

LIBRARY ASSESSMENT AS A COLLABORATIVE ENTERPRISE

BY

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Abstract

This paper focuses primarily on the collaborative partnerships that have shaped the ARL Statistics and Measurement Program, which currently serves the objective of “describing and measuring the performance of research libraries and their contribution to teaching, research, scholarship, and community service.” Over the last ten years, the ARL Statistics and Measurement Program has continued to engage in active collaboration at the national and international level, enabling libraries to enhance assessment.

INTRODUCTION

The Association of Research Libraries (ARL) works in an extensive and intensive collaborative environment, building consensus and defining the collective actions that libraries undertake to shape and influence the forces affecting the future of research libraries in the process of scholarly communication. ARL is a not-for-profit membership organization comprising the leading research libraries in North America. ARL programs and services promote equitable access to and effective use of recorded knowledge in support of teaching, research, scholarship, and community service. The Association articulates the concerns of research libraries and their institutions, forges coalitions, influences information policy development, and supports innovation and improvements in research library operations.

Within ARL, a set of eight strategic objectives has defined the organization's activities throughout the 1990s. ARL is currently undergoing a strategic planning process and a new vision will be emerging in the coming months. This rapidly approaching change creates a timely pressure to document the extensive and intensive collaborative partnerships that have shaped library assessment within the ARL Statistics and Measurement Program during the last decade. This paper focuses primarily on the collaborative partnerships that have shaped the ARL Statistics and Measurement Program, which currently serves the objective of "describing and measuring the performance of research libraries and their contribution to teaching, research, scholarship, and community service."

INTERNAL AND EXTERNAL COLLABORATIONS

One can view collaboration within ARL at many different levels, starting from within the organization and among the various programmatic areas that are served by the eight ARL strategic objectives.¹ One of the most prominent opportunities for internal collaboration involves the Statistics and Measurement Program. All program staff are actively interested in promoting the overall mission of the organization and frequently work together. For example, the ARL Statistics and Measurement Program often contributes evidence that is used by the Federal Relations Program² to inform testimony for legislative purposes. Data collected through the ARL Statistics are used to inform the “Create Change” campaign³ and sensitize external constituencies through SPARC.⁴ The ARL Statistics and Measurement program monitors trends in economic indicators affecting libraries, especially tracking the journal costs describe tensions in the scholarly communication system.⁵ In the preservation area, the ARL Preservation Statistics⁶ are a reflection of the close collaboration between the Preservation Program and the assessment capability within ARL. Through the New Measures Initiative, the interlibrary loan/document delivery (ILL/DD) cost study builds a similar bridge between the assessment capability and the collections and access area.⁷ Finally, a close relationship has also evolved through the New Measures Program⁸ between the Office of Leadership and Management Services and the ARL Statistics and Measurement Program, as we engage in helping libraries move in a more seamless way from assessment to management.⁹

The primary thrust of ARL collaborative activities, though, lies not with internal collaborations but rather with the external ones each program establishes with different

constituencies. ARL has an structure of committees and task forces that monitor programmatic areas of the association, support specific projects, and often guide the program in establishing collaborative relations with external constituencies. External collaborations whether among the ARL member libraries, subgroups, or a mix of member and non member libraries often make collaboration a very exciting and productive strategy. The rest of the article examines external collaboration activities in terms of how each programmatic area defines collaborative actions and services among (a) **all** ARL member libraries, (b) select subgroups of ARL member libraries, and (c) a mix of ARL member libraries and other libraries external to ARL. These overlapping circles of influence interact with one another in new ways as the external environment is enhanced with new technological applications and increased competition for attention.

Assessment by Consensus

Some collective actions are supported by all ARL member libraries. In the policy area, where timely topics arise, the political process usually involves the interaction of program staff, committee involvement, and ARL Board involvement. The ARL Statistics and Measurement Committee has grown from its beginning as the oversight committee for two long-term assessment activities that have become operationalized as established services for all member libraries. Those two activities involve the data collection of (a) the *ARL Annual Salary Survey*¹⁰ and (b) the *ARL Statistics*,¹¹ which now have well-formed processes that require advisory oversight from the committee and adjustments as new needs arise. These activities are primarily valued for the long-term stability and

reliability the services provide to the members, by allowing members to benchmark against one another in familiar and well-established ways.

In terms of performance measures, the two general areas that have sustained support and interest from member libraries over decades of collecting and describing the environment of research libraries reflect (a) the area of human resources and (b) the area of institutional qualitative and quantitative indicators. These areas are represented by annual data collection activities in the form of the *ARL Annual Salary Survey* and the *ARL Statistics*. All member libraries are actively contributing data for institutional benchmarking in both sets of annual publications.

The *ARL Statistics*, in particular, has strong roots in defining membership for the association over a number of years. A set of five variables (volumes held, volumes added gross, current serials, total expenditures, and professional plus support staff) from the larger pool of variables collected through the *ARL Statistics* has been reduced into a weighted index of the level of investment the parent institution has historically made in its library operation.¹² Although the ranking of this index has been used for comparative purposes, the main thrust of the index is to emphasize the similarity of these institutions, given the historically large investments that have been made in them.

The political process of defining membership criteria has evolved over the years to emphasize more qualitative aspects of a library's operations, yet the historical reality of the *ARL* membership criteria index still is a powerful unifying force for these institutions. As Kendon Stubbs noted in the conclusion of an address to the *ARL*

directors: “Look around the room at the dozen people in your group, and ask: what do we have in common, and how can we describe it? Is it volumes held? Added volumes? Number of professionals? Interlibrary loan turnaround time? Success rates of reference transactions? Or even a combination of variables like the ARL Index?”¹³ Yet as libraries are moving into increasingly competitive environments, the issue of increasing diversity in the interests of the various institutions as they deploy their resources into different collaborative arrangements has brought forward another model of engaging in assessment activities: sponsoring projects by subgroups of interested member libraries, or what is called “assessment by affinity subgroups” in the next section.

Assessment by Affinity Subgroups

In 1999, a small group of directors of ARL libraries under the leadership of the newly elected chair of the ARL Statistics and Measurement Committee, Carla Stoffle, Dean of Libraries at the University of Arizona established what has historically come to be known as the New Measures Initiatives. With the establishment of eight areas of investigation outlined in the original Tucson retreat, it was clear that the developing assessment agenda was growing in complexity and diversity. As a result different models for exploration and experimentation were adopted by different groups of libraries. There were varying levels of readiness to articulate the issues related to each one of these areas, as well as a different set of strategies deployed in some areas. For example, in some of the areas of investigation, like in the areas of learning and research outcomes, a more conceptual and theoretical investigatory approach was followed. For others, a robust mix of a conceptual research design and pragmatic technical applications, was developed such

as the work in the area of measuring library service quality that resulted in the establishment of the LibQUAL+™ service.

Select subgroups of ARL member libraries have come together since the Tucson retreat to experiment in specific areas and develop “new measures” that are not necessarily of interest to all member libraries. Measuring service quality, assessing information literacy skills, measuring the impact of networked information resources are some examples of such areas of investigation. These areas of investigation resulted into the development of various assessment tools respectively, such as LibQUAL+™, SAILS, E-Metrics and MINES. These tools have been used by different groups of libraries from year to year.[8]

An interesting example of a New Measures pilot project that is being successfully operationalized is the ARL E-Metrics¹⁴ project, which originally started as a pilot area of investigation by a group of 24 interested ARL libraries. This group has grown since 2000 to 50 ARL libraries and, following an assessment of the importance of the data elements proposed for collection through the project, the move to establish this pilot activity as the new *ARL Supplementary Statistics*¹⁵ for 2003-04 was supported by the ARL Statistics and Measurement Committee. As a result, the forthcoming *ARL Supplementary Statistics* survey that will be mailed to all member libraries will ask them to consider reporting new data elements such as electronic journal subscriptions, searches, sessions and items downloaded, which primarily attempt to describe electronic resources beyond the expenditures that have been successfully captured with earlier supplementary surveys.

The maturation of E-Metrics is an example of a successful pilot activity that has moved from the support of an affinity subgroup to a consensus assessment activity for all ARL member libraries.

Beyond ARL membership

Another model of developing and deploying assessment tools through the New Measures Initiatives is supported by a combination of ARL member libraries and other libraries external to ARL. These groups come together to test new approaches to collecting evidence for decision making. Two of the New Measures Initiatives, LibQUAL+™ and Standardized Assessment of Information Literacy Skills (SAILS) secured external funding from U.S. federal agencies that supported their expansion and application development to non-ARL member libraries. LibQUAL+™ was awarded a three-year grant by the Fund for the Improvement of Post-Secondary Education (FIPSE) in 2001¹⁶ and SAILS is in its last year of grant support from the Institute of Museum and Library Services (IMLS).¹⁷ Both projects have been applied extensively to settings outside of the immediate ARL community, often with enthusiastic support for meeting important needs at the institutions that deployed these new tools.

A recent New Measures Initiative, known as Measuring the Impact of Networked Information Services (MINES), is under development in partnership with a consortium of libraries that involves both ARL and non-ARL member libraries in Canada, the Ontario Council of University Libraries (OCUL). MINES has evolved from an earlier

methodology, applied to a variety of settings by Brinley Franklin and Terry Plum for measuring library usage patterns in the electronic information environment involving 15,000 users. The authors discover use of electronic sources shifting from in-library to remote use and argue that this phenomenon is going to increase rapidly.¹⁸ MINES has utilized the experience of these earlier studies and is currently being applied for evaluating the electronic resources that have been acquired through a centralized purchasing consortium, the Ontario Council of University Libraries (OCUL). OCUL has established a centralized portal through which it provides access to a rich array of licensed electronic resources. The MINES methodology provides a framework for collecting data from the users of these electronic resources through a pop-up user survey. Currently data collection is ongoing and is expected to be completed by summer 2005.

Interest in LibQUAL+™ from consortia has also been apparent, since the scalability of the total market survey approach makes it attractive to libraries that want to evaluate their users' perceptions and expectations in ways that are consistent across libraries. Often these consortia are partnering to offer enhanced access to electronic resources.¹⁹ Needing to move beyond the boundaries of a local institution in deploying assessment tools is, to some extent, related to the globalization²⁰ elements that are affecting the library marketplace today.

At least some of the New Measures Initiatives, including LibQUAL+™, SAILS and MINES, have evolved into collaborative activities where both ARL member and non-member libraries are coming together to engage in different assessment protocols

and learn from one another. LibQUAL+™ for example is designed so that libraries can share results and learn from each other. So, collaborative participation is highly valued assuming that it will lead to the identification of best practices and improvement in local service. We are all eagerly awaiting the next point of development, the movement into actions beyond the local level, based on the results that are gathered at various macro levels of consortia and group organizations.

ADVISORY STRUCTURES

The ARL Statistics and Measurement Committee

A complex set of issues like the ones addressed by the ARL Statistics and Measurement Program is affected by a variety of spheres of influence, ranging from the direct guidance provided by the directors of the various ARL member libraries who serve on the ARL Statistics and Measurement Committee: to the people who actually carry forward the data collection activities at the various libraries; and to the internal staffing resources available at ARL. The development of the ARL Statistics and Measurement Program is directed by the ARL Statistics and Measurement Committee, a focused, programmatic committee that provides advice and guidance regarding existing and emerging operations. The chair of the committee, in collaboration with program staff, is working on developing the agenda for the biannual committee meetings, which usually take place in conjunction with the May and October ARL Membership Meetings. Information about the agenda, the issues discussed, and the ways in which they are resolved is also posted on the Web site along with the committee minutes and agendas.²¹

Often, approaches that may have been discussed in earlier years are given renewed emphasis and impetus as changing leadership and environmental conditions provide more fertile ground for addressing specific assessment protocols. For example, discussions about the need to measure service quality from a user-based perspective took place at the ARL Statistics and Measurement Committee's meeting in October 1995, when Danuta Nitecki was invited to present results of her award-winning dissertation.²² Nitecki subsequently worked with ARL and drafted a proposal for application of a protocol across different libraries, but the proposal was not funded at that time. A few years later, however, the various New Measures Initiatives provided the impetus for further action, and LibQUAL+™ was developed through a new partnership with Texas A&M University libraries. The interaction of member library leaders and staff is of key importance in the effective deployment of new projects.

ARL Survey Coordinators

Staff working in ARL member libraries are closely involved with the activities of the ARL Statistics and Measurement Program if they to work on the ARL Annual Salary Survey, the ARL Statistics, ARL Law Library Statistics, ARL Health Sciences Library Statistics, or a well-established service like LibQUAL+™. They often meet in person in conjunction with ALA annual meetings.²³ Through these five data collection services, the ARL Statistics and Measurement Program interacts with (a) human resources specialists, (b) administrative and collection development specialists, specialized staff in (c) law libraries and (d) health sciences libraries, and (c) public services teams who tend to lead the LibQUAL+™ survey at the local level. For example, human resources

coordinators often provide support for data collection efforts relating to the ARL Salary Survey, and they often develop proposals for modifying the survey's various data elements. In 2003, members of the ACRL Personnel Administrators and Staff Development Officers Discussion Group examined the Functional Specialist category of the ARL Salary Survey and recommended changes to clarify the positions included in the category in order to ensure more comparability among the resulting data. These recommendations were accepted by the ARL Statistics and Measurement Committee and implemented in the 2004-05 ARL Annual Salary Survey.²⁴

Visiting Program Officer

Sometimes specific projects are conducted by staff members who are appointed as Visiting Program Officers (VPOs) at ARL. For example, Stanley Wilder collaborated with ARL twice as a VPO to finish his analysis of the age demographics of academic librarians.²⁵ Another example of a VPO appointment that fostered the subsequent development of the ARL E-Metrics project was Tim Jewell's work in 1997-98, when he helped to clarify the issues related to the characterization of expenditures for electronic resources.²⁶

Expert Advice

In addition to working with the various survey coordinators and Visiting Program Officers, ARL often brings experts and advisors to various projects. Examples of such collaborations include the reviewing services and advice provided by the well-known demographer Murray Gendell regarding the studies of age demographics. More recently,

ARL has established close collaborative relations with leading qualitative and quantitative researchers through joint grants with Texas A&M University. Yvonna Lincoln and Bruce Thompson from the School of Education at Texas A&M University have served as qualitative and quantitative experts, respectively, on the LibQUAL+™ project.

Technology Support for Collaborative Assessment

It is worth making a special note about the kind of collaboration that the LibQUAL+™ process brings to the large and complex research library environment. A team generally leads the local LibQUAL+™ process, with one person designated as a primary contact for communications on our end. This collaborative relationship is supported by a web-based management center that allows each institution to define six points of contact at each institution (three primary liaisons and three assistants). Communications among the various contacts is not only supported by related listservs, but also by the availability of an online directory that allows participating libraries to identify appropriate contact names for further dialogue, discovery, and learning about the interpretation of the LibQUAL+™ results.

Another important aspect of the LibQUAL+™ service's collaborative environment is the ability to work through groups of libraries with a common purpose, and yet get evidence that is useful and granular enough for planning at the local level. In promoting LibQUAL+™, we emphasize the benefits provided to various consortia, including:

- Analysis of group results and a group results notebook that is provided to all consortium participants;

- The ability to add five additional questions to the survey as a unified group; data from those questions will be presented in the group notebook;
- The opportunity for a locally hosted, customized results meeting (depending on the number of consortium participants and the availability of staff)
- The ability to benchmark user perceptions and expectations across different library settings within the peer group defined by the consortium.

During 2003 and 2004, we worked successfully with a diverse group of consortia from all over the globe (see Table 1). A total of thirteen different consortia, ranging from state-defined groups to other types of institutional associations, indicate that the majority of participating institutions during the last three years have joined this assessment activity as part of a larger group.

COOPERATIVE RELATIONS WITH OTHER ORGANIZATIONS

ARL has a strong tradition of collaborative relations with other associations, both in North America and the larger international environment. In this section I would like to highlight some of the collaborations that have taken place to promote standards and policy related work. ARL itself does not develop standards in the same way that other library associations do. ARL tends to be involved through partnerships with other organizations that support the development of standards through the official standards-setting bodies of the library marketplace (NISO and ISO).

Standards

ARL often works with other associations at the international and national level to promote the establishment of standards that are useful to the library marketplace and the implementation of policies that promote library values in relation to information access. The ARL Statistics and Measurement Program and Committee members have been actively involved in supporting the development of the revised NISO Z39.7 -2004 Information Services and Use: Metrics and Statistics for Libraries and Information Providers—Data Dictionary. Member leaders are representing ARL perspectives in the process of revising the library statistics and performance measures standards both at ISO and NISO. More recently, ARL has supported the development of COUNTER Online, which, although not an official standard-setting body, is promoting work that will help the establishment of standardization and good practices in the reporting of networked usage statistics.

Policy

In the area of policy development, ARL has been an active participant at the Academic Libraries Advisory (ALS) Committee to the National Center for Education Statistics (NCES) that has historically been staffed by the ALA Office of Research and Statistics under the leadership of Mary Jo Lynch and whose work has been supported by the National Commission of Library and Information Science (NCLIS). The ALS committee provides feedback to NCES in relation to the biennial academic libraries survey. Program staff at ARL have also been actively involved in the adjudication process of the Academic Libraries publication at NCES, a quality control mechanism that ensures that the publications produced by NCES have been thoroughly reviewed by

external reviewers. More recently, a strong partnership has evolved between ARL and ACRL as the latter organization, a division of ALA, has supported the implementation of the ARL Statistics survey to all academic libraries in the U.S. and Canada. Similar partnerships exist between ASERL and ARL and other smaller organizations. As a result, *ARL Statistics* is becoming an important instrument beyond simply describing those research libraries that are members of ARL, and it is being applied in more diverse and complex environments.

At the international level, ARL closely follows developments regarding the collection of annual statistics across the Atlantic, where SCONUL is currently introducing new data elements for describing and measuring electronic resources. Exchanges of information are also taking place between ARL and other library statistical units in other countries in Europe (Spain and Greece in particular). Furthermore, some thinking has taken place about the need to foster stronger Franco-American relations in the area of library assessment.²⁷ Much of this important work relating to library assessment is presented at a specialized forum known as the Northumbria Conference. ARL was an official sponsor of the 3rd Northumbria meeting, which took place in Pittsburgh, Pennsylvania as an official IFLA preconference activity.²⁸ LibQUAL+™ is also expanding internationally with the increasing representation of languages and countries.²⁹

STRATEGIC BOUNDARIES

In thinking retrospectively about assessment activities within the research library community, it is evident that the ARL Statistics and Measurement Program has effectively moved from simply describing, as is mostly done by the *ARL Statistics* and the *ARL Annual Salary Survey*, to offering interpretive frameworks, fostering action, and supporting collaborative assessment. In 1996, Sarah Pritchard eloquently described the plight of assessment: “The difficulty lies in trying to find a single model or set of simple indicators that can be used by different institutions, and that will compare something across large groups that is by definition only locally applicable—i.e., how well a library meets the needs of its institution. Librarians have either made do with oversimplified national data or have undertaken customized local evaluations of effectiveness, but there has not been devised an effective way to link the two.”³⁰ In 2004, we have moved beyond locally applicable assessment into more collaborative and global assessment frameworks. However, some may still question whether this provides, by necessity, better library service to the diverse users of libraries around the globe since we need more evidence of action and relation to learning, teaching, and research outcomes.

Two verbs are included in the objective served by the ARL Statistics and Measurement Program: to “describe” and “measure” – both of which have been active in the last decade. In terms of what we need to measure, i.e. “the performance of research libraries”—there continues to be some ambiguity as to whether our current tools, even as they are enhanced by the New Measures Initiatives are meeting the true needs of describing library organizational performance. Every method and tool has inherent limitations that tend to lead to further development and enhancements.

CONCLUSION

There continues to be a healthy search for identity and purpose on behalf of research libraries, as ARL's currently unfolding strategic planning process attempts to articulate and define the research library of the next decade. In an occasional paper published by the University of Illinois at Urbana-Champaign, Krummel describes the seven ages of librarianship and articulates that the currently unfolding age of libraries will be for future generations to characterize and articulate its significance.³² In venturing to predict the future, this author believes that the importance of the collaborative community that comes together to share common values, organizational purpose and/or geography, and the need for that community to maintain a center for preserving the collective memory, is one aspect of the currently unfolding age.

Libraries as collaborative enterprises and librarians as collaborators will need to be more focused and diffused in the community they serve, engaged in maintaining and serving the community needs, and alert in understanding the need to break or raise boundaries. Librarians are operating in increasingly intensive collaborative environments. There is always a fine balance to achieve between maintaining community and furthering action. Similarly, library assessment is becoming an increasingly intensive collaborative enterprise, and the need to maintain this fine balance between understanding community needs and moving beyond understanding into action is a healthy tension that characterizes all the activities described above.

It is the fine psychology of the emerging library “user”, and our collaborative engagement in assessing with this “user” the collective and individual worth of our value as libraries and librarians, that I believe will dominate the next age of libraries. In the words of the French philosopher and moralist François de La Rochefoucauld (1613-1680) and sounding as heretical as he probably did, we may indeed “need to study the people more than the books.”³³

Table 1. Consortium Participants by Year of Participation in LibQUAL+™

Consortium	Years				
	2000	2001	2002	2003	2004
Association of Academic Health Sciences Libraries (AAHSL)			35	21	12
American Jesuit Law Colleges and Universities (AJCU)					19
Church Education System (CES)					6
European Business School Librarians Group (EBSLG)					5
Hospital/MLA					7
<i>Independent Participants with no official consortium affiliation</i>	<i>13</i>	<i>41</i>	<i>72</i>	<i>118</i>	<i>107</i>
Military Educational Research Libraries Network (MERLN)				6	
Network of Alabama Academic Libraries (NAAL)				10	1
NY3Rs (New York)				76	
Oberlin				12	8
OhioLINK			57	45	1
SCONUL				20	16
State Universities of Florida					6
University of Wisconsin System					14

NOTES

- ¹ *ARL Program Plan 2003* (Washington, DC: Association of Research Libraries, 2003).
- ² Federal Relations and Information Policy < <http://www.arl.org/info/index.html>>.
- ³ Create Change < <http://www.createchange.org/home.html>>.
- ⁴ SPARC < <http://www.arl.org/sparc/>>.
- ⁵ Mary M. Case "A Snapshot in Time: ARL Libraries and Electronic Journal Resources." *ARL*, no. 235 (August 2004): 1-10 <<http://www.arl.org/newsltr/235/snapshot.html>>.
- ⁶ ARL Preservation Statistics. (Washington, DC: Association of Research Libraries, annual) <<http://www.arl.org/stats/pres/>>.
- ⁷ Mary E. Jackson "Assessing ILL/DD Services Study: Initial Observations." *ARL*, no. 230/231 (October/December 2003): 21-22 <<http://www.arl.org/newsltr/230/ildd.html>>.
- ⁸ Julia C. Blixrud "Mainstreaming New Measures." *ARL*, no. 230/231 (October/December 2003): 1-8 <<http://www.arl.org/newsltr/230/mainstreaming.html>>. Also, see New Measures Initiative page at <<http://www.arl.org/stats/newmeas/index.html>>
- ⁹ Steve Hiller and James Self "From Measurement to Management: Using Data Wisely for Planning and Decision-Making" *Library Trends* (forthcoming 2004).
- ¹⁰ Martha Kyriallidou and Mark Young *ARL Annual Salary Survey 2003-04* (Washington, DC: Association of Research Libraries, 2004).
- ¹¹ Martha Kyriallidou and Mark Young *ARL Statistics 2003-04* (Washington, DC: Association of Research Libraries, 2004).
- ¹² ARL Membership Criteria Index <<http://www.arl.org/stats/factor.html>>.
- ¹³ Kendon L. Stubbs "On The ARL Library Index," Research Libraries: Measurement, Management, Marketing: Minutes of the 108th Meeting, May 1-2, 1986, Minneapolis, Minnesota. Washington, DC: Association of Research Libraries, 1986. p. 18-20.

¹⁴ Rush Miller, Sherrie Schmidt and Martha Kyrrillidou “New Initiatives in Performance Measures” in *Global Issues in 21st Century Research Librarianship* (Helsinki: NORDINFO Publication 48, 2002): 161-177.

¹⁵ Association of Research Libraries *ARL Supplementary Statistics* (Washington, DC: Association of Research Libraries, annual)

¹⁶ Colleen Cook, Fred Heath, and Bruce Thompson “Users’ Hierarchical Perspectives on Library Service Quality: A LibQUAL+™ Study,” *College & Research Libraries* 62 (2001): 147-153; and Bruce Thompson, Colleen Cook, and Fred Heath “How Many Dimensions Does it Take to Measure Users’ Perceptions of Libraries?: A LibQUAL+™ Study” *Portal: Libraries and the Academy* 1 (2001): 129-138. For detailed bibliography regarding LibQUAL+™, see: <
<http://www.libqual.org/Publications/index.cfm>>

¹⁷ O'Connor, Lisa G., Carolyn J. Radcliff, and Julie A. Gedeon "Applying Systems Design and Item Response Theory to the Problem of Measuring Information **Literacy** Skills." *College & Research Libraries*, 63, no. 6 (2002): 528-543; and, O'Connor, Lisa G., Carolyn J. Radcliff, and Julie A. Gedeon "Assessing Information Literacy Skills: Developing a Standardized Instrument for Institutional and Longitudinal Measurement." In H. A. Thompson (Ed.), *Crossing the Divide: Proceedings of the Tenth National Conference of the Association of College and Research Libraries* (Chicago: 2001), 163-174.

¹⁸ Brinley Franklin and Terry Plum (2004) "Library usage patterns in the electronic information environment" *Information Research*, 9(4) paper 187 [Available at <http://InformationR.net/ir/9-4/paper187.html>]

¹⁹ A set of annual group reports are produced by the LibQUAL+™ research team. In 2004 the available reports are for the following groups: ARL, AAHSL, Association of Jesuit Colleges and

Universities Law Libraries, CES Library Consortium, European Business School Librarians Group, Hospital/MLA, Oberlin Libraries Group, SCONUL, State University Libraries of Florida, and University of Wisconsin System.

²⁰ Martha Kyrillidou “New Collections, New Marketplace Relations” *Resource Sharing and Information Networks* 14 (1) (1999): 61-75, Preprint version available at:

<<http://www.arl.org/stats/ifla83.html>>

²¹ ARL Statistics and Measurement Committee < <http://www.arl.org/stats/program/meeting.html>>

²² ARL Committee on Statistics and Measurement Minutes from the 127th ARL Membership Meeting, Wednesday, October 18, 1995 <<http://www.arl.org/stats/program/min1095.html>>

²³ ARL Survey Coordinators’ Meetings < http://www.arl.org/stats/arlstat/coord_mtgs.html>

²⁴ ARL Committee on Statistics and Measurement Minutes from the 143rd ARL Membership Meeting, Wednesday, October 15, 2003, Item 10 <

<http://www.arl.org/stats/program/2003/agnd1003.htm>>

²⁵ Stanley J. Wilder *Demographic Changes in Academic Librarianship* (Washington, DC: Association of Research Libraries, 2003) and Stanley J. Wilder *The Age Demographics of Academic Librarians: A Profession Apart* (Washington, DC: Association of Research Libraries, 1995).

²⁶ Timothy D. Jewell “The ARL Investment in Electronic Resources Study: Final Report to the Council on Library and Information Resources” December 24, 1998 <

<http://www.arl.org/stats/specproj/jewell.html>>

²⁷ James H. Spohrer “[Dossier : Regards étrangers sur les bibliothèques françaises: Les bibliothèques universitaires françaises et nord-américaines](#)” *BBF* 2002 – Paris, t. 47, n° 5, p. 32-35 (Avril 2002). < http://bbf.enssib.fr/bbf/html/2002_47_5/2002-5-p32-spohrer.xml.asp>

²⁸ Joan Stein, Martha Kyrillidou, and Denise Davis, eds. *Proceedings of the 4th Northumbria International Conference on Performance Measurement in Libraries and Information Services*. Pittsburgh, Pennsylvania, August 12-16, 2001 (Washington, DC: Association of Research Libraries, 2002).

²⁹ Martha Kyrillidou, Toni Olshen, Fred Heath, Claude Bonnelly, Jean-Pierre Cote “[Cross-cultural implementation of LibQUAL+™: the French language experience](#)” Paper presented at the 5th Northumbria International Conference, Durham, UK, July 29, 2003.

³⁰ Sarah Pritchard “Determining Quality in Academic Libraries” *Library Trends* (January 1, 1996)

³² Donald Krummel *Fiat Lux, Fiat Latebra: A celebration of Historical Library Functions* Occasional Papers 209 (Urbana, IL: Graduate School of Library and Information Science, 1999).

³³ François de La Rochefoucauld’s quote in original French: “Il est plus nécessaire d’étudier les hommes que les livres.” Source: *Maximes posthumes* page 51 line 106. Note: we were able to locate the original version of the quote through the kind service provided to us by the University of Virginia library.