May 10, 2000

TO: ARL Statistics and Measurement Committee

Claude Bonnelly, Laval University
Brinley Franklin, University of Connecticut
Clifford H. Haka, Michigan State University
Eileen Hitchingham, Virginia Tech
Ellen Hoffmann, York University
Susan K. Martin, Georgetown University
Carolynne Presser, University of Manitoba
Dana Rooks, University of Houston
Sherrie Schmidt, Arizona State University
Tom Shaughnessy, University of Minnesota
Paul Wiens, Queen’s University

Guests:

Vicki Coleman, ARL Visiting Program Officer, University of Kansas
Barbara Dewey, University of Iowa Libraries
Joanne Eustis, Case Western Reserve
Joyce Garnett, University of Western Ontario
Joan Lippincott, Coalition for Networked Information
Mod Mekkawi, Howard University
Aubrey Mitchell, University of Tennessee, Knoxville
Sarah Pritchard, University of California, Santa Barbara
Ken Smith, Eller Distinguished Service Professor of Economics-University of Arizona
Stanley Wilder, University of Rochester

FROM: Carla Stoffle, Chair, University of Arizona
Julia Blixrud, Director of Information Services, ARL
Martha Kyrillidou, Senior Program Officer for Statistics and Measurement, ARL

Enclosed are the agenda and supporting documents for the ARL Statistics and Measurement Committee meeting that will take place from 8:30 a.m. to 11:30 a.m. on Wednesday, May 17, 2000, in the Royale Conference Foyer of the Baltimore Hilton and Towers, Baltimore, MD.

The major part of the meeting will focus again on developments with the New Measures Initiatives. In particular, Ken Smith will be available to engage the committee members in preparation for the lunch discussion that will follow. Since our last meeting some projects have moved forward quickly and others are still looking for a focus. Last, the committee needs to take action on a couple of external requests for additional data collection.

Thank you for your interest and participation in the work of this committee. We look forward to a productive meeting.
136th ARL Membership Meeting
ARL Committee on Statistics and Measurement
Wednesday,
May 17, 2000
8:30 a.m. – 11:30 a.m.
Royale Conference Foyer, Baltimore Hilton and Towers
Baltimore, MD

AGENDA

Note: The parenthetical times shown are estimates only to aid in moving the meeting along. If an issue warrants, we will take as much time as necessary.

1. **Introductions and Overview.** Welcome three ‘new’ members to the committee: Brinley Franklin (University of Connecticut), Tom Shaughnessy (University of Minnesota) and Paul Wiens (Queen’s University). (5 minutes)

2. **Approval of Minutes and Feedback on the 2000 Program Plan section for the ARL Statistics and Measurement Program** (5 minutes)

   Attachment 2a: Minutes of the Meeting of the ARL Statistics and Measurement Committee, October 1999.

   Attachment 2b: ARL Statistics and Measurement Program Plan from ARL Program Plan 2000

   Outcome: Approval of minutes; feedback on 2000 program plan

3. **New Measures: Higher Education Outcomes (HEO) Research Review** is a project to help ARL libraries engage in a collaborative process in developing a strategy for involving research libraries in campus assessment activities that demonstrate the value of the library to the learning community. Direct member funding enabled ARL to engage Ken Smith, Eller Distinguished Service Professor of Economics at the University of Arizona, to develop a white paper that is available for discussion and presentation during the luncheon that will follow the committee meeting. This paper stems from the original discussions held at Tucson in February 1999 where the need to develop a white paper outlining the library impact on teaching and learning was identified (<http://www.arl.org/stats/newmeas/nmbackground.html>). ACRL has recently reviewed and approved the Information Literacy Competency Standards for Higher Education (<http://www.ala.org/acrl/ilcomstan.html>) (60 minutes)

   Attachment 3a: White Paper on *New Roles and Responsibilities for the University Library: Advancing Student Learning through Outcomes Assessment* by Ken Smith

   <http://www.arl.org/stats/newmeas/HEOSmith.html>
Outcome: Feedback; preparation for lunch discussion; advice on next steps

4. **New Measures: Higher Education Outcomes (HEO) Research Review** also involves another area of investigation identified at Tucson in February 1999 where a preliminary sketch of a white paper has been drafted by Carolynne Presser in the area of Library Impact on Research [http://www.arl.org/stats/newmeas/nmbackground.html](http://www.arl.org/stats/newmeas/nmbackground.html). Doug Jones from the University of Arizona will be appointed ARL Visiting Program Officer starting in January 2001 to develop further this area of investigation. *(10 minutes)*

Outcome: Introducing Doug Jones

5. **New Measures: Investigation of Cost Drivers.** The Leadership and Management Committee is coordinating work on the project to identify high impact library functions that are susceptible to cost savings and performance enhancement. At the New Measures meeting at ALA Midwinter 2000, attendees created criteria for choosing a cost driver project for study. Several areas for study have surfaced through these discussions and from member directors: the cost/benefit of remote storage and retrieval within a consortial setting; electronic reserves; and a public services function such as reference or circulation that could be modeled on the technical services study currently underway and led by Dilys Morris, retired technical services libraries from the University of Iowa. The Leadership Committee will be examining these suggestions at its May meeting. <see [http://www.arl.org/stats/newmeas/costdriver.html](http://www.arl.org/stats/newmeas/costdriver.html)>

In the meantime, Vicki Coleman, ARL Visiting Program Officer from the University of Kansas, has been in touch with Dilys Morris and some of the people involved in the current pilot that takes place across five ARL member libraries and will inform the committees regarding the possibilities of coordinating or supporting this work across multiple ARL libraries. *(15 minutes)*

Outcome: Vicki Coleman’s briefing; Understanding the possibilities and advising on future steps regarding the current cost study of technical services led by Dilys Morris

6. **New Measures: E-Usage (Usage Measures for Electronic Resources):** A well-attended meeting was held in Scottsdale, Arizona, at the end of February to develop a project that would address member interest in measuring usage measures for electronic resources. Out of that meeting, project consultant Charles McClure, ARL staff, and the project co-chairs Rush Miller (Pittsburgh) and Sherrie Schmidt (Arizona State), prepared a prospectus entitled “Developing Statistics and Performance Measures to Describe Electronic Information Services and Resources in ARL Libraries.” The prospectus was sent to directors of ARL libraries that were represented at Scottsdale and was accompanied by an invitation letter soliciting involvement in a 20-month-long effort. A response to this call for participation yielded 20 interested institutions, each willing to contribute $10,000 in direct funding...
and provide staff resources for the project activities. The revised prospectus is available to members upon request and public announcements will be made once the contract arrangements have been finalized [http://www.arl.org/stats/newmeas/e-usage.html](http://www.arl.org/stats/newmeas/e-usage.html) (15 minutes)

Attachment 6a: Brief Project Description

7. New Measures: SERVQUAL-pilot
Texas A&M (Fred Heath and Colleen Cook) is spearheading an effort with 12 ARL member libraries to participate in a pilot application of a web-based survey on user perceptions of library services. Using a uniform modified-SERVQUAL survey instrument, institutions completed their surveys in March and mid-to-late April. As part of the project, a symposium on the New Culture of Assessment: Measuring Service Quality is being planned for October 20-21 in Washington, D.C. The proceedings of this symposium will be published as a *Library Trends* issue edited by Fred Heath and Martha Kyrillidou.

External funding for further implementation of the modified-SERVQUAL instrument is being sought. The large interest generated by the modified-SERVQUAL-pilot project has prompted ARL into developing and submitting a grant proposal to FIPSE (Fund for the Improvement of Post Secondary Education). The ARL preliminary proposal entitled Service Effectiveness in Academic Research Libraries has been accepted and ARL is preparing a final proposal for consideration to FIPSE (deadline May 19). It is unusual for a library project to get this far in FIPSE priorities and letters of support were solicited from library directors whose libraries participate in the SERVQUAL-pilot project. If successful, the FIPSE grant proposal would offer the opportunity to ARL to extend the pilot application and establish it as a regular standing service. It would also build an infrastructure that can be used to develop additional tools and instruments for measuring service effectiveness. Attached please find a copy of the preliminary proposal. (10 minutes)

Attachment 7a: FIPSE preliminary proposal

8. New Measures: Assessing and Improving the Performance of ILL/DD Operations: One of the components of the ARL New Measures Initiative is the development of an assisted self-study for interlibrary loan and document delivery operations by Mary Jackson. The study will consist of three parts: an organizational assessment, comparison of local activity against the benchmarks and best practices identified in the ARL ILL/DD Performance Measures Study, and development of specific actions and changes that will result in a service that meets or exceeds those benchmarks. The draft study will be developed during the summer. In fall, a small pilot group of libraries will test the methodology, with a goal of making the study available to the membership and library community in early 2001. (5 minutes)

9. Annual Projects Update (5 minutes)
10. ARL Annual Salary Survey. The latest double ARL Newsletter issue on Human Resources features additional analysis of ARL Annual Salary Survey data. The following items involve consideration for further research in this area: (10 minutes)

(a) Additional data collection request by Deborah Lee, Mississippi State University; Deborah Lee would like ARL to collect two additional variables on Tenure and Faculty Status and asks permission to use these data in her dissertation research.

Attachment 10a: Letter by Deborah Lee
Attachment 10b: ARL Policy on Release of ARL Salary Survey Data to Researchers
Attachment 10c: Past requests

Outcome: Advice on response to Deborah Lee

11. Retirement Projections and Age Demographics. In 1998-99 the optional data collection took place again and Stanley updated his demographic analysis and presented findings in the ARL/OLMS Library Human Resources Symposium on March 2-3, 2000 and published the feature article in the latest ARL Newsletter issue dedicated on Human Resources. In the process of updating the earlier analysis, a meeting was held with Stanley Wilder and two demographers (Dr. Gendell and Dr. Irwin) for updating the retirement projections published in the original study. As a result of this meeting two recommendations emerged: (a) to move the optional data collection every five years to coincide with the Census data collection cycle (currently it is every four years and the next cycle will take place in 2002); and (b) to collect additional data regarding the exit behavior of the professionals in ARL libraries to make more informed retirement projections. (15 minutes)

Outcome: Feedback on optional data collection cycle and usefulness of retirement projections.

12. Dr. Lewis G. Liu, Ph.D. and Associate Professor Newman Library, City University of New York, request for additional data collection. (10 minutes)
Attachment 12a: Letter of request and additional data collection elements

Outcome: Advice on response to Lewis G. Liu

**Information Items: (15 minutes)**

13. Workshops Update

(a) Electronic Publishing of Datasets on the WWW led by Patrick Yott at the University of Virginia, March 13-15, 2000

(b) Building a Culture of Assessment in Libraries led by Shelley Phipps and Amos Lakos at the University of Arizona, April 26, 2000

(c) Role of Assessment in Advancing Diversity for Libraries led by DeEtta Jones, Julia Blixrud, and Martha Kyrillidou to be offered on June 5-23, 2000 as an Online Lyceum course

(d) Measuring Service Quality Online Lyceum workshop is currently under development for a fall offering by Danuta Nitecki and Toni Olshen

(e) Electronic Use and Usage Workshop will be developed by Charles McClure and associates to be delivered in Spring, 2001

(f) User Survey for Academic Libraries needs to be revised/updated – seeking VPO

(g) Research Methods and Statistics needs to be developed – seeking VPO

(h) Conducting Focus Groups in Libraries needs to developed – seeking VPO

14. Report on Relations with External Constituencies

(a) IPEDS Academic Libraries Advisory Committee: Academic Libraries 1996 was published earlier this year, the 1998 datafile is available on the web, the 2000 data collection is being prepared. NCES plans to offer interactive data analysis capabilities of the Academic Libraries data. An article by Mary Jo Lynch describing the current U.S. scene for library statistics will appear in ACRL News. The Academic Libraries survey is not part of the IPEDS set of surveys and is not subject to the IPEDS mandatory requirements any more.

(b) National Postsecondary Education Cooperative ARL’s official term of service to the Cooperative has expired. Information about future activities of the cooperative can be found at <http://www.nces.ed.gov/npec/membership.html>

(c) National Consortium for Continuous Improvement has a web presence at http://www.ncci-cu.org/. Susan Jurow is providing staff support for NCCI located at the NACUBO offices. ARL was one of the Charter Member Associations of NCCI.

(d) NISO SDC revision of Library Statistics standard. The U.S. withdrew from the international revision of the library statistics standard; it was felt that NISO should focus on the revision of the national library statistics standard; the revision process will be initiated with an invitational workshop in November, 2000.

(e) ACRL Library Statistics data collection is underway using an outdated version of the ARL instrument – some of the questions in the ACRL instrument have old instructions and we have been receiving questions regarding old and outdated references to E&G questions on the ACRL version of the questionnaire. We have directed these
questions to Hugh Thompson at ACRL; these outdated items seem to be creating some bad publicity for library data collection.
(f) The 4th Northumbria International Conference on Performance Measures in Libraries will be held on August 12-16, 2001 in Pittsburgh, PA. This international conference is co-sponsored by the ARL, NCLIS, the Oakland Library Consortium, University of Arizona, Arizona State, and Texas A&M. Carla Stoffle is serving on the editorial board for this conference and Martha Kyrillidou (ARL) and Joan Stein (Carnegie Mellon) are involved in the planning committee. A call for papers for this conference will be issued in July.

15. Presentations and Meetings related to the ARL New Measures Initiative

(a) “ARL New Measures Initiative” by Carla Stoffle was presented at the ARL Survey Coordinators Meeting in San Antonio, TX (January 14, 2000) and Scottsdale, AZ (February 27, 2000)
(b) “SERVQUAL-pilot” a planning meeting of the participating libraries organized by Fred Heath and Colleen Cook, San Antonio, TX (January 15, 2000).
(c) “Usage Measures for Electronic Information Resources” an invitational meeting at Scottsdale, Arizona, organized by ARL to initiate project activities under the leadership of Sherrie Schmidt and Rush Miller (February 27-29, 2000)
(d) “ARL Project on Usage Measures for Networked Information Resources” by Sherrie Schmidt and Rush Miller, CNI Spring Task Force Meeting (March 28, 2000)
(e) “Measures Matters, and Measures that Matter” by Martha Kyrillidou at FEDLINK (April 27, 2000)
(f) “How will Academic Libraries Measure Success in the 21st Century?” a conversation between the Middle States Association of Colleges and Schools Commission on Higher Education and the Academic Library Directors organized by the Congress of Academic Library Directors (CALD) of Maryland has invited Carla Stoffle, Dean of Libraries, University of Arizona, to present the ARL new measures initiative on (May 19, 2000)
(g) “Building Service Quality in Libraries through Continuous Assessment” a panel discussion where Carla Stoffle will present the activities of the ARL Statistics and Measurement Program and describe the New Measures Initiative; the two other panelists are Amos Lakos (University of Waterloo) and Danuta Nitecki (Yale University) – LAMA, Monday, July 10 [9:30 a.m. – 12NOON], ALA, Chicago 2000.
(h) ARL survey coordinators meeting on July 7, 2000 [4:00 p.m. – 6:00 p.m.], Chicago
(i) “The New Culture of Assessment: Measuring Service Quality” a symposium organized by ARL, October 20-21, 2000
(j) 4th Northumbria International Conference on Performance Measures, August 12-16, Pittsburgh, PA, co-sponsored by ARL, NCLIS, the Oakland Library Consortium, University of Arizona, Arizona State, and Texas A&M.
(k) ARL Statistics and Measurement Program by Julia Blixrud and Martha Kyrillidou at IFLA 2001 in Boston
135th ARL Membership Meeting
ARL Committee on Statistics and Measurement
Wednesday,
October 13, 2000
9:00 a.m. – 11:30 a.m.
Meeting Room 3014, Washington Marriott Hotel
Washington, D.C.

Minutes of the Meeting

Committee Members Present:
Martha Alexander, University of Missouri
Claude Bonnelly, Laval University
Cliff Haka, Michigan State University
Eileen Hitchingham, Virginia Tech
Ellen Hoffman, York University
Susan Martin, Georgetown University
Carolynne Presser, University of Manitoba
Dana Rooks, University of Houston
Sherrie Schmidt, Arizona State University
Carla Stoffle, Chair, University of Arizona
Julia Blixrud, Director of Information Services, ARL
Martha Kyrillidou, Senior Program Officer for Statistics and Measurement, ARL

Committee Members Absent:
Ronald F. Dow, University of Rochester
William G. Potter, University of Georgia

Guests:
Don Bosseau, University of Miami
Jennifer Cargill, Louisiana State University
Vicki Coleman, VPO, University of Kansas
Joanne Eustis, Case Western Reserve University
Bill Gosling, University of Michigan
Paul Kobulnicky, University of Connecticut
Joan Lippincott, CNI
Mod Mekkawi, Howard University
Sarah Pritchard, University of California-Santa Barbara
Paul Wiens, Queen’s University
Jennifer Younger, University of Notre Dame

Introductions; Approval of Minutes; Feedback on the 1999 Activities Report for the ARL Statistics and Measurement Program
Carla Stoffle, Committee Chair, convened the meeting and welcomed Committee members and guests. Introductions were made. Cliff Haka moved to approve the minutes and Dana Rooks provided a second. The minutes were approved by all present. There were no comments on the ARL Activities Report.

Two additional attachments were distributed: (a) a proposal to CLIR to support an investigator to examine the current state of outcomes assessment in higher education and (b) a fax by Fred Heath (Texas A&M) describing a pilot-SERVQUAL project to be undertaken as an ARL project under the new measures initiative. Vicki Coleman, ARL Visiting Program Officer, joined the meeting at 9:30 a.m.

**New Measures**

The discussion quickly focused on various ideas for specific projects that need to be defined under the New Measures Initiative agenda. It became clear that the original course of action of drafting white papers (see [http://www.arl.org/stats/newmeas/nmbackground.html](http://www.arl.org/stats/newmeas/nmbackground.html)) was only a first step and that there is enough interest in some of these areas to sponsor specific projects. The New Measures Initiative has two major objectives (a) define library outcomes and (b) develop tools to contain costs.

Between May and October, the following five target areas were identified for action: (a) the impact of libraries on the learning and research objectives of the parent institution; (b) the utility of service effectiveness measures currently underdevelopment; (c) building on the experience of the ILL/DD studies and measures; (d) securing a better understanding of how electronic information resources are used; and (e) identifying cost-drivers, i.e., service areas where substantial cost are being incurred. While some activities in support of these emerging areas can be initiated with limited staff and committee resources, the committee members agreed that there is a strong need for securing additional financial assistance from ARL members, other agencies sharing these interests and foundations to promote the New Measures agenda.

Jennifer Younger mentioned the need to liaise between the various committees in some of the new measures initiatives; she is currently also a member of the Access Committee and can bring forward to the Access Committee the desire of the ARL Statistics and Measurement Committee members to see further developments building on the experience of the ILL/DD study that was done by Mary Jackson. Paul Kobulnicky also is the chair of the ARL Leadership and Management Committee and serves as a liaison for the various New Measures Initiatives. Paul mentioned that the ARL Leadership and Management Committee would brainstorm on cost-drivers in its afternoon session. It is clear that the New Measures agenda transcends the narrow scope of the ARL Statistics and Measurement Program and crosses into other programmatic areas of the association, so making sure that there is a clear connection with these other committees and that there are opportunities for everybody to be informed is of paramount importance.

Carla Stoffle and Paul Kobulnicky reported on conversations and meetings held with Deanna Marcum, CLIR President, where CLIR expressed an interest in helping ARL identify an investigator who will provide a course of action in the area of describing the library's impact on learning and research. Susan Rosenblatt was mentioned as a potential investigator who could review the literature in this area and provide recommendations for action; it was mentioned, though, that Susan might not be available to start work in this area till later in 2000 due to other commitments with the Frye Leadership Institute. The committee members supported the idea of sending the proposal to CLIR; they also advised that if this area of investigation cannot move forward with a CLIR-sponsored investigator, we should move forward and hire an external consultant. Various other names and institutions (accrediting agencies, universities, associations) that are heavily involved in assessment work were mentioned for ARL staff to contact as potential investigators [Note: ARL ended up engaging Dr. Ken Smith, see his paper included as an attachment under 3a].

The committee discussion then focused on the transformation taking place in universities and libraries where different institutions seem to be adopting change at different rates and with varying commitments. The paradigms of teaching and learning are changing but there are early and late adapters. What do successful models look like? No one was sure. For example, how do you measure the effectiveness of distance learning as well as the library's impact on distance learning? Mod Mekkawi said
that it is really very hard to isolate the library's impact on teaching and learning; it is easier done at the department level, but harder to do it for the library. He said that we assume access to information has a positive impact on teaching and learning, so libraries by facilitating this access have an impact on learners. Therefore, the library may have to rely on some indirect measure. Cliff Haka expressed a concern at the notion of indirect measures. Are we really more interested in the process rather than the measures themselves? The committee members agreed that both processes as well as actual measures are of equal importance—the goal is to develop tools to use over time. We cannot be certain that we can develop measures that will be usable over time in the short term.

Ellen Hoffman also emphasized how important it is to develop tools to describe the new things we are doing. Carla Stoffle expressed a concern that the input/output framework will be transferred in the description of electronic resources. We always need to ask ourselves are we measuring these things that matter? Are we counting the things that count? We want to develop an understanding of best practices; identify actions we can take to improve our libraries.

Bill Gosling emphasized the importance of anecdotal evidence, for example, the importance of personal stories of alumni who choose to support the library. He emphasized how difficult it is to evaluate the library as this is only a piece of a complex whole that is becoming even more complex in the electronic environment. Paul Kobulnicky asserted that even though the task is complex, libraries continue to be under pressure to demonstrate their value to the society and to demonstrate value for dollars, i.e., both effectiveness and efficiency. Joan Lippincott mentioned that the discussion seems to surface three levels of assessment (a) the general level of assessment of graduates/alumni; (b) the departmental or programmatic level focused on specific disciplines; and (c) the level of feedback on specific services that tells you how people use new and established services. Oftentimes, which level is most important in terms of bringing change forward depends on the political environment.

The committee endorsed the idea of identifying an investigator to examine the library's impact on teaching and learning as soon as possible. [In the intervening time, Ken Smith has been engaged and had the opportunity to meet with a small group of ARL directors at Scottsdale, AZ in February. Based on feedback he received at Scottsdale as well as additional feedback from staff at the University of Arizona, he has drafted a paper listed under 3a. A membership luncheon will follow the May committee meeting where interested members will have the opportunity to provide more feedback on the course of action outlined in the proposal].

Next Vicki Coleman briefed the committee regarding the 3rd Northumbria International Conference on Performance Measures. It's a small conference, but a lot is accomplished there: there are both keynote and parallel sessions and wide representation from all areas of libraries; a lot of time for personal interaction and multiple approaches are presented. Chuck McClure was one of the keynote speakers in the most recent conference. ARL will be involved in organizing the 4th Northumbria International conference that will take place in Pittsburgh, August 2001.

Fred Heath's description of the proposed ARL pilot-SERVQUAL application was discussed next. Modified SERVQUAL instruments have been used in library settings many times—the ARL Statistics and Measurement Committee had the opportunity to discuss with Danuta Nitecki three years ago her application of the SERVQUAL instrument in evaluating public services at the University of Maryland. Texas A&M has been using SERVQUAL for a number of years and is willing to support the infrastructure for implementing a pilot project where a uniform modified-SERVQUAL instrument will be applied across multiple ARL libraries. This implementation will help ARL libraries identify best practices and improve service quality. Mod Mekkawi asked whether we are approaching the issue of service from the point of view of a researcher or that of a manager. Although the two functions may complement each other, balancing the research project with the need of managers to use data for decision making should be kept in mind. Martha Alexander also wanted to know if external funding will be sought and where these requests may be directed. Eileen Hitchingham pointed out that the SERVQUAL model aims at identifying gaps in service delivery and helps you manage those gaps between expectations and perceived service delivery; the findings will be useful only to the extent that management is willing to invest time and effort in managing the expectations. Outside funding would give the whole effort more credibility and help ensure its further
refinement and implementation. Some committee members were wondering how many institutions are needed for the pilot; Fred Heath believes that about 10 institutions for the first year of the pilot implementation is more than adequate. The committee was very supportive of this effort and endorsed it as a New Measures Initiative. [A large interest emerged for this project as 30 institutions were interested in participating in the pilot; 12 institutions were selected in the end for the pilot implementation and additional funding is being sought that will allow ARL to continue this project in the future by refining the process and the instrument used, possibly leading to the establishment of a standing service].

The committee also briefly brainstormed about cost-drivers and came up with a list of them for further consideration at the afternoon session of the ARL Leadership and Management Committee:

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<td>• Electronic reserves</td>
<td>• Serials – ownership vs. access (use studies)</td>
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<td>• Buildings – space/storage cost, physical and electronic</td>
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The fourth area of investigation under the New Measures Initiative is the development of an assisted self-study program applying the results of the ILL/DD studies. The ARL Access Committee has expressed interest in securing support to apply lessons learned from the ILL/DD cost and performance studies, the several ILL/DD workshops, and a variety of organizational experiences in redesigning and reengineering ILL/DD. This may take the form of preparing a self-study manual and process that could be applied by a larger number of libraries. Eileen Hitchingham mentioned how important is the collection of follow-up data. The committee members agreed that they would like to work with the Access Committee and have this project be under the new measures initiative.

Last, the need to hold a workshop to secure a better understanding of how electronic information resources are used was mentioned. Sherrie Schmidt expressed a strong interest in this area and expressed a willingness to assume a leadership role for this initiative. This initiative builds on the current work of expenditures for electronic resources that ARL is collecting and also will try to bring on the table vendors to see whether consistent data can be collected across commercial products. It will take into account the ICOLC principles. [Charles McClure has been invited to advice on this project at an invitation planning meeting that took place at Scottsdale in February and attachment 6a is a brief description of this project; Sherrie Schmidt and Rush Miller are the leader-directors for this effort].
5.1 STATISTICS AND MEASUREMENT

The Statistics and Measurement Program seeks to describe the characteristics of research libraries today as well as to develop and measure these libraries’ contribution to teaching, research, scholarship, and community service. Strategies to accomplish the objectives of the program include the collection, analysis, and publishing of quantifiable information about library collections, personnel, and expenditures, as well as expenditures and indicators of the nature of research institutions; developing new ways to describe and measure traditional and networked information resources and services; developing mechanisms to assess the relationship between campus information resources and high-quality research and the teaching and learning experience of students; providing customized, confidential analysis for peer comparisons; preparing workshops regarding statistics and measurement issues in research libraries; sustaining a leadership role in the testing and application of academic research library statistics for North American institutions of higher education; and collaborating with other national and international library statistics programs and accreditation agencies. The Statistics and Measurement Program receives guidance from the ARL Statistics and Measurement Committee.

PRIORITIES FOR 2000 AND BEYOND

Operating Priorities

The Program supports the production of five publications and two internal reports regarding the operations of research libraries (ARL Annual Salary Survey, ARL Statistics, ARL Academic Law and Medical Library Statistics, ARL Preservation Statistics, Developing Indicators for Academic Library Performance: Ratios from the ARL Statistics, ARL Supplementary Statistics, and Library Expenditures as a Percent of E&G Expenditures in ARL University Libraries). The “Library Expenditures as a Percent of E&G Expenditures in ARL University Libraries” survey was not distributed for FY 1997–98 and 1998–99 as changes to the accounting standards are being implemented gradually in private and public universities. ARL will identify the new data elements that need to be collected regarding university expenditures that are comparable across public and private universities.

Apart from these printed publishing efforts, the Program continues its strong presence in electronic publishing activities. Of special interest is the interactive electronic publication of the ARL Statistics on the Web, which is supported by staff at the Geospatial and Statistical Data Center at the University of Virginia. The Program's website is also updated regularly with information and data from new editions of ARL statistical publications. Plans call for the design of a revised web interface for data collection that will offer live data editing capabilities.

Workshops on Electronic Publishing of Datasets will be offered in the spring and fall of 2000 and an Online Lyceum workshop entitled The Role of Assessment in Advancing Diversity will be offered in June in cooperation with the ARL Diversity Program. Planning for a revised User Surveys workshop has been postponed to accommodate the development of the above Online Lyceum workshop.

Liaisons with external statistical projects include participation and monitoring of the following groups: ALA/IPEDS Advisory Committee; NACUBO Benchmarking Council; NCES Library Cooperating Working Group; National Council of Postsecondary Information; and International Standards Organization Technical Committee 46 Subcommittee 8 (ISO TC 46/SC8).

Program staff communicates with ARL Survey Coordinators through electronic lists for the three annual statistical surveys (arl-statsurvey, arl-statsalary, and arl-statpresv), at meetings for the ARL Survey Coordinators in conjunction with ALA meetings, and through a web page developed for the survey coordinators <www.arl.org/stats/coordinator.html>. Statistics and Measurement works closely with all other ARL programs, particularly in the provision of data or survey information to support various projects. Program staff work closely with the Diversity Program on an assessment workshop, with the Leadership and Career Development Program in developing an agenda for the New Measures Initiative and tracking human resources issues, with the Collections Program in providing trends regarding foreign language and special collections, with the Office of Scholarly Communication in updating trends for serials prices, and with the Preservation Program in collecting the ARL Preservation Statistics.
Program staff participates in planning for ARL technologies through the Technology Team and coordinate publications and communications through the Communications Team.

**Developmental Priorities**

The ARL Statistics and Measurement and the Research Library Leadership and Management Committees have been involved in a long-term effort entitled the New Measures Initiatives [www.arl.org/stats/newmeas.html](http://www.arl.org/stats/newmeas.html). This Initiative involves the support of pilot projects that will help libraries assess their operations and measure their impact on the parent institution and its constituencies. This effort has crystallized in the manifestation of five projects:

- An investigation into higher education outcomes assessment efforts.
- A pilot application—SERVQUAL—encompassing large-scale data collection across libraries that will involve 12 ARL libraries. This is a study of the utility of service effectiveness measures using the SERVQUAL instrument spearheaded by Texas A&M University.
- Usage measures for electronic resources: an invitational meeting to address the feasibility of conducting a year-long study on usage measures for electronic resources will be held in Scottsdale, Arizona, in early 2000.
- Identification of a cost-driver area that greatly impacts library operation and needs to be studied in finer detail.
- The development of a self-assisted manual on measuring the performance of ILL/DD operations.

These five projects and others that may be defined under the New Measures Initiative agenda are most likely to have a compelling impact in the next three to five years as the Statistics & Measurement Program agenda will include:

- Analysis and preparation of a new trend report regarding electronic resource investments based on the supplementary survey data.
- Analysis and preparation of a report on the information collected through the ARL Annual Salary Survey regarding salaries, job positions, experience, and education; revising the retirement projections published in 1995 with updated data and contribute to a special issue of the ARL *Bimonthly Report* on human resources.
- Working with the Office of Leadership and Management Services to coordinate data collection and survey management for SPEC Kits, and working with other ARL programs to coordinate member data-gathering activities across programs. Examples of such activities include the Library Materials Budget Survey and one-time quick surveys on hiring requirements, DMCA ruling, etc.
- Increasing opportunities for library staff to learn and develop measurement and evaluation skills by developing and organizing workshops on a cost-recovery basis. Examples of workshops in this area include redesigning the user survey workshop and developing a methods workshop for librarians, both for in-person delivery and for the Online Lyceum forum.
- Marketing custom report services and publications.

**Horizon Issues**

The New Measures Initiative projects will impact the Program agenda in the next three to five years. The goal of this Initiative and its associated projects is to engage libraries in measuring their contributions to their constituencies.

The impact of the electronic, digital, or virtual library—and the corresponding shift in balance from print to electronic delivery of information—is influencing the rethinking of most aspects of the work of libraries. This transformation, along with the concurrent financial constraints libraries are facing, shifts performance measurement issues from the traditional emphasis on resource acquisition to an emphasis on library services and quality of service.
STATISTICS & MEASUREMENT 1999 ACTIVITIES

New Measures for Research Libraries

In January 1999, several members of the Statistics and Measurement Committee, the Leadership and Management Committee, and other interested member leaders, gathered to discuss what ARL can do to assist members in developing new measures that better describe research libraries and their services. Those attending the retreat addressed a set of questions regarding the data needed to describe research libraries in today's environment, the need for new measures, and the means by which useful data and measurement tools could be developed. At the October 1999 Membership Meeting, the ARL Statistics and Leadership Committees supported the initiation of specific projects to advance what has come to be called the New Measures Initiative.

(See:  www.arl.org/stats/newmeas/nmbackground.html).

These projects include:
- an investigation into outcomes activities at the university level that could be used as a basis to determine measures for library contributions
- a pilot project, spearheaded by Texas A&M, testing the utility of service effectiveness measures using the SERVQUAL instrument
- an identification of library functions that are seen as cost-drivers for which a cost study could be developed
- development of an assisted self-study program applying the results of the recent ARL ILL/DD study
- an invitational meeting to address electronic resource measures.

In January 2000 at the ALA mid-winter conference, an update on each project was provided. The five projects are in various stages of development. Program staff are supporting the development of the new measures agenda by managing an electronic list of interested member leaders, developing and maintaining a website that includes white papers addressing issues related to new measures, investigating current national and international activities on performance measures, providing data when requested, and assisting in the production of reports (www.arl.org/stats/newmeas.html).

Supporting Annual Publications

Statistical compilations produced or distributed

- Developing Indicators for Academic Library Performance: Ratios from the ARL Statistics 1995-96 and 1996-97
- ARL Annual Salary Survey 1998-99
- ARL Statistics 1997-98
- ARL Academic Law and Medical Library Statistics 1997-98
- "Report on the 1997-98 ARL Supplementary Statistics"

Most of the data collected for the annual publications comes through a website interface. This speeds the data entry process and ensures accuracy. Printed copies of surveys and instructions are mailed to members during the summer, but copies of the documents are available as PDF files for easy replication at any time during the year.

A new cycle of annual surveys were mailed to member libraries:
- ARL Annual Salary Survey 1999-2000
- ARL Statistics 1997-98
- ARL Academic Law and Medical Library Surveys 1997-98
- ARL Supplementary Statistics survey 1997-98
- ARL Preservation Statistics survey 1997-98

Electronic Publishing

Website Enhancements
Apart from its printed publishing efforts, the Program maintains a strong presence in electronic publishing activities. Of special interest is the interactive electronic publication of the ARL Statistics on the Web, which was completely revised by staff of the Geospatial and Statistical Data Center at the University of Virginia. The Program's website also was revised and is updated regularly with information and data from the latest editions of ARL statistical publications. New web pages established this year feature:

- ARL membership index data <http://fisher.lib.virginia.edu/newarl/rankdat.html>
- All annual survey mailings <www.arl.org/stats/coordinator.html>
- The work on developing an agenda of new measures for research libraries <www.arl.org/stats/newmeas.html>.

**Performance Measures Website**

Program staff have developed and are maintaining a website devoted to the topic of performance measures for research libraries (see <www.arl.org/stats/perfmeas/>). The site includes bibliographies and readings, annotated links to tools and projects for measurement, and links to other organizations working in the area of performance measures.

**Custom Reports**

Several custom reports on peer institution comparisons for various ARL member libraries were prepared from the ARL Salary Survey data, the ARL Statistics, and ratios used to produce the ARL Developing Indicators publication. This service expands each year as member libraries discover the utility of these reports within their campus environment.

**Workshops**

A workshop on "Electronic Publishing of Data Sets on the WWW" was organized at the University of Virginia in March. These workshops provide individuals with the skills to develop web services in support of data file management. This workshop conducted by Patrick Yott, Director of the Geospatial and Statistical Data Center at the University of Virginia, continues to receive excellent reviews.

The Statistics and Diversity Programs are collaborating on the development and delivery in June 2000 of an Online Lyceum version of the workshop on "The Role of Assessment in Advancing Diversity". (See <www.arl.org/training/assessment.html>.)

Planning is also underway for a revised set of workshops on user based assessment methods.

**Communication & Liaison Activities**

To further develop the presence and influence of the ARL Statistics and Measurement Program, Program staff continue to participate in several groups and activities.

**ARL Survey Coordinators**

Program staff communicate with ARL Survey Coordinators through electronic lists for the three annual statistical surveys (arl-statsurvey, arl-statsalary, and arl-statpresv), meetings for the ARL Survey Coordinators in conjunction with ALA meetings, and a web page developed for the Survey Coordinators <www.arl.org/stats/coordinator.html>. New Survey Coordinators are also invited to attend a one-hour orientation workshop addressing special issues related to the various annual surveys.

**Library Materials Budget Survey - ALCTS/CMD/CDOs**

The Library Materials Budget Survey data collection for FY2000 was mounted on the ARL Web site and the ARL survey coordinators were notified. The Library Materials Budget Survey--a survey which has been conducted for the past decade by the ALCTS/CMD/Chief Collection Development Officers of Large Research Libraries Discussion Group (CCDOs)--was distributed to all ARL members for the first time last year. Summary analysis of the CCDOs' Surveys for FY1996, FY1997, FY1998, and FY1999 are now available at <www.arl.org/scomm/lmbs.html>. Robert Sewell, Associate University Librarian for Collection Development and Management at Rutgers University Libraries, is the lead investigator on this survey.

**ALA/IPEDS Advisory Committee**
This committee advises NCES on the IPEDS Academic Libraries survey and meets twice a year in conjunction with the ALA meetings. Julia Blixrud represented ARL at this year’s meetings, in which changes to the data to be collected in future surveys were decided upon. The ARL study on electronic resources and interest in performance measures helped shape the revisions to those surveys. Additionally, Martha Kyrillidou served as an outside reviewer of the ED-TABS Academic Libraries: 1996 NCES publication.

National Consortium on Continuous Improvement
With administrative support from NACUBO, interested institutions have joined together to address performance measurement in higher education. ARL is a charter member of this new consortium. Julia Blixrud participated in the organizing meeting and serves on the membership and marketing committee.

International Standards Organization Technical Committee 46 Subcommittee 8 ARL both monitors and provides input into the development of national and international standards on library statistics and performance measures. ISO 2789:1991 Information and Documentation-International Library Statistics is currently under revision and ARL advises the U.S. representative on the committee.

Relation to Other ARL Programs
Statistics and Measurement works closely with all other ARL programs, particularly in the provision of data or survey information. This year, Program staff worked specifically with the Diversity Program on the online assessment workshop and in support of the data and research projects for the Leadership and Career Development Program. With the Office of Leadership and Management Services, Program staff provide support for the New Measures initiative and survey development and data analysis for the SPEC Kit series. For Preservation, the Program conducts the annual survey on preservation activities. For Research Collections, the Program staff provided support for the survey on special collections and assistance in analyzing patterns of foreign acquisitions for the AAU/ARL Global Resources Program.

A quick SPEC survey on hiring requirements was done for the New York University library. In answer to the question of whether institutions have a strict M.L.S. requirement, 67% of the institutions responded yes and 33% responded no. Fifty-one percent of ARL libraries have faculty status and 39% award tenure to librarians.
NEW ROLES AND RESPONSIBILITIES
FOR THE UNIVERSITY LIBRARY:
ADVANCING STUDENT LEARNING
THROUGH OUTCOMES ASSESSMENT*

Paper prepared for the
ASSOCIATION OF RESEARCH LIBRARIES
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I would like to acknowledge the advice and counsel of Dean Carla Stoffle of the University of Arizona Library. Members of her staff and a number of members of ARL helped me think about learning outcomes from the perspective of the library and I thank them for their support and encouragement. I also learned much of what I know about outcomes assessment from working on the University of Arizona pilot initiative with Elena Berman and colleagues from a number of academic departments across the University. I retain sole responsibility for the limitations of the final product.
The well-ordered world of the university library is giving way to a new era of promise and uncertainty, of technology, of new forms of engagement and redefined roles in learning. The assumptions and rationales that have been relied on in the past are inadequate as a guide to future developments. To be successful in this new environment those responsible for academic libraries need to understand:

• the changing expectations faced by universities,
• how universities are responding to these new expectations,
• how this affects the library’s mission,
• how libraries can develop a strategy to be a central part of the university’s response, and
• how the Association of Research Libraries can assist its members to take on new roles.

The purpose of this paper is to answer these questions in order to provide a fuller understanding of student learning outcomes at the university level and the relationship to emerging library roles and contributions. An important conclusion of this paper is that “shared need creates opportunity” for the library to become an even more central part of the University learning community.

**CHANGING EXPECTATIONS**

Today’s debate is a dialogue about vision and how that vision is to be achieved. It is a discussion about the nature of the educational experience. The central idea is to use the concept of learning to redefine the mission of the University.

The relevance of learning as a central concept is that it requires us to focus attention on the student’s experience. It requires that we rethink the curriculum, moving from a model in which we package knowledge around the expertise of the faculty to a model based on the learning outcomes realized by students. These outcomes include not only what students know, but also the skills they develop, what they are able to do and the attitudes of mind that characterize the way they will approach their work over a lifetime of change.
This concept of learning requires a shift in focus from the teacher’s knowledge to the student’s understandings and capabilities. This shift in focus leads to a new perspective on the development of quality in the academic enterprise. More than anything, it requires the faculty to bring the strength of the research paradigm into the learning process. The high quality of research in American universities is, in part, the result of the central role of assessment in the research process. The best evidence of this value is the fact that, in research, faculty put their assessment activities (peer review, participation on peer panels) on their resumes.

In viewing our mission from the student’s perspective, we must constantly ask whether student learning is enhanced by the way we teach, by the organization of the university, by the structure of the academic program, and by the activities of faculty and other professionals. The assessment of student outcomes is a means of focusing our collective attention, examining our assumptions and creating a shared academic culture dedicated to understanding what we are doing and how well we are doing it and to improving the quality of learning that results.

What has become clear is that there is a broader view of the learning outcomes that is necessary for success. It is recognized that universities provide their graduates with an excellent base of knowledge. It is a measure of our success that their knowledge, to a significant extent, does not differentiate among our graduates. Their ability to apply knowledge in new situations, their skills (communication, teamwork, information and technical literacy), and the values and attitudes that affect how they work have become more critical factors in determining how effective graduates are as they apply themselves throughout their careers.

**HOW UNIVERSITIES ARE RESPONDING**

To respond to these new expectations involves developing the scholarship of teaching and learning. With an understanding of student learning objectives, the scholarship of teaching and learning identifies critical issues, uses research methods, and applies results to understand and improve learning outcomes.
For over a decade, institutional and professional accreditation bodies have been shifting their attention from input measures (faculty, courses, books) to outcomes measures (what students learn).

Universities and colleges are required to develop and implement a student outcomes assessment program. Assessment requires academic organizations (departments, colleges, universities) to:

- make expectations and standards for quality explicit and public
- systematically gather evidence on how well performance matches those expectations and standards
- analyze and interpret the evidence
- use the resulting information to document, explain and improve performance.

More than anything, assessment is a means for organizing a conversation among the faculty and other professionals responsible for an academic program. The objectives of this conversation are to:

**Understand our students**

- What are they like when they arrive?
- What are their educational and personal backgrounds, their needs, attitudes, goals and values?
- What are the challenges they face now and in the future?
- What becomes of our students after they graduate?
- What opportunities are available to them, which ones do they pursue and what determines their ultimate success in navigating the future?

**Determine learning outcomes required for student success**

- What are the societal and professional expectations for our graduates; which external constituencies have a stake in how well our students are prepared?
• Based on a shared understanding of university and societal expectations and our disciplinary knowledge, what are the outcomes we desire from the learning experience?

• What do we want them to know and what capabilities or competencies do we intend to develop?

• What are the dimensions of learning on which we must focus our efforts?

Identify how the academic program achieves desired learning outcomes

• What is the relationship between our academic program, curricular and co-curricular, and the achievement of particular learning outcomes?

Measure the extent to which outcomes are achieved

• What cost effective assessment strategies will determine whether, or to what extent, students are achieving specific learning outcomes?

• How can we identify areas in which the program is not achieving acceptable results?

Use the knowledge to improve academic programs

• Can we develop a shared understanding by the department faculty of the reasons for the shortfall or the issues to be addressed?

• What changes in the academic program will address these reasons?

• After implementing these changes, do we get the desired improvements?

The focus on learning involves looking at the academic program not from the perspective of its subject matter content but from the perspective of the competencies to be developed by students. These competencies include knowledge, skills and abilities, and attitudes and values that are important to a graduate’s future success. It is easy to treat these new expectations as one more example of a demand
for accountability in higher education. A closer examination leads me to conclude that they represent a recognition of the changing needs of graduates to be successful in an increasingly complex knowledge economy.

Faculty have always assessed the performance of individual students within their individual courses. The focus of outcomes assessment is on the collective success of the program in developing the competencies of the students in the program. The faculty is being asked to accept responsibility for a broader set of outcomes. To a significant extent this represents a new challenge because while faculty are knowledge experts, they are not necessarily learning experts.

Students will also be required to approach the learning experience differently. They are being asked to become more actively involved in the learning process. While they have mastered the passive accumulation of knowledge, they are less comfortable with the responsibility to demonstrate their ability to use knowledge in unstructured situations. They must become proficient as members of teams, in communicating their solutions, and effectively taking advantage of access to information and the use of technology. Finally, they must begin to develop and demonstrate maturity in how they approach their work.

Employers believe we do an excellent job at providing our graduates with a strong base of knowledge. Because of that, what our graduates know is not a major concern. What employers are most concerned about is performance in the other dimensions of learning - skills, conceptual abilities and attitudes of mind - and especially the ability to learn itself.

The focus on learning outcomes leads to a consideration of the learning process and the learning community. Consider Figure 1. The learning outcomes represent a set of competencies of the graduate. From the University’s perspective, they are achieved as a result of a total experience over a four (or more) year period. Each element of the educational program contributes, directly or indirectly, to their achievement. Looking at the learning process allows us to recognize the various activities that
contribute to learning. On the far left of the figure we see how foundational courses (math, composition, etc), general education courses and special prerequisite service courses prepare the student for the major. The requirements for the major are designed to produce the learning outcomes necessary for the graduate to be successful. Across the bottom of the figure we see how the program offerings of the library, student life and technical services can contribute to the learning outcomes of the graduate.

Looking at the learning community allows us to consider how faculty, students and other learning professionals can contribute to learning outcomes. The faculty responsible for the major is in the best position to develop the complete set of learning outcomes, since those outcomes will depend on the specific objectives for the degree program. In doing so they will need to incorporate the outcomes that the faculty of the University have concluded are important for all students. They will also recognize that the department can take advantage of the contributions of colleagues throughout the university.

The American Association for Higher Education’s *Principles of Good Practice for Assessing Student Learning* recognize that “student learning is a campus-wide responsibility, and assessment is a way of enacting that responsibility. Faculty play an especially important role, but assessment questions can’t be fully addressed without participation by student affairs educators, librarians, administrators, and students. …assessment is not a task for a small group of experts but a collaborative activity; its aim is wider, better informed attention to student learning by all parties with a stake in its improvement.”
The Learning Process and The Learning Community

- General Education Courses
- Foundation Courses
- Special Prerequisite "Service" Courses
- Requirements Of The (Major) Degree Program
- Learning Outcome Of Graduates
- Library Offerings, Technical Services, Student Life
The University is made up of various communities, each of which has a direct and/or indirect view of student learning outcomes. For example, faculty with responsibility for designing and delivering a general education program must define outcomes that assure students across the University will have a common foundation and also contribute to the learning outcomes that are important in many degree programs. An academic department has a direct interest in the learning outcomes for students in their majors. A department with an important course that serves a critical role in preparing students in another department’s degree program has an indirect interest in the learning outcomes for students in that major. For example, physics is an important service course for students in an engineering program. The Physics faculty can not be effective unless they are working with the Engineering faculty to produce a clear set of learning outcomes for their service courses that will help achieve the outcomes desired for the engineering students.

**THE LIBRARY’S MISSION**

How does the focus on learning outcomes affect the mission of the Library? Like other communities at the University, the library must move from a content view (books, subject knowledge) to a competency view (what students will be able to do). Within the new environment, we need to measure the ways in which the library is contributing to the learning that the University values. Like the general education program, the library has a direct and an indirect interest in the learning outcomes for all the students at the University. Like the Physics Department, the Library should be able to contribute to the achievement of learning outcomes for various academic programs across the University.

**THE LIBRARY AND STUDENT LEARNING OUTCOMES**

It is useful to begin by asking, within their own expertise and their understanding of what will make students successful, what do library professionals consider key learning outcomes. One potential answer to this question is provided by the Information Literacy Competency Standards for Higher Education, approved by the Association of College and Research Libraries on January 18, 2000. As an alternative, I asked two groups of librarians to help me define a set of learning outcomes. My goal was not to achieve a definitive answer but rather to provide an example that would help me discuss how academic libraries
might begin to participate in this campus wide activity. The following table is illustrative of what might be produced in such an exercise.

Student Learning Outcomes

- Become self reliant (comfortable and confident) in information literacy skills including:
  - Identifying information needs
  - Finding/locating information
  - Selecting relevant information
  - Assessing and evaluating information
  - Synthesizing
  - Using information effectively
  - Presenting information
- Students understand and use the information search process (e.g. Kuhlthau model)
- Understand different formats of information and deal with them effectively
- Be aware (have an accurate mental model) of the structured nature of information
- Understand how to evaluate bias and the credibility of information
- Appreciate the way the quality of information varies along an historical continuum
- Understand the social/ethical/political/economic implications of information and intellectual property
- Understand the research process through which new knowledge is created
- Understand the scholarly communications cycle and its application to scholarly research
- Become self confident and comfortable in information rich environments
- Develop attitudes of openness, flexibility, curiosity, creativity, and an appreciation of the value of a broad perspective.

Developing a set of learning outcomes will allow libraries to determine the extent to which their interests are aligned with the expectations of other academic communities in the University. They will find that faculty responsible for the general education program as well as those responsible for many of the academic degree programs also are interested in critical thinking, the effective use of information and technology, the search process and collaborative reasoning.

We have described above how current expectations require consideration of a broader set of student learning outcomes, not simply the subject material of a particular program. We discover that some of these outcomes are common to programs across the University. What students need to be able to do (critical
thinking and creative ability), their ability to manage technology and implement an efficient information search, and their skills in communicating and collaborative reasoning are fundamental across many subject domains.

The library can build on a shared view of what are important student learning outcomes. All the individual communities are being asked to prepare students in ways that go beyond their expertise in their fields. It is this shared need to go beyond our traditional focus on what students need to know that creates an opportunity for the library.

Consider for a moment the way in which a department faculty might look at the learning outcomes for their degree program and how they are achieved through the course requirements. Having agreed on what outcomes they believe are important to their graduate’s future success, they can ask the faculty responsible for each course to identify the extent to which each outcome is a focus of the course. Collectively, across the curriculum, they can determine which outcomes are covered to a major, moderate or minor extent. At this point, while they haven’t yet assessed how well their students have developed on each learning outcome, they can evaluate whether enough attention is being paid to individual outcomes.

Table 1 presents a matrix that shows which courses in the accounting curriculum contribute to each of the learning outcomes. Let me draw two conclusions from this matrix. First, observe that many of the learning outcomes are similar to those identified for the library. Second, while the Accounting Department has a well-defined set of course offerings through which they attempt to develop these outcomes, they recognize that in some areas they have been unable to give an outcome adequate attention. Those outcomes that receive the most attention are, for the most part, those that the faculty have felt best prepared to address.
# Learning Outcome Matrix for Undergraduate Accounting Courses

0 = not at all 1 = one or two times 2 = three or four times 3 = very regularly (5 or more times a semester)

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<th>Intro 210</th>
<th>Intro 272</th>
<th>Int. 305</th>
<th>Int. 310</th>
<th>Fin. 400A</th>
<th>Fin. 400B</th>
<th>Intro 401</th>
<th>Intro 410</th>
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<td>6. Teamwork in-class group projects</td>
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<td>3</td>
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<td>3</td>
<td>1</td>
<td></td>
<td></td>
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<tr>
<td>out of class group projects</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7. Understanding Current Applied Accounting Practices</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Interpretation of Accounting Information and Integration with Different Accounting Areas, and Related Fields (e.g.,</td>
<td>0</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
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</tr>
</tbody>
</table>
## Learning Outcome Matrix for Undergraduate Accounting Courses

0 = not at all  
1 = one or two times  
2 = three or four times  
3 = very regularly (5 or more times a semester)

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance, MIS, Law</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>9. Ability to Identify Ethical Dilemmas</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>10. Ability to be a Self-learner and Understand the Value of Life-Long Learning</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>11. Ability to Identify Career Paths and specialties that Yield Career Opportunities</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>12. Develop a Strong Work Ethic</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>13. Develop a Social Responsibility</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>14. Develop an Openess to Diversity</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>15. Develop an interest in government and regulatory policy (GAAP, tax law, etc.)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**TOTAL**  
25          
54          
29          
44          
37          
37          
17          
41          
45          
25          
5

**AVERAGE**  
1          
2.16       
1.16       
1.76       
1.48       
1.48       
0.68       
1.64       
1.8        
1
These conclusions suggest that departments may be very receptive to including in their courses, “offerings” developed and delivered by the library to increase the emphasis on a number of shared outcomes, especially where the expertise of the library complements the expertise of those in the academic programs. By “offerings,” we mean units of learning materials designed to develop competency in specific learning outcomes that are considered important by the library and by other academic programs. They are a way to give the library a curriculum (its own set of course segments) and an opportunity to connect this curriculum to other academic programs.

To be effective, these “offerings” must be incorporated into required courses. Thus, there is a need for the library to engage in a dialogue with departmental faculty in order to identify ways in which they can contribute to the learning outcomes of the academic program. The library must take the initiative in determining what the library has to offer that will help the department achieve greater success in achieving their learning outcomes. It is unlikely that the Department on its own will identify the library as a place to turn for help.

As an example, the University of Arizona Library is offering instruction sessions based on the ACRL Information Literacy Competencies, using the Kuhlthau “Information Search Process” model. The instruction will be integrated into a general education natural sciences course offered by the Astronomy department. The library team has developed learning modules that focus on entry-level information literacy competencies customized for use in Astronomy related studies. They will be a required part of the course but offered at a variety of times outside the normal class period. The aim is for students to become confident and skillful information users.

To pursue this strategy also requires that the library create new roles for its learning practitioners. To some extent and in some libraries this process of change has begun. Libraries have developed organizational strategies to serve the various academic communities. But the focus to date is primarily on making information more and more accessible rather than addressing specifically the learning outcomes important to student success. The library needs to ask what kind of expertise is required for actively engaged in the
learning process and an effective partner in achieving learning outcomes. It then will be in a position to adapt roles and responsibilities of its professionals to take full advantage of the opportunity.

**HOW CAN ARL HELP ITS MEMBER INSTITUTIONS?**

Esther Dyson, a well known commentator of the information technology scene has observed that “we are entering a new economic environment – where a new physical set of rules will govern. Chief among the new rules is that ‘content is free.’ While not all content will be free, the new economic dynamic will operate as if it were.” Value will increasingly be defined not in terms of collections or even access to information but by creating solutions that help to achieve student learning.

It is timely to think about the ways in which ARL can help its member institutions become involved in the assessment of student outcomes and demonstrate the value of their contribution to the University. What is clear is that we are at the beginning of a period of learning how to do this in an effective and efficient manner.

What works best at this stage is experimentation. At the University of Arizona, we have developed a pilot initiative to learn how to help academic departments respond to expectations for assessment of student outcomes. The strategy was to begin with volunteer departments interested in the assessment of student outcomes, provide them with information and support and make their experiences available to others. Participants agreed that stories and examples are helpful. These stories and examples are being shared through periodic meetings and through the organization of a “tool kit.” A description of our tool kit is included in the appendix. It is important for libraries to understand the processes that are used to define learning outcomes, to select measures, to collaborate with other academic departments, and to use the results to improve their
programs. In time, a tool kit will include a composite of best practice ideas that can be adopted by other departments.

Even with a group of departments that have volunteered to participate, progress is uneven. Each department has gotten started in its own way. However, we have observed that those who are achieving results have a significant impact on other departments in the pilot initiative and on those who are ready to become involved. ARL, similarly, will have members whose early engagement and resulting accomplishments will attract others to become involved.

As more and more major research universities are successful in using outcomes assessment to improve student learning and to demonstrate the way they are preparing students, it will be important that libraries are an effective part of their campus assessment program. Within the community of research universities, there are a number who are already leaders in the assessment of student outcomes. The University of Colorado, Boulder has almost a decade of experience, a testament to the impact of a mandate by the Governor. Others who are significantly engaged are the University of Wisconsin, Madison and the University of Illinois at Urbana Champaign.

What is clear is that expectations are accelerating and all members of ARL will have to respond. Within this new environment, it will be important to the Library to be recognized by their colleagues across the campus as a full contributor. Those who become involved in a pilot will play a critical role in demonstrating how this can be a
valuable activity. Their leadership will help their colleagues to understand the
opportunity and participate in their campus progress.

A pilot process for ARL would involve a number of libraries working through a sequence
of activities and sharing experiences in periodic meeting and, more importantly, in a best
practice tool kit. The activities would include:

- Develop learning outcomes from the library’s perspective
- Develop curriculum segments or “offerings” through which the library would
  achieve the outcomes
- Understand the learning outcomes of academic degree programs
- Consider how library offerings can be integrated into academic courses to
  achieve shared outcomes
- Identify ways to measure how well outcomes are being achieved
- Collect data and use information to modify curriculum strategies

To be successful in this new era, the library must contribute to student learning. This
represents an expanded responsibility and a more active role in the learning process. The
focus has moved beyond access to content or to tools. What is important is how the
library’s capabilities can provide solutions that measurably impact the quality of learning.
It will require a significant period of learning new ways to participate and new roles for
the library professionals. To make this period of learning effective, ARL needs to
organize a pilot initiative and share creative solutions with all its members. In this way
their member schools will be better able to turn student outcomes assessment into an important opportunity to make the library an even more central part of the University.
This Tool Kit is based upon brainstorming sessions engaged in by representatives of 1999-2000 pilot departments. Broad interest was expressed in hearing about the process other departments are using as well as the products. Participants strongly agreed that stories and examples are helpful and should be part of the Tool Kit. There was also consensus that the organization should follow the temporal sequence of activities. The headings below are intended to capture not only products – results, instruments, etc. – but also the activities and human climate that resulted in the products. The Tool Kit may be accessed both by department and by heading.

### View by Department

<table>
<thead>
<tr>
<th>Headings</th>
<th>Format</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desired outcomes</td>
<td>This should be a simple list, perhaps divided according to cognitive, skill, and attitude outcomes; perhaps divided by major areas or concentrations</td>
</tr>
<tr>
<td>How outcomes were arrived at</td>
<td>A brief description of the process(es) used to arrive at the list of outcomes</td>
</tr>
<tr>
<td>How decisions were made about what to assess and how to assess</td>
<td>A brief description of the process(es) used to decide which outcomes would be addressed</td>
</tr>
<tr>
<td>Measures</td>
<td>This section will be an important source of ideas for those beginning the process. Measures can be sorted in a variety of ways: most obviously, they should be linked to the outcomes they are measuring. A further division is the level at which they address outcomes: to establish baselines, at the course level, and at the program level. Questionnaires and software tools will likely be widely copied. As you list the measures you are using, indicate the outcomes they are measuring and the level at which the measurement is taking place.</td>
</tr>
<tr>
<td>Assessment results</td>
<td>It will be up to individual departments to decide what aspects of their assessment results they wish to make public.</td>
</tr>
<tr>
<td>Faculty engagement</td>
<td>A brief discussion of the extent to which faculty get engaged in the process and to what extent the outcomes measures are incorporated into teaching.</td>
</tr>
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<td>---------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Student Engagement</td>
<td>A brief discussion of how students have been involved in the evaluation process.</td>
</tr>
<tr>
<td>Uses of assessment results</td>
<td>A discussion of how assessment results impact: 1) the curriculum, 2) resource allocations, and 3) anything else</td>
</tr>
<tr>
<td>Costs and benefits of the evaluation process</td>
<td>A discussion of costs and benefits, both monetary and other.</td>
</tr>
<tr>
<td>Barriers and enablers</td>
<td>A discussion of barriers and how they were addressed, enablers and how they were taken advantage of.</td>
</tr>
</tbody>
</table>

**Special Interest Areas**

| advising | Any instruments used for evaluating advising effectiveness will be of interest. |
| service courses | Courses that primarily serve other majors represent an interesting assessment challenge. The primary assessment question is how well students are prepared for follow-up courses. Assessments and (especially) assessment processes related to service courses will be of interest to others involved with service courses; thus this special area for storing information. |
| measuring alumni and employer opinions | Many departments are interested in learning how others go about measuring alumni and employer opinions; instruments used will also be stored. |
| tracking curricular flow | Some departments may decide to analyze curricular flow as part of their assessment system. Their experiences will likely be of interest to other departments. |
Developing Statistics and Performance Measures to Describe Electronic Information Services and Resource for ARL Libraries

Project Abstract

Charles R. McClure <cmcclure@lis.fsu.edu>, Francis Eppes Professor, and Director, Information Management Use and Policy Institute
School of Information Studies
Florida State University

Problem

The move to a networked environment has significantly increased the range of services and resources that research libraries provide to their users. The library has become a 24 hour a day access point to information services where users obtain services and resources on their terms and when they want such services—oftentimes not coming to the library physically nor interacting directly with library staff. The costs to provide these networked services and resources, however, can be significant.

Under these circumstances, it is quite likely that ARL libraries are under-representing and under-counting the range of services and resource provision in which they are engaged because there are no agreed upon means to count and describe service provision in the networked environment. In addition, resource allocation decisions are further complicated by a limited understanding of the use and costs of services provision in the networked environment. Given this situation, library administrators are oftentimes unable to demonstrate the importance and impact of such networked-based services. Such is true for individual libraries as well as for ARL libraries as a group.

Importance

As demonstrated at the ARL Scottsdale meeting on New Measures in February 2000, a number of ARL libraries are investigating various ways to account for electronic services and resources. This project will bring together different approaches to coordinated efforts that result in useful measures, processes and strategies which then can be generalized across the spectrum of member libraries.

Clearly, the problems and issues identified in this proposal regarding counts and measures of services and resources in the networked environment will not disappear in the near future. Indeed, these issues are only likely to increase in importance as the networked environment evolves with a range of new services and resources. Support for this project provides ARL and a group of ARL libraries to take a leadership role in the process of developing statistics and measures for services and use in the networked environment. It provides a basis for ARL libraries to formally begin work with selected database vendors to reach agreement on possible data reporting activities. And the project will begin to develop linkages between these statistics and performance measures and a range of higher education outcomes.

Most ARL libraries need such statistics and measures now. The sooner work is initiated on a project such as this, the sooner such statistics and measures can be used to support resource allocation decisions, services provision and assessment, and strategic planning.
**Goals/Objectives**

One key goal of the project is to develop, test, and refine selected statistics and performance measures to describe electronic services and resources in ARL libraries. A second goal is to engage in a collaborative effort with selected database vendors to establish an ongoing means to produce selected descriptive statistics on database use, users, and services. A third goal of the project is to develop a proposal for external funding to maintain the development and refinement of networked statistics and performance measures. More specifically, the project has the following research questions:

- What existing techniques and approaches are being used by ARL libraries to produce statistics and performance measures to describe networked information services and resources? What can be learned from these techniques that could be generalized to other libraries?
- For what purposes and for what audiences are networked statistics and measures needed?
- Which types of networked services and resources should be described, how should they be defined and operationalized, and how should the data be collected to insure reliable and valid data?
- What performance or quality indicators are needed to describe the impact and success of such networked services?
- How might such statistics and measures be best reported?
- What linkages can be established between these statistics and performance measures with selected outcomes from higher education?

**Project Management and Major Tasks**

In this project, a group of interested ARL libraries will work together as a consortium in conjunction with a study team at the Information Management Use and Policy Institute at Florida State University and with ARL staff. The participant libraries will involve in the project through various aspects of the study implementation such as data collection/analysis, field testing, and review of study results.

In terms of execution, the project will take place in the following three major phases.

**Phase I:** Knowledge Inventory of ARL Libraries and organizing ARL working group on database vendor statistics (May, 2000 – October, 2000). Primary goals in this phases are to identify and describe the current state of the art of statistics and performance measures for networked services and resources in ARL libraries, and to organize an ARL working group on database vendor statistics and begin discussions with database vendors.

**Phase II:** Development of statistics and performance measures (November, 2000 – June, 2001). The objective of this stage is to develop tools, data collection processes, statistics, and performance measures to describe services and resources in the networked environment.
Phase III: Institutionalizing Statistics and Performance Measures (July 2001-December 2001). The objective of this phase is to develop mechanisms and processes that insure the ongoing development of networked statistics and performance measures. This objective includes building and promoting infrastructure in ARL and ARL libraries to continue the development and use of such statistics and measures.

Specifically, upon successful completion of the study, ARL libraries will have:

- A set of statistics and performance measures that describe electronic information use, users, costs, and staffing. These statistics and measures can assist ARL administrators make better decisions regarding deployment, use, and purchase of electronic services.
- A process to collaborate with database vendors to develop, refine, and create statistics and performance measures needed to describe database use, users, and costs. The objective of this process is to ensure that database vendors understand the need and importance of ARL libraries obtaining reliable and comparable data describing database use and users.
- Models that link and describe relationships and possible impacts between electronic services and resources and higher education outcomes. These models will attempt to show where and how electronic services and resources contribute to accomplishing selected higher education outcomes.
- A report that summarizes the current “state of the art” of best practices in ARL libraries for collecting and reporting statistics and performance measures related to electronic resources and services. This report will include practical suggestions and techniques that will be of use to ARL libraries for describing electronic services and resource use and users.
- A short, concise manual that describes possible procedures for how to collect, analyze, and report data to produce such statistics and performance measures. The manual will stress practical and usable techniques that can be used in ARL libraries as well as identify key issues to consider when using such statistics
- A one-day workshop for interested ARL staff offered by members of the study team that will introduce the manual, describe how best to use it, and discuss issues that should be considered in the use of the manual.

These products will be a first set of tools, processes, and techniques that will assist ARL libraries (1) better meet the needs of their users, and (2) make better decisions regarding the purchase, use, and deployment of electronic services and resources.

**Benefits to ARL Libraries**

In addition to having a set of agreed upon, field-tested measures which describe networked services and resources, project participants will have direct access to the study team and the information about the study processes and contextualized outcomes. This will significantly facilitate the implementation of data collection, analysis, and presentation at the local level. Also, through the project's advisory committee (AC), they will provide feedback and suggestions that help shape the course of this project.
As a group, upon successful completion of the study, ARL will have a tremendous corporate knowledge in the area of networked service management. Also, the collaborative nature of the project will put ARL libraries in a strategically favorable position to pursue further efforts as technology and environment evolve in the future.
THE COMPREHENSIVE PROGRAM
FUND FOR THE IMPROVEMENT OF POSTSECONDARY EDUCATION

TITLE PAGE

Check one: Preliminary Proposal _✓___ Final Proposal ____

This application should be sent to:
No. 84.116A
U.S. Department of Education
Application Control Center
Room 3633, ROB-3
Washington, D.C. 20202-4725

1. Application Number

2. D-U-N-S Number

3. Project Director (Name and Mailing Address)
(not designated) Contact:
Martha Kyrillidou
Senior Program Officer
ARL Statistics and Measurement Program
Private
Association of Research Libraries
21 Dupont Circle, Washington D.C. 20036
Telephone: 202 296-2296
Fax: 202 872-0884
E-mail: martha@arl.org

4. Institutional Information

Highest Degree Awarded: Type:
Senior Program Officer _____ Two-year _____ Public
ARL Statistics and Measurement Program _____ Four-Year _____ Private
Association of Research Libraries _____ Graduate
21 Dupont Circle, Washington D.C. 20036 _____ Doctorate
Telephone: 202 296-2296 _____ Non-degree granting
Fax: 202 872-0884
E-mail: martha@arl.org

5. Federal Funds Requested:

1st Year $225,720 Starting Date Oct 1, 2000
2nd Year (if applicable) $155,520 Ending Date Sept 30, 2003
3rd Year (if applicable) $111,240
Total Amount: $492,480 Total No. of Months 36

6. Duration of Project:

7. Proposal Title

Service Effectiveness in Academic Research Libraries

8. Brief Abstract of Proposal (DO NOT LEAVE THIS BLANK) This project is a large-scale user-based assessment of library service effectiveness across multiple universities. It is a response to the need for outcomes-based assessment on behalf of research libraries, validates the applicability of the SERVQUAL (service quality) instrument to the not-for-profit sector, and provides libraries with data they can use to be responsive to student and faculty needs.

9. Legal Applicant: (Name and Mailing Address)

Association of Research Libraries
21 Dupont Circle #800
Washington D.C. 20036

10. Population Directly Benefiting from the Project:

121 research libraries serving 150,700 faculty and
2.2 million students

Congressional District of the Applicant Institution: DC
1. What is the problem we intend to address and our project objective?

What constitutes excellence or effectiveness in research library services? How does a library evaluate for itself and its diverse constituencies whether it is delivering the best possible services for the considerable investments made in its operations? This is the problem that the Association of Research Libraries (ARL) seeks to address in this project.

ARL is a non-profit association composed of 121 North American research libraries—111 preeminent university libraries and 10 nonuniversity libraries. ARL member libraries are among the most important research facilities in the world. Their richly diverse collections support the missions of their institutions and draw use from other North American postsecondary students and faculty as well as scholars from across the globe. Building, sustaining, and servicing a library is a major cost for an institution. Collectively, ARL member libraries spent more than $2.5 billion in the past year. Despite innovative strategies to counter rising costs, libraries are called on by their institutions to articulate value in relation to the investments made. This project will develop tools that enable libraries to articulate how they are responding to student and faculty needs and whether those needs are being met successfully.

The ARL-sponsored project charts new territory complementing other measurement practices now in place among the nation’s research libraries. Most of the current measurements are descriptive of the inputs (e.g., measures of collection size and expenditures) and outputs of libraries (instructional classes offered, etc.) – not the outcomes. A widely held misperception is that investments in resources relate to effectiveness. Postsecondary library leaders recognize that new demands for evaluation and accountability must be met by extending current data on resources with new credible measures of service effectiveness. They are looking to new measures for outcome assessments that permit a deeper understanding of local quality issues and provide “best practices” guides for those who seek to take
corrective action. **The objective of the project** is to introduce new service effectiveness measures for libraries.

2. **What do we propose to do about this problem?**

   This project addresses the problem of defining service effectiveness for libraries by (1) adapting a credible tool that was developed in the for-profit sector, the SERVQUAL instrument; (2) establishing a web-based process to facilitate the tool’s use by postsecondary libraries so that they may easily collect data that will evaluate the effectiveness of their services through the eyes of their students and faculty; and (3) developing guides to “best practices” in library services, based on the results of the evaluations.

   ARL proposes to undertake a four-year program that initially involves working intensively with experts from Texas A&M University in the areas of library administration, psychometrics, business and education and building on lessons learned from their administration of the SERVQUAL instrument. Grounded in the Gap Theory of Service Quality, SERVQUAL was developed for the for-profit sector by a marketing research group in the 1980’s. The instrument undertakes to measure service quality across five dimensions: reliability, assurance, tangibles, empathy and responsiveness. The complexities of the Gap Theory approach make it (1) difficult to adapt the SERVQUAL instrument to the not-for-profit sector, (2) hard to administer without deep survey and statistical expertise at the local level, and (3) challenging to fully utilize the results in the absence of normative data that places local data in the context of outcomes at similar institutions.

   At the conclusion of this four-year project, ARL intends to (1) make the administration of the service quality instrument transparent at the local level (that is, minimize the administrative burden on each campus while appearing to users as a local initiative), (2) develop the normative data that will permit institutions to surface best practices, and (3) make it possible to identify national trends while at the same time distinguishing situations of importance to the local institution. Equally important, because of the transparency and ease of administration—requiring no local expertise—the potential client base can be infinitely expanded. All types of postsecondary and other types of libraries will benefit from the ARL project.
The ARL project pre-dates the FIPSE grant cycle by one year and gains its initial impetus from research sponsored by Texas A&M University General Libraries—a member of the Association. The project, based upon the experiences derived at Texas A&M University over six years in translating the SERVQUAL instrument to the not-for-profit sector, will now be transformed for administration over the web and across different institutions.

3. **How will our strategy improve upon present practice—locally and nationally?**

This bold and innovative project intends to make four fundamental contributions to the measurement of effective delivery of library services. First, it proposes to shift the focus of assessment to user-centered measures of quality. Second, it will undertake to reground the Gap Theory tools developed for the private sector to meet the needs of the public sector, particularly research libraries. Third, it will perform an analysis to determine the degree to which the information derived from local data can be generalized across the larger cohort group, providing much-needed “best practices” information. And fourth, it will demonstrate the efficacy of large-scale administration of user-centered evaluation across the World Wide Web in a manner all but transparent to the local institution.

The ARL SERVQUAL project focuses upon user perceptions of the delivery of library services relevant to their needs. Where there are deficits, libraries will have an opportunity to identify improvements that could fit the local situation. A cohort of best practices across all the SERVQUAL dimensions that define library quality will facilitate the efforts of administrators to tailor resources to improve their local practices. Trends across the dimensions can be identified at the national level, placing local results in an important context for librarians and campus administrators alike. The applications to teaching, learning, and research are apparent. The project presents a library with a tool that can be used to shape library services so that they are most responsive to the information needs of students and faculty.

4. **How will we evaluate whether we have achieved our goals?**

The robust evaluation of the data captured and scored during the pilot phases will help broaden the understanding of how effective the new measures are in meeting the calls for accountability; plans for dissemination, including key national and international conferences and a theory-building monograph, will help share the lessons learned across the postsecondary community.
Year Zero: October 1999–September 2000 (Pre-FIPSE Grant Cycle)

Based on experience at Texas A&M and corroborated by research elsewhere, the SERVQUAL instrument as it now exists is being subjected to rigorous qualitative review. Texas A&M investigators are currently conducting 80 interviews across multiple campuses; the final version of the instrument will be mounted on the Web in April 2000 at Texas A&M. Over the summer of 2000, after all data has been collected from a sample of 18,000 faculty, graduate and undergraduate students across 12 pilot institutions, the validity of the theory and theregrounding of the SERVQUAL instrument across research libraries will be assessed.

Year One: October 2000–September 2001

In the fall of 2000, approximately 12 experts in the application of assessment instruments to library programs will be invited to a symposium to review and comment on the preliminary findings. This international group will also be invited to participate in discussions with representatives from research and academic libraries, including those who participated in the initial pilot testing, to build community awareness for the full potential of user-based assessments in academic libraries. During this year, a monograph will be issued assessing the cross-institutional data on each of the service dimensions. Concurrent with the completion of the monograph, the findings of the first pilot project will be disseminated at the fourth Northumbria International Conference on Performance Measurement in Information Services, in Pittsburgh in August 2001.

Year Two: October 2001–September 2002

In Year Two, with migration of the operational oversight of the tool from Texas A&M to ARL, the instrument will be available for widespread application within the academic and research library community. Other library assessment and measurement instruments can be mounted upon the servers and the resulting data sets compared with those that result from SERVQUAL, further facilitating theory building in this arena.

Year Three: October 2000–September 2003

Year Three will be the year to promote and expand the use of the instrument in other parts of the library community. For example, other library settings including medical, law, and public libraries will be
recruited to take advantage of the SERVQUAL resource, and to gain results that can be compared with the data sets from the research library community. During this year, “best practices” in other types of libraries will be studied to look for opportunities to improve library services in postsecondary institutions.

Evaluation will also come from the ongoing active interest of member leaders of ARL. When ARL meets as a community, the people who convene are the library directors, deans, or vice chancellors who have responsibility on each campus for these extraordinary libraries. These semi annual membership forums are occasions for the research library leadership to come together to focus on the most pressing issues they face in common. This proposal is the direct result of discussions that arose in a recent ARL membership meeting, followed by exceptional member energy and commitment to advance a strategy to develop library service effectiveness measures. ARL member library interest in this project is keen and evaluation of the activities described in this proposal will be on the agendas of each membership meeting for the duration of this project—and beyond.

This new assessment tool, well grounded in theory, rigorously administered, and ground-breaking in its practical implications, promises to answer the calls for greater accountability and to enable libraries to be responsive to student and faculty needs.
March 14, 2000

Martha Kyrillidou  
Senior Program Officer  
ARL Statistics and Measurement Program  
Association of Research Libraries  
21 Dupont Circle  
Washington, D.C. 20036

Dear Ms. Kyrillidou:

Enclosed please find my proposal for use of the 2000/2001 ARL Salary Survey. As we discussed via email, I am working on my dissertation, tentatively entitled *Compensating Wage Differentials and Tenure: The Case of Academic Librarianship*. My proposal details the level of access and the proposed modifications that I and my dissertation advisor make. While my analysis requires access to the individual level data, including salary and the institution code, at no time would any individual respondent or their institution be identified in the project. All results would be shared with ARL after the completion of the study.

Mississippi State University routinely flies a plane up to Washington D.C. to encourage faculty interaction with granting agencies. Based on the flight schedule for this semester, we could be available April 13th, May 17th or June 8th. My dissertation advisor, Dr. Paul Grimes, and myself would be glad to fly up and answer any questions that ARL may have concerning this project. In addition, if you have any questions that you wish to ask, please do not hesitate to contact myself or my dissertation advisor.

As I mentioned in my email, I am very excited about this dissertation project. In addition to being a graduate student in the economics program, I am a tenured librarian at Mississippi State University Libraries and am very interested in issues pertaining to academic librarianship. This project gives me the opportunity to combine two research interests and to hopefully provide insight into the tenure and compensation issues pertaining to academic librarianship.

Sincerely,

Deborah Lee
Compensating Wage Differentials and Tenure: The Case of Academic Librarianship

A Proposal

Proposed by: Deborah Lee
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Dissertation Advisor: Dr. Paul Grimes
Professor, Department of Finance and Economics
Mississippi State University
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Proposal

I am requesting access to the ARL Salary Survey data for use in my dissertation, tentatively titled "Compensating Wage Differentials and Tenure: The Case of Academic Librarianship." Specifically, I and my dissertation advisor, Dr. Paul Grimes are requesting:

1. Access to the individual level data collected on the 2000-2001 ARL Annual Salary survey, form Part II individual data. While individual level data is required for the analysis described below, at no time would any individual person or individual institution be identified;

2. Modification of the 2000-2001 ARL survey to include two additional pieces of information. Both questions would appear on the form Part II: Individual Data from the ARL Annual Survey. One would be an institutional level question, appearing at the top of the page, that asked the question “Does your institution grant tenure to librarians?” The second question would appear as an additional column on the form and would ask whether the individual listed was tenured.

Please note that even if modification of the survey is not possible, we are still requesting access to the individual level data as described in (1). All final results would be made available to ARL and appropriate acknowledgment would be made in the final report/dissertation. Mississippi State University schedules a monthly flight to Washington to support faculty research; my dissertation advisor and myself could visit with ARL staff to answer any questions.
Compensating Wage Differentials and Tenure

Economists have long attempted to explain the observed differences in wage structure among workers. The theory of compensating wage differentials is one attempt to explain this difference and dates back to Adam Smith. Smith was one of the first theorists to observe that different characteristics of a job resulted in a variation in the wage structure. In general, the theory of compensating wage differentials seeks to explain differences in wages in terms of the job characteristics. Jobs with higher risks such as personal danger, potential layoffs or termination, or other such risks would reflect these undesirable characteristics in the form of a higher compensation package. Likewise, jobs with pleasant or desirable attributes would offer compensation at a lower level, all else being the same.

Tenure, as an academic institution, was “codified” by the American Association of University Professors (AAUP) in its 1940 statement on academic tenure. The original concept of tenure was the development of an employment contract within higher education that provided employment security. This long-term, secure employment would protect the intellectual freedom of scholars and would foster the appropriate intellectual climate in institutions of higher learning. Despite its widespread acceptance, tenure has a long history of controversy.

The adoption of faculty status and tenure within academic librarianship has been no less controversial. In 1971, the Association of College and Research Libraries (ACRL) adopted the ACRL Standards for Faculty Status of College and University Librarians. In 1972, ACRL, in cooperation with AAUP and AAC, issued the Joint Statement on Faculty Status of College and University Librarians. Despite consistent support from ACRL, the use of tenure in academic librarian appointments is far less than that of the university faculty as a whole.

My dissertation will examine the use of tenure as a compensating wage differential. Tenure has increasingly come under attack from legislators and critics outside of academe. Some critics have attempted to abolish tenure and replace it with some alternative compensation package. Academic librarianship provides an excellent case study for the examination of this issue. Even within the ARL population, some institutions support a tenure track for librarians, while others do not. The theory of compensating wage differentials predicts that, other things being equal, compensation will be higher in those institutions that do not support tenure for academic librarians. The ARL data will be used to empirically test this hypothesis. This topic provides a timely analysis of the use of tenure as a compensating wage differential and hopefully will further the study of tenure in academic librarianship.
Dissertation Advisors

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Timeframe

The ARL Annual Salary Survey will be mailed to member libraries in July 2000. It is my understanding that all data collection would be completed by December 2000. I would hope to have access to the data in January 2001, with a projected completion date of April 1st. However, my situation is a little different from that of most graduate students. I am currently a tenured librarian in the Mississippi State University Libraries. While completion of my doctorate is a high priority and a May 2001 graduation date desirable, it is not a necessity that I make that date. If access to the necessary data required a later completion date, that would not be a problem.
POLICY ON RELEASE OF ARL SALARY SURVEY DATA TO RESEARCHERS

The data collected for the Annual Salary Survey of the Association of Research Libraries are the property of the Association and may not be used for any purpose except as authorized by ARL. The Association recommends that researchers using the ARL salary data keep members of the Committee on ARL Statistics and/or ARL Office staff apprised of the progress and results of their research. Committee members who are familiar with ARL libraries and possible peculiarities in the data base may be of help to researchers in interpreting results.

The Salary Survey data are highly confidential and, unlike the ARL Statistics data, are not made generally available. However, the Association may elect to release tapes of the Salary Survey data to qualified researchers under the guidelines specified below.

1. Requests for tapes of the Salary Survey data are reviewed by the Committee on ARL Statistics which will determine on a case-by-case basis whether to recommend release of the data. In reviewing requests, the Committee will consider, among other factors, the serious intent and qualifications of the researcher and the extent to which the project proposed is in keeping with the mission and objectives of the Association.

2. If approval of a request is recommended by the Committee on ARL Statistics, the ARL Office can authorize release of a tape or tapes of the data.

3. Tapes released to outside researchers will contain no identifying codes for specific institutions, i.e. the data will be "institution-blind." However, each institution's data will be separately coded, with indication of geographic region and of whether the institution is private or public. Additional codes may be requested, provided they are practical to apply and do not compromise the confidentiality of the data.

4. Requestors will be expected to pay all direct costs of removing institutional codes, adding additional codes, and reproducing the data.

5. To protect confidentiality of the data, requestors must comply with the following conditions:

   a. No figure which describes or is derived from the salaries of fewer than four individuals may be published.

   b. No information may be published, circulated, or discussed that would reveal the identity of any library or individual, either implicitly or explicitly. Papers prepared for publication using the Salary Survey data may be reviewed by the Committee on ARL Statistics to ensure that libraries or individuals are not inadvertently identified.

   c. The data may not be provided to a third party without ARL's written authorization to do so.

6. By consent of the Committee on ARL Statistics, the American Library Association may ask individual institutions to permit release of their data directly from ARL to ALA, to avoid unnecessary duplication in survey requests.

Adopted January 31, 1984
ARL Board
Revised May 1990
Past Requests

(a) **Stanley Wilder’s study on age demographics as a Visiting Program Officer assignment** (see Committee minutes [http://www.arl.org/stats/program/min1095.html](http://www.arl.org/stats/program/min1095.html)) Note: a recent ARL Newsletter article presents the latest analysis done by Stanley Wilder (see [http://www.arl.org/newsltr/208_209/chgprofile.html](http://www.arl.org/newsltr/208_209/chgprofile.html))

(b) **Martha Kyrillidou’s request for dissertation research** - see Committee minutes [http://www.arl.org/stats/program/min0596.html](http://www.arl.org/stats/program/min0596.html). Note: a recent ARL Newsletter article presents some descriptive analysis from Martha’s research (see [http://www.arl.org/newsltr/208_209/saltrend.html](http://www.arl.org/newsltr/208_209/saltrend.html); dissertation still in progress)

(c) **ALA request by Mary Jo Lynch, Office of Research and Statistics** -- Mary Jo Lynch sends the following letter (below see the latest version - 2000- of the letter that went out) to each ARL member library in the ALA sample to be included in the ALA Survey of Librarians Salary:

Dear «FirstName» «LastName»:

Enclosed is a copy of the cover letter and questionnaire recently sent to a sample of public and academic libraries regarding salaries paid to librarians. We are **NOT** asking you to fill out the questionnaire. Instead, we are asking your permission to use the data you already submitted to ARL for the positions described on our questionnaire. We will, of course, treat this data confidentially. If you are willing to release that data, **please sign the enclosed form and return it to us in the envelope provided.**

As you may know, the universe for the annual ALA survey includes ARL libraries even though ARL has its own salary survey. We do this to ensure that the summary data we report will represent the entire field. In 1991, after conferring with ARL, we started a procedure which has been used successfully ever since. After the sample is pulled each year, we separate out the ARL libraries and ask their directors for permission to use data already given to ARL. Most give that permission, ARL sends an electronic record, and ARL salaries are added to the file used to produce our report.

Last year there was a change in the questionnaire which means that we will be able to use ARL data for some positions but not for all. We realize that ARL does not currently collect data that would enable us to separate supervisors of professionals from those who supervise support staff only – the third and fourth of the five categories in our survey. Nevertheless we believe it is still best for all concerned to continue using the data available from ARL for ARL libraries.

Thank you very much for your cooperation. If you have questions, please call me at 1-800-545-2433, ext. 4273 or send e-mail to mlynch@ala.org.

Sincerely yours,
Mary Jo Lynch, Ph.D.
Director
ALA Office for Research and Statistics
Dear ARL Measurement Committee Members:

I am writing you to explore the possibility of obtaining additional data on ARL members. The purpose of gathering additional data is to study costs and outputs of academic research libraries. I am particularly interested in studying cost functions and outputs of major functional areas of academic research libraries. To do so, we need to collect data at the departmental level. Much of ARL data basically is gathered at the library level, which is not very helpful for microeconomic analyses of major library functions. It is important to study cost functions and outputs by library functional areas since their economic behaviors tend to differ.

Economics of libraries has long been ignored by economists and library researchers are not comfortable to deal with this issue due to lack of understanding of economic theories and methodologies. While some studies addressed issues related to some aspects of economics of academic libraries in the 1970s and 1980s, this study of costs and outputs of academic research libraries is an original attempt. My academic background is in economics of higher education. I received my Ph.D. from SUNY-Buffalo and Library Degree from the University of Illinois at Urbana-Champaign. I have been doing research on libraries and economics. My recent publications include: Global Economic Growth: Theories, Research, and Studies (Greenwood Press, 2000) and Internet and Library and Information Services (Greenwood Press, 1996). I have been working in academic libraries for over six years. My academic training and working experience will certainly help me conduct this kind of research.

This study will not only develop cost functions and outputs of academic research libraries, it also will deal with economic theory of academic research libraries. The outcome of this study will help library administrators and librarians to better understand economic behavior of academic research libraries.

I hope that the Committee will seriously consider collaborating with me and help to collect additional data on academic research libraries. The questionnaire is attached to this request. Questions are listed under six library functional areas.

Please review the questions in the questionnaire. If you have any questions regarding the questionnaire or this research project, please feel free to contact me.

Thank you very much for your cooperation.

Lewis G. Liu, Ph.D. and Associate Professor
Newman Library, City University of New York

212 802-2433

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1. The Central Administration

Total number of professional staff:
Total salary of professional staff:

Total number of paraprofessional staff:
Total salary of paraprofessional staff:

Total number of student assistants:
Total wages of student assistants:

Total number of computers:
Total costs of computers:

2. Reference Service
Total number of professional staff:
Total salary of professional staff:

Total number of paraprofessional staff:
Total salary of paraprofessional staff:

Total number of student assistants:
Total wages of student assistants:

Total number of computers:
Total costs of computers:

Total number of print reference collection items:
Total costs of print reference collection items:

Total number of electronic databases, including indexes, abstracts, full-text databases, reference tools such as encyclopedias, dictionaries; excluding electronic catalog:
Total costs of these electronic databases:

Total number of reference transactions: (already in the ARL questionnaire)
Total number of instruction workshops provided by reference librarians:

Total number of non-reference-service instructional librarians:
Total salary of non-reference service instructors:
Total number of workshops provided by non-reference-service instructional librarians:

3. Circulation
Total number of professional staff:
Total salary of professional staff:

Total number of paraprofessional staff:
Total salary of paraprofessional staff:

Total number of student assistants:
Total wages of student assistants:

Total number of computers:
Total costs of computers:

Total number of items circulated: (already in the ARL questionnaire)

4. Interlibrary loan
Total number of professional staff:
Total salary of professional staff:

Total number of paraprofessional staff:
Total salary of paraprofessional staff:

Total number of student assistants:
Total wages of student assistants:

Total number of computers:
Total costs of computers:

Total number of interlibrary loan items borrowed: (already in the ARL questionnaire)
Total costs of interlibrary loan items borrowed excluding staff salary and computer costs:

Total number of interlibrary loan items lent: (already in the ARL questionnaire)
Total costs of interlibrary loan items lent excluding staff salary and computer costs:

5. Cataloging
Total number of professional staff:
Total salary of professional staff:

Total number of paraprofessional staff:
Total salary of paraprofessional staff:

Total number of student assistants:
Total wages of student assistants:

Total number of computers:
Total costs of computers:

Total number of items cataloged:
Total costs of items cataloged excluding staff salary and computer costs:

6. Periodicals and Serials service
Total number of professional staff:
Total salary of professional staff:

Total number of paraprofessional staff:
Total salary of paraprofessional staff:

Total number of student assistants:
Total wages of student assistants:

Total number of computers:
Total costs of computers:

Total number of serials subscribed (journals, magazines, newspapers etc): (already in the ARL questionnaire)
Total costs of serials subscribed (already in the ARL questionnaire)
Total costs of processing serials excluding staff salary and computer costs: