series and instead invest all staff efforts in exploring new areas? Is collecting and publishing data on collections, expenditures, staffing, and services holding us back? What is the current value of our investments in the *ARL Statistics*, *ARL Annual Salary Survey*, "Library Expenditures as a Percent of E&G," and *ARL Preservation Statistics*?

Recently, one of the Program's fundamental strategies has been to maximize the usefulness of the annual projects. Thus, from data collected in the *ARL Annual Salary Survey*, Stanley Wilder was able to publish a report on aging in the library profession and calculated retirement projections. ⁸ Martha Kyrillidou received permission to study earnings differentials and hierarchical segregation in ARL libraries using the same dataset. Using the *ARL Statistics*, a secondary annual report is published containing thirty selected ratios that ARL directors have identified as useful indicators for examining progress towards local goals and objectives. ⁹ Maximizing the investments in ARL's annual statistical data has proven a very successful strategy that helps managers develop a better understanding of current trends in their institutions.

ARL Membership Index

When reviewing the ARL Statistics and Measurement Program activities, one cannot escape a discussion of the [ARL Membership Criteria Index](#), one of ARL's most publicized and controversial products. The Index serves as a measure of the commonality of new members with the founding ARL member libraries. It is a composite measure of volumes held, volumes added gross, current serials, total expenditures, and professional plus support staff. The Index is not a measure of a library's services, the quality of its collections, or its success in meeting the needs of users.

Three out of the five variables that comprise the Membership Index encompass investments in the emerging library realities. For example, "current serials" is a measure that includes not only print journals, but electronic ones as well; "total expenditures" incorporates expenditures for electronic investments; and "staffing" is an essential composition of both the old and the new.

The ARL Membership Index is published by *The Chronicle of Higher Education* every year. A number of voices have called for a stop to the Index, declaring that it fosters a competitive posture in an era of increasing cooperation. The Index is also seen as a threat to resource sharing because it appears to emphasize investments in local collections. Further, it is said to de-emphasize the distinct institutional character of each library. It is perceived as calling those universities that invest most heavily in libraries "winners," implying top, or best ranked, schools.

If ARL membership were not based on the Index, what would take its place? A variety of membership committees have attempted to answer this question, the most recent body submitting a thoughtful report in 1994 proposing to supplement the quantitative membership criteria with qualitative factors that take into account, among other things, investments in electronic resources. In 1995, the membership adopted this proposal to amend the membership criteria. This latest revision does not eliminate the pre-existing quantitative requirements, but allows for consideration of qualitative assessments about the contributions a research library makes to North American learning and scholarship when the quantitative requirements are marginal.

Striking a Balance

Activities undertaken by the Statistics and Measurement Program include collecting, refining, and making use of the traditional data while simultaneously searching for new measures.

The analyses to date indicate that access measures are best developed locally. Ratios, user survey data, and service transaction data complement the traditional quantitative data in providing an overall picture of library input and output. As the library and its constituent

community reach consensus on how to best measure the expenditures, collections, and use of electronic resources, these additional measures can be added to a library's collective dataset, as well.

Our challenge each year is to learn from our experiences how to improve ARL measures. As our members' environment changes, ARL is adjusting program goals and adapting measures to suit the emerging realities of research libraries. Douglas Bennett, President, Earlham College, and former Vice President of the American Council of Learned Societies, was invited to comment on ARL's search for new research library measures. He noted that "we need goals in order to measure progress toward them, but at present we do not have adequate goals, or ultimate goals, with regard to what universities [and libraries] should do." He further cautioned the library community to "avoid premature closure. Keep experimenting because we are unlikely to settle into comfortable grooves anytime soon."¹⁰

¹ *Proceedings of the 125th Membership Meeting*, Association of Research Libraries, 1996. p. 35.

² see <http://www.arl.org/stats/program/planning.html>

³ For example, the Council on Library and Information Resources and the University of Washington are supporting Timothy Jewell in an examination of the investment made by research libraries in electronic resources. The Andrew W. Mellon Foundation funded Mary Jackson's two-year study of interlibrary loan performance. Jan Merrill-Oldham, Harvard University, led a project to revise the ARL Preservation Statistics Survey to begin to collect data on digitization for preservation.

⁴ *Recent Trends in ARL Electronic Access Services Data*. Available at <http://www.arl.org/stats/specproj/etrends.htm>.

⁵ Chen, Paul. "Hit-or-Miss Measurement." *Marketing Tools*. (Mar. 1997): 22-25.

⁶ Hightower, Christy, Julie Sih, and Adam Tilghman. "Recommendations for Benchmarking Website Usage Among Academic Libraries." *College and Research Libraries* (Jan. 1998): 61-79.

⁷ GraceAnne A. DeCandido. Julia C. Blixrud, Ed. Advisor. *Transforming Libraries 4: After the User Survey, What Then?* (SPEC 226). September 1997. This publication is also available online at: <http://www.arl.org/transform/us/index.html>.

⁸ Wilder, Stanley. *The Age Demographics of Academic Librarians: A Profession Apart*. Washington, DC: Association of Research Libraries, 1995.

⁹ *Developing Indicators for Academic Library Performance: Ratios for the ARL Statistics*. ARL annual report.

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