

## **SURVEY RESULTS**

## **EXECUTIVE SUMMARY**

## Introduction

To assess, in general, is to determine the importance, size, or value of; to evaluate. Library staff assess operations by collecting, interpreting, and using data to make decisions and to improve customer service. They study internal processes, levels and quality of service, and library impact on institutional goals.

The number of assessment activities undertaken in libraries over the last decade has grown exponentially. Libraries of all kinds are looking more closely at how and how well they are serving their users. What may have begun as the occasional assessment duty assigned to the library staff member with the most interest or greatest statistical acumen, has blossomed at many institutions into a formalized library assessment position, committee, department, or all three.

Although this growing area of library management has become recognized as a legitimate use of limited budgets and time, there is not as yet a good overview of precisely how library assessment activities are being implemented or developed. This survey sought to address that missing piece of the puzzle—to examine the current state of library assessment, as well as to provide a starting point for those seeking to develop a library assessment program at their own institutions.

This survey was distributed to the 123 ARL member libraries in May 2007. Seventy-three li-

braries completed the survey for a response rate of 60%. Only one library indicated that it did not engage in any assessment activities beyond collecting annual data for the ARL statistics, though no reason was given as to why this was the case.

The respondents are primarily from US academic libraries, 63% in public institutions and 22% in private institutions. Twelve percent are libraries in Canadian academic institutions, all of which are public. Public libraries account for only 3% of the respondents. This closely reflects the membership distribution of ARL.

## **Assessment Activities**

Survey results indicate that while a modest number of libraries in the 1980s and earlier engaged in assessment activities beyond annual ARL statistics gathering, the biggest jump in activity occurred between 1990 and 2004. The overwhelming majority of responses indicate the impetus was service driven and user centered and came from within the library itself rather than from an outside source. Respondents' top impetus for beginning assessment activities (63 respondents or 91%) was the desire to know more about their customers. Based on responses to a question about their first assessment activities, over half began with a survey, almost all of which were user surveys.

It is clear from the survey results that respondents use a wide variety of methods in their assessment endeavors. All respondents have gathered statistics, presumably at least ARL statistics, but every one of the methods listed in the survey has been used by at least one of the respondents at some point, either currently or in the past. The top five assessment methods currently being used are statistics gathering, a suggestion box, Web usability testing, user interface usability, and surveys that were developed outside the library. Locally designed user satisfaction surveys used to be widely used. Now, 20 of the 31 libraries (65%) that previously used this method have switched to surveys developed elsewhere, such as LibQUAL+®. The five least used methods are secret shopper studies, the Balanced Scorecard, wayfinding studies, worklife/organizational climate studies, and unit cost analysis.

The areas of the library being assessed are as varied as the methods used. In the last five years, every function of the library listed in the survey has been assessed by at least one respondent. Almost every respondent has assessed the library's Web site, most frequently with a usability study. Other widely assessed areas include electronic resources, usually assessed by statistics collection and analysis; user instruction, evaluated through statistics and surveys; and reference and collections, both most frequently assessed through statistics collection and analysis. Administrative functions, including human resources, financial services, marketing, and development, that are not centered on users are least evaluated; 30% of the respondents have not assessed even one of these areas.

## **Organization of Assessment Activities**

Respondents were asked to identify where assessment responsibility fits into their organizational structure. Forty-nine respondents reported that responsibility for assessment activities rests on either a single full- or part-time individual (24 or 34%), an ad-hoc or standing committee (16 or 23%), or a formal department (9 or 13%). All but one of the

full- and part-time assessment coordinators and department heads is within two reporting levels of the library director. The remaining 21 respondents (30%) described another organizational structure. The majority of these (15 or 71%) are decentralized, with various units doing their own assessments as needed. For large-scale projects such as LibQUAL+®, an ad-hoc team or committee may be formed. The remaining respondents either use a combination of coordinators and committees or are in the process of creating a new coordinator position.

Though respondents indicated that assessment activities have been performed in their libraries over the last 20+ years, the presence of staff who have primary responsibility for assessment activities has a much more recent history. All but one of the part-time and two of the full-time coordinator positions were created between 2002 and 2007; all of the assessment departments were created in 2000 or later. Nearly 60% of these positions and departments were created between 2005 and 2007. All four ad-hoc committees were created between 2002 and 2007. Standing committees or teams have the longest history of primary assessment responsibility (one since 1984), but the most recent was created in 2007. Departments average 2.4 FTE; committees average six to seven members.

At nearly all of the responding libraries, regardless of organizational structure, assessment staff analyze, interpret, and report on data collected in assessment activities and consult with staff on assessment methods and needs. They frequently perform assessment activities and coordinate the collection and reporting of data. They train staff at just over half of the libraries. They only approve assessment projects at 25% of the responding libraries.

Full- and part-time coordinators and assessment department staff are very similar in the tasks they perform, although part-time coordinators are less likely to be responsible for training staff or monitoring projects. Standing committees are less likely to coordinate the collection, reporting, or archiving of data, to fill requests for library data, or to submit external surveys.

The majority of assessment staff have collaborated on assessment activities with other non-library departments, agencies, or units within the institution, though standing committees are less likely to do so. These non-library collaborations are most often with institutional offices of research and learning, information technology, and assessment and planning.

#### **Assessment Results Distribution and Outcomes**

Methods of distributing assessment results vary depending on the audience, although overall, the most frequently used method is through a Web site. In addition, the methods most widely used to inform the parent institution are print reports and library newsletter articles, while presentations and e-mail announcements are used more frequently for library staff. Staff appears to be the most targeted audience for the distribution of library assessment results; all methods except a campus newsletter are heavily used for them. Results are overwhelmingly distributed to the general public through a Web site or library newsletter articles.

The top two types of assessment information listed on a library's assessment Web site (whether publicly accessible or staff-only) are general library statistics and analyses of assessment activity results. Assessment publications are found more frequently on a public Web site than on a staff-only Web site, while presentations and assessment data are provided more on staff-only Web sites than on public ones. Other types of information mentioned by more than one respondent include meeting notes and agendas on staff-only Web sites.

There is little point in having an assessment program unless the results are used to make improvements in services. Respondents were asked to list three outcomes that were attributable to their assessment activities. Twenty areas were reported, but changes to Web sites and facilities were the most frequently mentioned. Collections, hours, and staff formed the next highest groups. Other areas that were changed include customer service, journals, access services, the online catalog interface, instruction and outreach, and reference services. Only one respondent reported no changes attributable to assessment.

## **Professional Development**

When asked if their library provides assessment training to library staff, all but 20 of 68 respondents (71%) indicated they received some sort of support for training, whether provided by the library (28%), their institution (32%), or an outside source (62%). When the library provides training, the topics focus primarily on assessment methods, basic statistics, survey construction, the value of assessment, and data analysis.

When evaluating assessment-related professional development venues (such as conferences) outside the institution, the most highly recommended and most attended events were ARL assessment-related meetings and the 2006 Library Assessment Conference. When asked to identify the professional development needs not being met by the aforementioned conferences, respondents focused on training, indicating that there is a lack of available instruction on basic statistical analysis, methodologies, and tools.

## **Culture of Assessment**

The survey included a series of statements on the culture of assessment. Respondents were asked to rate on a scale of 1 to 5 how well the statements described their respective libraries. Between 68% and 79% of the respondents agreed or strongly agreed with statements related to the commitment of their library administrations to assessment. The remaining statements were related to staff and their support for, or ability to carry out, assessment activities. Only 50% or fewer of the respondents rated

these statements at agree or strongly agree; most cluster around the middle of the scale. There appears to be a strong administrative commitment to assessment that does not translate to the organization as a whole.

Just under half of the respondents (31 or 46%) indicated that there is an assessment plan in some or all of their library's departments or units or a library-wide assessment plan. Fifteen respondents commented that the library was either in the process of developing a plan or used an alternate document (such as a strategic plan or annual report) as their assessment plan.

#### **Conclusions**

What do "typical" library assessment programs look like? The typical programs began in the 1990s and engage in various assessment activities in addition to the collection of ARL statistics. They began by doing a user survey because the library wanted greater knowledge of its users and wanted to determine which new services to offer. The programs most frequently gather statistics (100%), but are also strongly involved in doing various user surveys, Web usability testing, and focus groups. They have performed studies of their Web sites. They track usage statistics for electronic resources and assess user education programs, collections, and reference. They have not usually assessed their administrative areas that are not centered on the library user.

Typically, various individual library departments or units do assessment, although the number of institutions with assessment coordinators or committees is growing. The coordinators have typically been appointed within the last five years (2002 to 2007) and are within two reporting levels of the library director. If there is an assessment department, it has just over two members. Committees sometimes date to the 1990s and average six to seven members. The tasks performed by

all are remarkably uniform; they analyze, interpret, and report on assessment activities, consult with staff on assessment methods and needs, and perform assessment activities. They coordinate their work with other units in their institutions.

Results of activities are usually distributed through a Web site; they are communicated with staff more frequently than with the parent institution or the general public. Both staff and public Web sites most often present general library statistics and analyses of assessment results. Assessment does lead to programmatic changes in the library, primarily changes to Web sites and facilities.

Training in assessment is supported by the library but is mostly outsourced rather than local. Training that is provided by the library is focused on assessment methods, basic statistics, and surveys. The most highly regarded training appears to come through ARL-sponsored events such as meetings at American Library Association conferences and the Library Assessment Conference. These venues are also appreciated for their networking and sharing opportunities. But more training is needed in assessment basics.

Library administrations are typically committed to the concept of a culture of assessment in their libraries, but there is a perception that this commitment is not shared by all staff. Many staff do not have the skills or rewards needed to carry out assessment projects. Most libraries have an assessment plan or are using a similar alternative document, or they are in the process of developing a plan.

In short, library assessment is alive and well in North America. There has been considerable progress in this area from the mid-1980s through 2007. For that progress to continue, there needs to be more effort to train not only those responsible for assessment, but all staff who are expected to participate in assessment activities.

## **SURVEY QUESTIONS AND RESPONSES**

The SPEC survey on Library Assessment was designed by **Lynda S. White**, Associate Director, Management Information Services, University of Virginia, and **Stephanie Wright**, Natural Sciences Information Services Librarian/ Management Information Librarian, University of Washington. These results are based on data submitted by 74 of the 123 ARL member libraries (60%) by the deadline of June 8, 2007. The survey's introductory text and questions are reproduced below, followed by the response data and selected comments from the respondents.

To assess, in general, is to determine the importance, size, or value of; to evaluate. In libraries, we assess by collecting, interpreting, and using data to make decisions and to improve customer service. We study internal processes, levels and quality of service, and library impact on institutional goals.

The number of assessment activities undertaken in libraries over the last decade has grown exponentially. Libraries of all kinds are looking more closely at how and how well they are serving their users. Since 2004, ARL has sponsored a program to assist libraries with the assessment of services that they offer their users and the processes that support those services. This visiting program has been part of a move away from measuring inputs and outputs and toward judging service quality by measuring outcomes and the value that library programs add to their communities. What may have begun as the occasional assessment duty assigned to the library staff member with the most interest or greatest statistical acumen, has blossomed at many institutions into a formalized library assessment position, committee, department, or all three. These programs may include such activities as statistics collection, conducting surveys, conducting focus groups, Web usability testing, and benchmarking, etc.

Although this growing area of library management has become recognized as a legitimate use of limited budgets and time, there is not as yet a good overview of precisely how library assessment activities are being implemented or developed. The purpose of this survey is to address that missing piece of the puzzle—to examine the current state of library assessment, as well as to provide a starting point for those seeking to develop a library assessment program at their own institutions. This data should help libraries assess where they are and identify best practices to help them build or expand their own programs.

## **BACKGROUND**

1. Does your library engage in any assessment of library activities (such as statistics collection, conducting surveys, conducting focus groups, Web usability testing, benchmarking, etc.) beyond collecting annual data for the ARL statistics? N=74

Yes	73	99%
No	1	1%

## **ASSESSMENT ACTIVITIES**

2. Please indicate which of the specific assessment methods below your library is currently using or has used in the past. Check "Currently Used" for methods that the library continues to use to assess activities. Check "Previously Used" for methods that were once used but are no longer used. Check "Never Used" for methods the library has never tried. Check one category for each row. N=73

Assessment Method	N	Currently Used	Previously Used	Never Used
Surveys N=73				
Surveys developed elsewhere (e.g., CSEQ, LibQUAL+®)	72	55	15	2
Locally designed user satisfaction survey	70	36	31	3
Facilities use studies	69	41	22	6
Online user feedback (pop-up windows, etc.)	69	38	18	13
Worklife/organizational climate studies	66	20	21	25
Qualitative Methods N=71				
Focus Groups	70	51	16	3
Secret Shopper Studies	70	5	3	62
Suggestion Box	70	60	6	4
Observation	69	37	22	10
Interviews	67	38	22	7
Statistics N=73				
Statistics gathering (e.g., e-resource usage, gate counts, ARL statistics, etc.)	73	72	1	_
Data mining and analyses	68	43	6	19
Statistics inventory	66	40	9	17

Assessment Method	N	Currently Used	Previously Used	Never Used
Usability N=72			·	
User interface usability	72	57	9	6
Web usability testing	71	59	9	3
Wayfinding	68	15	10	43
Other Methods N=73				
Student learning outcomes evaluations	70	40	11	19
Benchmarking	68	37	11	20
Unit cost analyses	67	23	25	19
Balanced Scorecard	65	4	4	57
Process improvement	65	29	20	16
Other method not included above	31	10	4	17

If you selected "Other method not included above," please specify that assessment method.

## **Currently Used**

"Administrative Unit Review — review and evaluate library department services or operations."

"Card sorts used to gather user input on the library Web site's content structure. Users were provided index cards of keywords that identify library services, collections, facilities, and other related information. They were requested to group the label cards according to about 6 broad categories. A spreadsheet and color coding was used to analysis the frequency of grouped items. This process was used to advise the redesign of a Web site that was user friendly. Clicker Response System. A concept was demonstrated to the class of students. Then a question was shown on their computer screens which presented the same concept in a different situation. They used the Clicker Response System to check how well the students understood the concept and could transfer it to another situation before we moved on to other material."

<sup>&</sup>quot;Card sorting (usability); heuristic evaluations."

<sup>&</sup>quot;Comparison of collection with authoritative lists (a form of benchmarking). Comparison of library collection to what faculty are citing in their publications."

<sup>&</sup>quot;Faculty Contact Database to track responses to faculty issues and concerns (qualitative and quantitative)."

<sup>&</sup>quot;In the fall 2006 semester, a class in our Library and Information Science Program, 'Competitive Intelligence and Data Mining (LIS 7490),' used a simulation software package, Arena, to combine data supplied by the University Libraries and observations by students to analyze functions in our reference areas. The simulation and accompanying analysis has resulted in a significant reorganization of the reference area in one of our buildings. The simulation software is now being acquired by the University Libraries."

<sup>&</sup>quot;Online card sort."

<sup>&</sup>quot;Outcome measure assessing impact of a grant funded project that digitized special collection material on

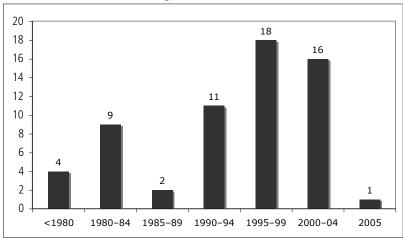
teaching and learning."

## **Previously Used**

- "+/Delta exercise."
- "Review of staff organization to look at efficiencies and possible duplication of functions across departments."
- "Several years ago we did a telephone survey of student and faculty. It was conducted for us by a survey group within the university. It was moderately useful."

3. In what year did your library begin assessing library activities beyond the annual ARL data gathering? What was the first assessment activity (survey, focus group, usability test, etc.)? N=63

## Year Assessment Activities Began N=61



Year Range: 1911 to 2005

## First Assessment Activity N=62

#### <1980

"ARL's Management Review and Analysis Program."

<sup>&</sup>quot;The library has established a set of metrics corresponding to the goals, objectives, and strategies in the Academic Affairs Strategic Plan for Academic Excellence."

<sup>&</sup>quot;Usage stats for e-resources."

<sup>&</sup>quot;Use of outside consultants for programmatic reviews."

<sup>&</sup>quot;Periodic user surveys."

"Survey on material and stack location."

"We have been collecting statistics and doing assessment since the library opened."

#### 1980-84

"A satisfaction survey was distributed in paper form to library visitors, mostly students."

"ARL/OMS study."

"At least since 1980, there have been regular calculations of indirect costs of library activities as an associated cost of research. These studies were meant to facilitate university grants requests."

"Cost studies."

"Organizational Assessment."

"Participation in university-wide student satisfaction survey including satisfaction with library."

"Self-study for accreditation. This is the earliest study I can find, but there may be something even earlier."

"Survey of user attitudes: pre- and post opening of a new library facility."

"Work analysis by random sampling."

## 1985-89

"Facility use survey in preparation for construction of addition to main research library building."

"Undergraduate Services Task Force Report entitled 'Preparing Undergraduate Students for the Information Age.'"

## 1990-94

"Exit surveys of library users."

"Locally designed user satisfaction survey."

"Locally devised user survey."

"Organizational climate and organizational structure assessment."

"Survey and focus group."

"Survey of university faculty for: user satisfaction, spending priorities, behavior (frequency of use, etc.)"

"System-wide user surveys."

"User exit survey (behavior, satisfaction, etc.)"

"User satisfaction survey."

"User survey."

"Various customer surveys, comparative peer assessments based on ARL data, various and recurring cost studies."

#### 1995-99

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"1998-focus groups with staff; 1999-survey of graduate students; 1999-survey of faculty."
    "In-house developed user survey."
    "Large-scale user survey."
    "LibOUAL+TM"
    "Locally developed comprehensive user survey."
    "Not sure, but suspect some form of assessment was undertaken at various times in our history. I am
    personally aware of having observation, survey, focus group and individual interviewing, and process mapping
    used as early as 1997."
    "SERVQUAL survey of satisfaction of users of undergraduate library."
    "Study of print journal 'cost per use.' The library needed to reduce its expenditures on journal subscriptions."
    "Survey." (2 responses)
    "Survey of users perceptions on service delivery, facilities, service needs."
    "There is an indication that a 'Campus Library Assessment' was conducted in 1972, however this cannot be
    substantiated at this time. In 1995 a comprehensive survey was conducted by the library system."
    "User Needs Assessment."
    "User satisfaction survey."
    "User satisfaction survey in collaboration with regional universities."
    "User survey."
    "We have always done some assessment: 1 of 6 very least, the 7-yearly program review includes self-study
    and surveys."
2000-04
    "Benchmarking for strategic planning."
    "Exit survey."
    "Focus group."
    "Formal Library Assessment Plan."
    "LibQUAL+®" (7 responses)|
    "LibQUAL+® and Process Improvement Studies."
    "Survey."
    "Web site design survey."
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## 2005

"We have been conducting various assessment activities including unit cost studies, usability studies, focus groups, etc. for many years. We instituted a formal assessment program in 2005 with the first activity being a user satisfaction survey for our Law Library."

# 4. What was the impetus for beginning these assessment activities at your institution? Check all that apply. N=69

Desire to know more about your customers	63	91%
Investigation of possible new library services or resources	49	71%
Desire to know more about your processes	45	65%
Desire to identify library performance objectives	43	62%
Need to reallocate library resources	38	55%
Accountability requirements from your parent institution	26	38%
Institutional or programmatic accreditation process	20	29%
Proposal from staff member with assessment knowledge	12	17%
Other (please specify)	16	23%

<sup>&</sup>quot;Comparisons with other institutions, decision-making, resource allocation, strategic planning."

<sup>&</sup>quot;Desire to facilitate university research activities."

<sup>&</sup>quot;Desire to focus our attention for making improvements, desire to give authority to our observations when making plans."

<sup>&</sup>quot;Desire to inform users of services and resources, encourage user input concerning library issues, and document the needs of the library system."

<sup>&</sup>quot;External review."

<sup>&</sup>quot;Formative & Summative Evaluation of Educational Resource Development Projects."

<sup>&</sup>quot;Identifying client focused priorities for service quality and process improvement."

<sup>&</sup>quot;Initiative from Director of Libraries."

<sup>&</sup>quot;Need for expenditure reduction."

<sup>&</sup>quot;Preparation for move to new building."

<sup>&</sup>quot;Strategic planning."

5. Please indicate which of the following departments/units your library has assessed since 2002 and what methodologies were used for those assessments. Check all that apply. N=67

Library Function	N	Surveys	Qualitative Methods	Statistics Collection & Analysis	Usability	Other	Have not assessed
Electronic Resources	66	29	15	56	24	3	2
Interlibrary Loan	66	30	10	51	4	4	7
Web site	66	32	25	32	59	4	_
Branch Libraries	65	40	23	36	7	2	14
Circulation/Reserve	65	27	10	49	_	5	6
Collections	65	25	28	57	9	3	3
Reference	65	37	26	53	3	2	5
User Instruction	64	45	24	46	3	4	3
Digital Initiatives	63	24	17	33	21	1	16
Online Catalog	63	25	11	33	34	2	6
Acquisitions	62	9	8	46	_	8	13
Cataloging	62	3	6	43	1	9	15
IT Systems	62	12	13	27	11	3	20
Shelving	62	11	6	45	1	4	12
Facilities	61	35	20	27	6	6	6
Human Resources	61	8	12	10	_	1	41
Preservation	61	8	8	35	1	5	20
Publicity/Marketing	61	10	9	4	1	1	42
Selectors/Subject Liaisons	61	22	19	29	_	2	16
Special Collections	61	14	14	32	3	4	19
Administration	60	9	15	12	_	4	31
Financial/Business Services	60	5	4	21	1	5	32

<sup>&</sup>quot;To meet a requirement in new Strategic Plan for a user-centered approach to libraries services."

<sup>&</sup>quot;To meet objectives in the library's strategic plan."

<sup>&</sup>quot;Too long in the past to be really sure."

<sup>&</sup>quot;User satisfaction."

<sup>&</sup>quot;We were planning to open a library expansion and wanted to know more about user satisfaction with services and facilities."

Library Function	N	Surveys	Qualitative Methods	Statistics Collection & Analysis	Usability	Other	Have not assessed
Staff Training/ Development	60	37	14	14	1	1	17
Work Climate	60	29	18	4	1	_	23
Development/ Fundraising	59	3	5	22	_	_	36
Other	16	3	2	2	1	4	9

Please specify other library function that was assessed.

Library Function	Assessment Method
Acquisitions & Cataloging	Process improvement
Book availability	(not specified)
In general, all of our units are assessed through our	
user surveys.	
Information Literacy	(not specified)
Libraries; Technical Services	In Summer 2006, an external review committee was appointed to
	assess the libraries (as a unit). In Summer 2007, a consulting firm was hired to assess Technical Services
Library Spaces	Observational studies and surveys are used to inform decision about construction and renovation. ('Facilities' means maintenance and cleaning activities to me.)
Media Services, Special Collections	We conducted a self-study for Special Collections and hired an outside management consultant to assess. We are currently conducting a self-study for Media Services and will have a consultant come in this summer. Also we participated in LibQUAL+ <sup>TM</sup> in 2001 and 2005.
Overall with LibQUAL+™	
Public Programs; Government Documents	Public Programs: surveys. Government Docs: statistics and randomized and selective shelf-reading for quality control and improvement.
Student Multimedia Design Center planning	The use of multimedia by faculty and students was assessed as part of the planning process for design and implementation of the new 15,000 square foot Student Multimedia Design Center with 70 workstations, 6 studios and 2 classrooms. The assessment included focus groups, surveys and interviews.
User satisfaction with online finding tools	
Workflow in Cataloging and Acquisitions; Inventory of facilities; audit processes of business office.	

## Please specify other assessment method(s) that was used.

- "Administrative Unit Review."
- "ARL ILL cost/performance for all years."
- "Assorted consultant review and reports based on data, interviews, work flow analysis, review etc."
- "Branch Libraries: Visits to other libraries to develop benchmarks. Web site: Card sorting tests on technology and organizations. Staff Training Development: Informal conversations with individual staff. Financial/Business Services: Various operational aspects of library business office are periodically assessed by university business services unit."
- "Card Sorts, SWOT analysis."
- "Collections: WorldCat Collection Analysis. IT Systems: informal feedback and in-house assessments. Cataloging: process improvement. ILL: unit costs."
- "For Preservation and Special Collections: assessment of the collections. For many services, we use informal feedback and our suggestion box."
- "Gap surveys."
- "Informal evaluation of workflow and procedures."
- "In-house reviews: data/cost data."
- "Observational study of facilities and laptop use; external consultants."
- "Process improvement studies."
- "Process improvement/CQI (for all six departments/units for which OTHER was checked)."
- "The 'qualitative methods' used includes significant individual interactions with students and faculty to ascertain the value of the service and any suggested improvements to services, systems and collections."
- "We are at an early stage of using 'student learning outcomes evaluations' to measure the impact of our user instruction. We made use of the simulation software package, Arena, to analyze reference services in several of our buildings."
- "We have also done benchmarking studies of our shelving process (1999) and of our training program (2000)."

## **ORGANIZATION OF ASSESSMENT ACTIVITIES**

6. Who has primary responsibility for coordinating and/or planning your library's assessment activities? Check the one item below that best describes your organization. N=70

A single individual working part-time as an assessment coordinator	13	19%
A standing committee(s)/team(s) that is charged with assessment	12	17%
A single individual working full-time as an assessment coordinator	11	16%
A department/unit that is charged with assessment	9	13%
An ad hoc committee that is charged with assessment	4	6%
Other	21	30%

7. For which functions below is the assessment coordinator responsible? Check all that apply. N=49

	Part- Indiv N=		Comn	ding nittee :12	Indiv	Time idual :11	Depar	sment tment =9	Comr	hoc nittee =4		tal :49
	#	%	#	%	#	%	#	-9 %	#	- <del>4</del> %	#	- <b>4</b> 5 %
Analyzes, interprets, and reports on data collected in assessment activities	12	92%	11	92%	11	100%	9	100%	4	100%	47	96%
Consults with staff on assessment methods and needs	12	92%	11	92%	11	100%	9	100%	3	75%	46	94%
Performs assessment activities	11	85%	9	75%	11	100%	9	100%	3	75%	43	88%
Monitors/coordinates assessment projects throughout the library	7	54%	11	92%	10	91%	8	89%	2	50%	38	78%
Coordinates collection of data across the library	11	85%	5	42%	11	100%	7	78%	3	75%	37	76%
Submits external surveys (ARL, ALS, NATC, American Library Directory, etc.)	10	77%	5	42%	10	91%	8	89%	1	25%	34	69%
Coordinates the reporting/archiving of the library's statistical data	12	92%	2	17%	7	64%	9	100%	3	75%	33	67%
Fills requests for library data	11	85%	2	17%	9	82%	9	100%	2	50%	33	67%
Provides training on assessment topics	5	38%	7	58%	8	73%	6	67%	1	25%	27	55%
Approves assessment projects throughout the library	3	23%	1	8%	4	36%	2	22%	2	50%	12	25%
Other, please specify	4	31%	1	8%	3	27%	5	56%	_	_	13	27%

## Please specify other responsibility.

#### **Part-time Assessment Coordinator**

- "Internal staff training. Coordinate searches for professional librarians."
- "Leads the library's Assessment Team."
- "Serves on Institutional Research Committees."
- "Training Coordinator handles most training, and is a member of the Assessment Working Group. I provide guidance and best-practices."

## **Standing Assessment Committee/Team**

"Feedback from contributors (assessing the assessment process)."

#### **Full-time Assessment Coordinator**

- "Ethics review applications."
- "Supervise student assessment and usability assistants."
- "The position is not officially designated as a 'coordinator' although it is an inherit aspect of the position. It is still under development based upon determining the extent and type of assessment coordination needs for the campus library system."

## **Assessment Department/Unit**

- "Chairs Library Assessment Group; Ex-officio member of the Strategic Planning team and develops strategic planning performance measures and benchmarks."
- "Collaborates with the Public Services Executive Committee's Usability & User Studies Committee. The U&US committee was created in 2005, and currently has 8 members. To date, this group's focus has been to promote and facilitate usability within the library. This group: Consults with staff on usability methods and needs. Facilitates usability projects throughout the library. Performs priority usability activities. Analyzes, interprets, and reports on data collected in usability activities. Provides training through priority usability projects. Has provided other training opportunities by reporting on its work and by inviting guest speakers. U&US has been collaborating with the IRB, and may work with the usability group in Cornell's IT department. Other general information: CUL conducts LibQUAL+TM periodically, centrally. Each subject library determines needs and assessment approaches independently. Project-based assessments are conducted on-demand by RAU based on priority. Annual statistics collected/compiled centrally from units."
- "Develops programmatic, strategic, and sustainable approach to library assessment activities."
- "Manages institutional data repository and development of same. Collaborates with library central IT unit on repository architecture and data structures. Manages development of report writing applications as part of MIS program. Point of contact for IRB. Liaises with university's department of planning and analysis."
- "The 'Evaluation and Analysis' unit is part of the Organizational Services department. Organizational Services provides 'back office' services to both the library and the 'Computing and Communications Services' unit. Thus, 'Evaluation & Analysis' also serves the computing unit on campus."

8. Does this position or group collaborate on assessment activities with other non-library departments, agencies, or units within the institution? N=49

		Yes		
	N	#	%	
Part-time Assessment Coordinator	13	9	69%	
Standing Assessment Committee/Team	12	5	42%	
Full-time Assessment Coordinator	11	8	73%	
Assessment Department/Unit	9	8	89%	
Ad hoc Assessment Committee/Team	4	3	75%	

If yes, please list the department(s), agency, or unit(s). N=49

#### Part-time Assessment Coordinator

- "Budget Office, Government Affairs, Foundation and Government Grants."
- "Have had the opportunity to work with one academic department on a survey this year. (School of International and Public Affairs.)"
- "Human Resources, Office of Affirmative Action and Diversity Programs, Council on the Status of Women."
- "Institutional Planning and Budgeting share relevant assessment analyses; Libraries provide library-related information to IPB for university-wide surveys; Libraries coordinate running of LibQUAL+<sup>TM</sup> not to conflict with a graduate student survey run by IPB in same term."
- "Provost's office often requests data for higher ed surveys."
- "Research, Planning and Institutional Effectiveness."
- "University administration provides statistical reports and participates in accreditation data-gathering."
- "University Administration, especially for accreditation; academic departments, especially those undergoing certification and accreditation."
- "University Planning and Analysis."

## **Standing Assessment Committee/Team**

- "Academic Affairs, Advancement, Institutional Research, Washington Research Library Consortium."
- "Office of Information Technology. Educational Testing Center, Statistical Consulting Service, Registrar's Office."
- "Office of Institutional Research."
- "Primarily data exchange with the Office of Institutional Research."
- "Statistical analysis."

#### **Full-time Assessment Coordinator**

"At the university, Libraries and Informational Technology are integrated. This position reports directly to the Vice Provost for Information Services and is also responsible for coordinating the same assessment activities in IT. The position collaborates with the university's Office of Institutional Research and Planning."

"Auditing, Student Life, University Communications, Southern University Libraries."

"Institutional Planning and Assessment, Center for Teaching and Learning."

"Office of Institutional Research."

"Office of Institutional Research & Assessment."

"The Assessment Officer is a member of the University Assessment Committee."

"University office of Institutional Research, Office of Assessment."

## **Assessment Department/Unit**

"Center for Teaching Advancement and Assessment Research, Assessment Council Office of Institutional Research and Academic Planning, Various assessment committees working on self-study for 2008 reaccreditation."

"Computing and Communications Services as well as the university's 'analysis and planning' unit."

"Office of Educational Assessment; Office of Learning Technologies."

"Office of Institutional Planning and Analysis, individual faculty."

"RAU will also collaborate with our office of institutional research, IRB, Survey Research Institute and other appropriate units."

"University Assessment and Testing."

"University Institutional Assessment and Studies."

## Ad hoc Assessment Committee/Team

"Office of Institutional Research."

"Planning & Institutional Research."

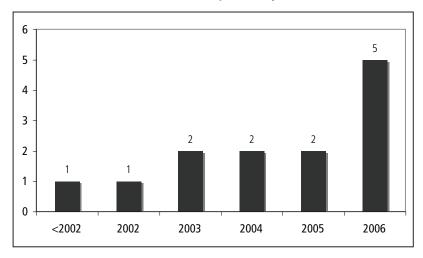
"University Committee on Assessment & Institutional Improvement. The Library Director chairs the Sub-Committee on 'University Community Experience.'"

## **Part-time Assessment Coordinator**

 Please provide the following information about the part-time assessment coordinator: position title, year position took on assessment responsibility, by how many reporting levels the parttime assessment coordinator is removed from the library director (e.g., Director > Dept Head > Assessment Coordinator = 2). N=13

Position Title	Year	Reporting Levels
Director for Planning and Research	1995	2
Training, Assessment & Statistics Coordinator	2002	2
Associate University Librarian	2003	1
Special Assistant to the Director for Programs	2003	1
Coordinator of Assessment & Staff Development	2004	1
Director, Access Services	2004	2
Assessment Librarian	2005	2
Deputy University Librarian	2005	1
Assistant Dean	2006	1
Associate Dean for Organizational Development	2006	1
Coordinator of Assessment	2006	2
Program Coordinator	2006	1
Program Coordinator for Marketing and Assessment	2006	3

## Year Position Took on Assessment Responsibility



## **Reporting Levels**

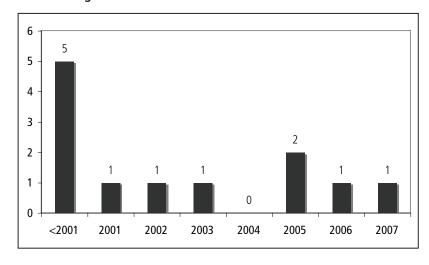
One level	7	54%
Two levels	5	38%
Three levels	1	8%

## **Standing Assessment Committee/Team**

10. Please provide the following information about the standing assessment committee/team: name of standing committee/team, position title of standing committee/team leader, year standing committee/team was created, number of standing committee/team members. N=12

Name of Standing Committee/Team	Position Title of Leader	Created	Members
The Administrative Group plus the Manager of Staff Technology Training & Development and Strategic Planning	University Librarian	1984	6 to 8
Community Needs Assessment Committee	Current team leader is Head, Information Services & Resources Department	1995	7
User Feedback Committee	Co-chaired by reference librarian and collection development librarian	1995	8
USER Team	Director, Collections Services	1997	5
Assessment Working Group	Varies; chair is elected	1998	9
Assessment Committee	Assistant to the Director	2001	12
Assessment Committee	History and Area Studies Librarian	2002	8
Library Assessment Task Force	Manager, Circulation Services	2003	5
Library Services Assessment Committee	Associate Dean	2005	6
University Libraries Assessment Team	Director, Library Resource Management	2005	3
Assessment Committee	Department Chair	2006	6
Library Assessment Working Group	Chair	2007	6

## **Year Standing Committee/Team Was Created**

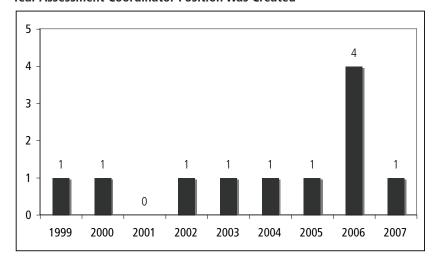


## **Full-time Assessment Coordinator**

11. Please provide the following information about the full-time assessment coordinator. Position title, year position was created, by how many reporting levels is the full-time assessment coordinator removed from the library director? (e.g., Director > Dept Head > Assessment Coordinator = 2) N=11

Position Title	Created	Reporting Levels
Assessment Coordinator	1999	1
Process Improvement Specialist	2000	2
Staff Development Librarian	2002	2
Director of Assessment and Outreach	2003	1
Assessment Librarian	2004	1
Library Assessment Coordinator	2005	2
Director of Planning, Assessment, and Research	2006	1
Associate Dean for Assessment, Personnel and Research	2006	1
Senior Program Office for Research & Analysis	2006	2
Assessment Officer	2006	1
Assessment & Public Services Librarian	March 2007	2

## **Year Assessment Coordinator Position Was Created**



## **Reporting Levels**

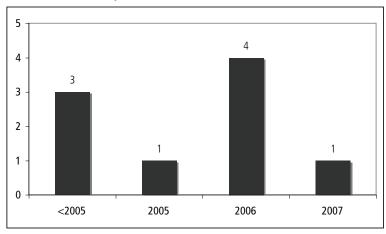
One level	6	55%
Two levels	5	45%

## **Assessment Department/Unit**

12. Please provide the following information about the assessment department/unit. Name of department/unit, position title of department head, year department/unit was created, number of staff in the department/unit, by how many reporting levels is the department/unit head removed from the library director? (e.g., Director> Dept Head>Assessment Department/Unit Head = 2). N=9

Name of Department/Unit	Department Head	Staff	Created	Levels
Evaluation & Analysis	Manager	1.5 FTE	2000	2
Direction générale – communications	Adjointe au directeur général	4	2000	1
Management Information Services	Director	3	2000	2
Dean's Office	Associate Dean for Planning & Assessment	2	2005	1
Research & Assessment Unit	Director of Service Innovations & Resource Planning	3.2 devoted to assessment	2006	2
Management Information Services and Communication	Assistant Director	2.75 FTE	2006	1
Planning and Organizational Research	Associate University Librarian	2	2006	1
Office of Assessment & Planning	Director of Assessment & Planning	1.5 FTE	2006	2
Assessment	Head of Access Services and Assessment	2	2007	2

## **Year Assessment Department/Unit Was Created**



## **Reporting Levels**

One level	4	44%
Two levels	5	56%

#### Ad hoc Assessment Committee/Team

13. Please provide the following information about the ad hoc assessment committee/team:

Name of ad hoc committee/team, position title of ad hoc committee/team leader, year ad hoc committee/team was created, number of ad hoc committee/team members. N=4

Name of Committee/Team	Committee/Team Leader	Created	Members
Assessment Team	Director	2002	3
Assessment Committee	Engineering Reference Librarians	2004	6
LibQUAL+™ User Assessment Group	Department Leader, Administrative Services	2006	6
Assessment Committee	Director, Access, Information & Research Services	2007	8

## **Other Assessment Activities Organization**

14. Please briefly describe the organization of assessment activities in your library. N=21

"All ad hoc and as needed."

"Assessment activities have been initiated, conducted, and coordinated at the unit or department level, or by a committee charged for a specific project."

"Assessment efforts have been coordinated through a combination of participants: Library Administration, an Assessment Committee, and a part-time Statistical Data and Assessment Specialist."

"Assessment in the University Libraries is currently distributed among a number of individuals, departments, committees, and task forces. Assessment activities are currently being examined and/or conducted by the: Statistics, Metrics, and Survey Development Committee and subcommittees; the Public Services Committees and associated task forces; and the Collections Committee and associated task forces. The groups communicate with each other regularly."

"Assessment is generally done at the unit/function level. For large-scale assessment efforts such as LibQUAL+TM, an ad hoc committee has been appointed."

"Assessment is generally undertaken by a unit within the library, such as the Web Services Group, and has a particular focus. At times, an ad hoc committee is formed for an overarching assessment project."

"Assessment occurs largely in a decentralized way. Individual libraries or organizational units initiate activities. Several system-wide activities have been done—two rounds of LibQUAL+TM, a time/cost study, Web usability. These have been overseen by individual ad hoc committees created for that purpose."

"Associate Dean for Research & Access oversees the Biennial LibQUAL+TM Survey and any other surveys conducted. A Usability Studies Task Force, reporting to the e-Library Oversight Committee, plans and

implements usability testing for the library Web site, online catalog, etc."

"Combination of: newly formed User Feedback Committee (est. 2007); individual with responsibility for managing and reporting ARL, institutional, and other library-wide data; and ad hoc activity by individuals, groups, and units, as appropriate."

"Information Access and Delivery Service Department is responsible for collection of data within the department the organization and presentation of the data."

"Leadership of library-wide assessment activities is at the administrative level Director/Assistant Director. Leadership of library instruction related assessment is at the department level. Leadership of Web site assessment is as the Assistant Director level. Leadership related to multimedia needs was assessed by the Assistant Director for Library Public Services."

"Oversight for assessment is the responsibility of the associate dean for planning and administration. Under consideration is a half-time position of evaluation and assessment librarian, reporting to this associate dean."

"Participated in LibQUAL+TM Survey January 2007 for the first time. Other: ad hoc, periodic reviews for specific purposes. Assessment Librarian position is currently at job description stage. ARL and other statistics: coordinated by Statistics Coordinator (now Assessment Librarian). Teams (subcommittees) are being formed to assist Assessment Librarian with various tasks."

"Program managers (aka department heads) are expected to have assessment skills & experience to evaluate the success of their services, operations and projects."

"Statistical compilations coordinated by Administrative Office. Focus groups, usability studies surveys designed and implemented by the specific public service group responsible."

"The Assistant to the Dean of Libraries handles assessment, particularly LibQUAL+<sup>TM</sup> on a part-time basis. A reference librarian does a considerable amount of LibQUAL+<sup>TM</sup> data analysis and benchmarking. The Associate Director and other library staff have done numerous focus groups over the years, particularly as they relate to facilities and library as place."

"There is a Usability Librarian, others in collections and public services as well as department libraries who conduct assessments, also consultants brought in to conduct university and library surveys [especially in HR activities]."

"Two part time assessment librarians reporting to the director. (We also have an assessment committee.)"

"Various committees (and ad hoc task groups) and various library departments determine and carry out own assessment activities. Some assessment activities are library wide and coordinated by admin of library."

"Very minor other than LibQUAL+TM."

"We are just establishing central roles for assessment. Individual departments have done various assessments. Statistics reporting is being centralized in the Administrative Office."

## **ASSESSMENT RESULTS DISTRIBUTION**

15. What methods are used to distribute data/analysis/results of library assessment activities? Check all that apply. N=69

	N	To Library Staff	To Parent Institution	To General Public	Not Used
Presentations	66	58	32	11	2
Print reports (e.g., annual report)	65	49	39	18	8
Web site	65	56	40	39	5
E-mail announcements	64	58	16	4	6
Library newsletter articles	62	45	35	27	11
Campus newsletter articles	59	16	31	14	24
Other	12	4	_	_	8

## Please specify other distribution method(s).

<sup>&</sup>quot;Attend departmental meetings to report on assessment results."

<sup>&</sup>quot;In the recent past formal reports on assessment have not been developed exclusively for the 'parent organization,' staff, users or public, but rather recently have been included in internal administrative reports. LibQUAL +® results have been provided to staff via presentations and brief articles describing outcomes have been reported in campus newspaper/e-news outlets. Currently an assessment and evaluation Web site is under development for internal resource purposes."

<sup>&</sup>quot;Our basic statistical data is accessible through our library Web site."

<sup>&</sup>quot;Presentations at professional library meetings."

<sup>&</sup>quot;Staff intranet site."

<sup>&</sup>quot;The Libraries use a central announcements blog which is available as an RSS feed to any subscribers. Library liaisons to academic departments also share selected assessment information with their assigned departments."

<sup>&</sup>quot;To the profession through presentations and publications."

<sup>&</sup>quot;WIKI. Annual budget submission includes annual assessment highlights."

# 16. If your library has either a staff-only or publicly accessible library assessment Web site, please indicate which kind of information is published there. Check all that apply. N=58

	N	Staff-only Web site	Publicly accessible Web site
General library statistics	54	40	31
Analysis of assessment activity results	49	36	27
Presentations	40	30	18
Assessment data	39	32	16
Publications	34	20	25
Online assessment tools (e.g., surveys)	31	26	12
Links to other library assessment sites or information	30	22	13
Other	5	4	2

Please specify other information that is published on the staff-only Web site.

<sup>&</sup>quot;A bibliography of assessment resources, and a white paper on the library as place."

<sup>&</sup>quot;Assessment group meeting notes and agendas; Working documents."

<sup>&</sup>quot;Individual comments from USER surveys are on staff-only Web site. Comments gathered from our online comments link as well as comments gathered from our comments boxes are on staff-only Web site."

<sup>&</sup>quot;LibOUAL+TM results."

<sup>&</sup>quot;Links to internal department stats and assessment committee membership and contact info."

<sup>&</sup>quot;List of user focused assessment projects in progress and completed; list of staff focused assessment projects in progress and completed; Assessment Committee Plan (aligned with the libraries' strategic plan); notes of Assessment Committee meetings."

<sup>&</sup>quot;Minutes of Assessment team meetings, form and procedures for staff to submit ideas for assessment activities."

<sup>&</sup>quot;Minutes of meetings, annual reports, assessment inventory."

<sup>&</sup>quot;Reports conducted by external evaluators; guidelines for statistics collection."

<sup>&</sup>quot;The library assessment plan."

<sup>&</sup>quot;The staff-only Web site is currently under construction but the intended content, initially, will centrally communicate: the status of assessment initiatives, calendar planned projects, report outcomes, identify working groups/committees, identify administrative priorities, and include reading resources organized by functional areas."

Please specify other information that is published on the publicly accessible Web site.

- "Annual Report (ARL rankings); Strategic Planning Metrics."
- "Assessment committee membership and contact info."
- "LibQUAL+TM results. Lists of specific actions taken in response to user suggestions and assessment data."
- "Meeting Minutes, Committee Annual Reports."
- "Terms of reference, membership, minutes, suggested readings, project form."
- "The library assessment plan."

## **ASSESSMENT OUTCOMES**

17. Please describe up to three demonstrable outcomes that have been made to your library's programs, policies, or services based on information collected via assessment activities. N=64

## Respondent 1

- "2006 LibQUAL+™ data motivated OSUL to become a development partner with OCLC for WorldCatLocal as a potential replacement for local OPAC."
- "2006 LibQUAL+™ data motivated the change from title to keyword as default OPAC search."

## Respondent 2

- "A library expansion project was moved up on the campus master plan due to recent facilities' studies which have shown that our main library and our remote storage facility are at 95% capacity and that we will be completely out of shelf space for library collections in 2009."
- "Improved delivery of Instant Messaging service to library patrons based on surveys of staff providing the service."
- "Increased hours of operation during winter intersession with minor budget implications. The need was conveyed from students in focus groups."

## Respondent 3

- "A strong user-centered focus in all our initiatives and services."
- "Changing of hours in response to LibQUAL+TM data; had immediate results in terms of satisfaction of users."
- "Aggressive e-resources collection development."

## Respondent 4

- "Acquired and made available federated searching for subscribed databases."
- "Cancelled low and retained high use databases and journal packages."
- "Revamped brochures and established a marketing team."

## Respondent 5

- "Additional custodial staff assigned to Western Libraries."
- "Major renovations funded by the University to increase user-designated space to accommodate increased undergraduate enrollment."
- "Purchases made in response to requests."

## Respondent 6

- "Addressed problems with ILL fill rates and turn around times."
- "Improved design and ease of use of library Web site."
- "Improved design and ease of use of library online catalog."

## Respondent 7

- "Adopted measurable methods to assess student learning."
- "Library became involved in planning and implementing the Freshmen Experience with extensive information component."
- "Quality of service survey informed management of service points in need of improvement."

#### Respondent 8

- "Advocacy for renovating outdated library spaces using the results of the LibQUAL+<sup>TM</sup> survey. Library users gave it a very high priority, and made many negative comments about existing facilities."
- "Journal cancellations and additions resulting from a faculty survey."
- 'Redesigned library Web site and new library catalog incorporated usability testing results and user feedback. Also included a change to a new chat reference product."

## Respondent 9

"Assessment of faculty and student needs related to use of the multimedia resources and facilities included surveys, focus groups and interviews, and resulted in the planning and implementation of a very successful 15,000 square foot Student Multimedia Design Center in 2007 which has been widely praised by faculty and

students for its design and functionality and resulting in a heavily used facility."

"Assessment of the library Web site is currently underway and has involved surveys, focus groups, web usability studies and interviews, and the results so far have resulted in many new ideas for the revised Web site to be developed in 2007/2008."

## Respondent 10

"Attempts to 'calm' the physical environment of the library in terms of noise/food/inappropriate behavior."

"Experimentation, as funding became available, with 24/5 hours for the main research library."

## Respondent 11

"Based on LibQUAL+TM results we decided to stay open 24/7 during dead week and finals week."

"Based on benchmarking selected ARL statistics data against comparator institutions we received a budget increase from the University Administration."

"Our Organizational Climate survey produced a staff development needs assessment; weekly reports from the library administration published in the staff bulletin; department heads attending a 'Strategies for Change' workshop; and a re-structuring of the student employment budget."

## Respondent 12

"Based on user satisfaction survey responses a program for customer service training was implemented for training library staff and student employees."

"Based on responses to an organizational culture survey, the internal staff Web site is being moved to a content management site and is going through a complete overhaul with new rules and guidelines for department/unit sites."

"For years our user community has been asking for the ability to use institutional ID cards that link to money accounts to pay for copies and printing. We worked with the copy & print vendors to come up with software to make it possible and will be implementing this change this summer."

## Respondent 13

"Better Web site design."

"Identification of strategic initiatives within current strategic plan."

"Improvement to photocopy services."

## Respondent 14

"Changed approval plan vendor based on evaluation of profile, return rates, and focus groups with selectors. Improved efficiency of approval plan process to allow for purchase of shelf-ready materials."

"Assessment of budgeting process has led to a built-in replacement cycle for the library's computer equipment."

"Evaluation of software used for instant messaging in virtual reference led to a change from one system to another, more popular and commonly used program. This has led to a real increase in the usage of our chat reference service."

#### Respondent 15

- "Changed library hours based on gate counts and student feedback."
- "Increasing expenditures for electronic resources based on LibQUAL+TM findings."
- "Redesigning the library Web site based on LibQUAL+TM comments."

## Respondent 16

- "Coffee shop created in 24-hour study lounge."
- "Increases in fundraising and number of donors; and heightened campus awareness of library."
- "Increased attention to service quality."

#### Respondent 17

- "Collapsed six service points on entry-level floor of main library to two based on input gathered from assessment activities, asking to simplify user experience."
- "Added cafe to entry level of main library based on user input gathered from assessment activities."
- "Placed group study rooms on online reservation system based on user input from assessment activities."

## Respondent 18

- "Currently redesigning public Web pages based on user survey feedback."
- "Currently investigating improvements to OPAC based on user survey feedback."
- "Currently providing free document delivery based on a combination of user feedback, and results from a survey of peer institutions."

#### Respondent 19

- "Customer Service Academies were held for both professional and paraprofessional staff. A regular program of customer service training was also established for the student assistants working in the library."
- "Our Interlibrary Loan Department was reorganized to improve customer service. A program to Buy-not-Borrow certain returnable (i.e., book) requests was established to provide such materials more rapidly."
- "The University Libraries' Web site was completely redesigned to allow greater ease of use and accessibility."

## Respondent 20

- "Development and implementation of service training workshops for library staff and student employees."
- "Improvements to library Web site, digital publishing, and presentation of electronic resources."
- "Development of plans for renovation to and services in Undergraduate Library."

#### Respondent 21

- "Development of the Assessment Librarian position for the purpose of developing and advancing assessment initiatives that inform library administrative decisions on collection resources, public service and related issues."
- "Development of the 'Reference Management Taskforce' (RMT) as a result of the Reference Service Delivery User Survey in 2005. The RMT works to coordinate service related initiatives, facilitate dialogue among campus reference librarians, and identify public service goals and priorities that inform library administration. The survey facilitated the selection of a new virtual IM/Chat reference software and efforts to revise the current reference service staffing model."
- "One of the campus libraries used a product Clicker Response System from E-Instruction to collect user data in library instruction sessions. The tool was used in about 40 instruction sessions over the course of a semester. The system of the clicker software was used to receive immediate feedback in class as to the percentage of students that answered questions correctly, incorrectly, or were unsure. The feedback within the class was used to inform the content of the class (go over the concept again or move on to new concepts). The accumulated data from all sessions after the semester was used to identify and prioritize difficult concepts for students and work with faculty and students to find teaching and learning solutions."

## Respondent 22

- "E-journal subscription decisions based on use and cost analysis. Cancellation of print materials after use study."
- "Learning Commons development largely informed by multiple assessment activities. Choices about furniture, technology, and hours were all shaped by iterative assessment efforts."
- "Stack and Circulation statistics shaped decisions about off-site storage of materials."

## Respondent 23

- "Enhancements to role of library liaisons. This came about when focus group data indicated faculty was looking for improved communication and a closer working relationship."
- "Identification of quiet study areas within the library as a result of comments from LibQUAL+™ survey."
- "Changes in assignment of study carrels based on LibQUAL+™ and focus group data indicating a need for more individual study areas."

## Respondent 24

"Established an Information Commons for collaborative learning, which success has resulted in expanding the commons to satellite locations throughout the library."

"From the results of a collaborative study on library usage, casual study areas were enhanced, the number of public workstations were doubled, and application software was installed to match the suite used in general-purpose university computer labs."

"Web usability studies have resulted in a simplified Web site design to reflect patron usage patterns, improved access to databases and other electronic resources, and the creation of a usability center to coordinate and conduct usability studies for the library and university."

## Respondent 25

"Extended hours (user survey)."

"Adjusted workday reference desk hours (monitored statistics for a period)."

"Installation of a RFID security system (feedback from every assessment activity ever conducted, regardless of the topic)."

## Respondent 26

"Extended library hours and new faculty communications vehicles as a result of LibQUAL+TM survey results."

## Respondent 27

"Extended opening hours during exam periods."

"Participated in consortium virtual reference program. This evolved from an in-house service."

"Expansion of outreach activities: e.g., instruction program for faculty/students in academic departments' facilities; other liaison activities."

## Respondent 28

"Extended service hours and expanded customer service training to better meet user needs."

"Increases in productivity and in cost savings."

"Improved design and content of Web site."

## Respondent 29

"Facilities Renovation Plan."

"Public Services Competencies Development & Training."

"Improved access to online resources and assessment of library's Web site."

## Respondent 30

"Focus group discussions with students have convinced us to do some renovations differently than originally conceived."

"Learning from survey results that good students were heavily unaware of liaison librarians, caused us to put more energy into reaching out to grad students."

"Decision to purchase or cancel subscriptions is partly based on usage stats."

## Respondent 31

"Geology Library Renovation Survey: Questionnaire designed to inform decisions regarding study space needs of faculty and graduate students in the Geology and Geoscience departments. Results informed decisions regarding purchase of soft seating and study table size and location within the library. Also, graduate students repeatedly requested that lockers be made available, as they travel between two campuses. We were able to include lockers in the renovation, and were otherwise not intending to."

"Virtual Reference Assessment: Analyzed 5 years worth of chat and e-mail reference transactions. The following recommendations were acted upon, more are forthcoming: Cancel contract with Live Assistance Chat, switch to commercial IM (Meebo). Staffing of chat reference services was adjusted slightly, based on the distribution of subject areas of the questions asked. Staffing of CUL Suggestions (online suggestion box) was rotated, due to one division having staffed it for 5+ years. E-mail management system is on order to manage e-mail transactions from the public Web sites. Access Services and Reference Services are partnering. More assessment: Phase II of Virtual Reference Assessment will gather user input to inform further decisions about the structure of reference services (i.e., centralized vs. subject specific)."

"Document Delivery Benchmarking Survey: This survey was sent to peer institutions, inquiring about their current document delivery services and the planning processes for establishing these services. Cost was also addressed. Clarified the need for the Shipping Department to join Access Services in support of campus-wide delivery programs. Shipping joined Access in June 2007."

## Respondent 32

"Help budget planning/justification."

"Data used in library marketing and communications."

## Respondent 33

"Identification of priority services."

"Identification of facilities problems."

"Identification of quality of service to users."

## Respondent 34

- "Implementation of Customer Service program for Information Access staff."
- "Shifting staff resources."
- "Increase funding for Interlibrary Loan borrowing."

## Respondent 35

- "Improved service to users by increasing maintenance of equipment such as photocopy machines and increasing availability of public computers."
- "Improved service to users by offering access to computer software such as Microsoft Office on public computers."
- "Improved service to users by providing MyLibrary portal, RSS feeds, and integrating resources with campus courseware."

## Respondent 36

- "Improved signage to help students better navigate through the Main Library."
- "Extended library hours and additional staff."
- "Completely revamped library Web site to make navigation easier, resources more transparent, and functionality more intuitive."

## Respondent 37

- "Improved turnaround time for acquiring new books requested by users."
- "Redefined collection development (disbanded department, reduced foreign language acquisitions, added copies of high use items, funded transition from print to e-journals, etc)."
- "Improved speed and accuracy of shelving."

## Respondent 38

- "Improved procedures and processes for requesting and delivering print materials from storage facility."
- "Revisions/improvements to libraries catalog and Web site."
- "Program improvements to Libraries Open House based on participant feedback in exit survey."

## Respondent 39

"In spring 2007 the library implemented longer hours as a result of information collected in a LibQUAL+™ survey earlier in the academic year."

"Two departmental libraries were closed based on information from surveys and statistics gathering."

"Based on feedback from library users, the library decided to open its electronic classroom as a computer lab when classes were not scheduled."

#### Respondent 40

"Increase in library open hours."

"Revision of the OPAC user interface."

"Additional training opportunities for library faculty and staff."

#### Respondent 41

"Intensive customer service training as a result of LibQUAL+TM Affect of Service results and improvement in scores on next survey."

"Process improvement in circulation and shelving based on survey results changes procedures for checking in materials."

"Purchased library materials in specific subject areas based on results of interviews with faculty and focus group discussions with graduate students."

#### Respondent 42

"Justified improving endowed librarian salaries."

"Extended library service hours."

"Constructed additional storage units to shift a larger percentage of collections off campus (while increasing document delivery services)."

#### Respondent 43

"Leadership changes based on results of staff surveys."

"Collection activities based on results of faculty surveys."

#### Respondent 44

"Major e-Library redesign project (i.e., library Web site)."

"Increased emphasis, in the library's instructional programs, on evaluating information resources, and distinguishing between trustworthy and untrustworthy information."

"Very specific improvements to physical facilities (e.g., improved lighting in stairwells, etc.)"

### Respondent 45

"Move to electronic only format for most scholarly journals."

"Creation of regional library service."

"Develop prototype data curation systems that support needs across a range of disciplines: Virtual Observatory; Roman de la Rose; and Dry Valleys in Antarctica."

#### Respondent 46

"None."

"None."

"None."

#### Respondent 47

"Number of user stations increased due to accreditation recommendation and later assessment."

"1995 user survey influenced design/equipment in building expansion project."

"Collection decisions are made based on usability in many cases."

## Respondent 48

"Re/allocation of resources (including changes to staffing numbers and patterns)."

"User-oriented redesign of library Web site."

"Increase in outreach efforts by librarians."

#### Respondent 49

"Replaced online catalog system with a new one."

"Started online reference services."

"Initiated self-service checkout and other self-service activities; improved photocopying by buying new equipment and making it easier to debit charges for copies."

#### Respondent 50

"Revised building hours."

# Respondent 51

"Revision of library's public Web site."

- "Revision of reference staffing needs."
- "Revision of digital library interface."

#### Respondent 52

- "Routinely make adjustments to library subscriptions based on use statistics."
- "Reconfigured the libraries' Web site based on user surveys and focus groups."
- "Added positions in a liaison area based on interviews with colleges' administrators."

### Respondent 53

- "Selective reduction in journal subscriptions based on analysis of usage."
- "Redesign of library Web site resulting from usability studies."
- "Expansion of laptop loan service based on analysis of usage statistics."

#### Respondent 54

- "Service quality improvements through better training and related goal setting."
- "Process improvements in circulation and re-shelving."
- "Adding more computers and software to meet user requests."

#### Respondent 55

- "Significant modifications to library Web site design and functions."
- "Changes in collection development budgeting process, also extensive modifications to quality control in and management of stack operations."
- "Awarding of grants to certain discipline-based library programs."

#### Respondent 56

- "Space improvements."
- "Web and catalog redesigns."
- "Emphasis on instructional services."

# Respondent 57

"The library has made considerable facilities improvements based on LibQUAL+™ data and focus groups. The creation of two Commons areas has been greatly informed and facilitated by the assessment that has been

done."

"The library's Web site modifications and improvements have been informed by LibQUAL+™, an outside consultant, and in-house usability testing that we've done over the last two years."

"The library periodically (most recent are 2000, 2004, 2006) does a Serials Review using a variety of factors including price, inflation rates, local use, availability at other local libraries or electronically through consortia agreements, ISI Impact Factors and ranking in relevant disciplines. Faculty input is an important facet of this process. This assessment is done in order to provide the best collections and resources to meet the needs our constituents."

#### Respondent 58

"The library introduced staff recognition programs to address workplace concerns identified in the Library Employee Opinion Survey."

"The library's Web page was refined/improved based on input from usability studies and focus groups."

"The library's ILL service was modified to remove barriers to access based on user survey."

#### Respondent 59

"The redesign of the libraries' Web site and the improvement of the OPAC."

"The closing and remodeling of branch libraries."

"The expansion of libraries hours."

#### Respondent 60

"Updated and improved library services."

"Increase staff training."

#### Respondent 61

"Upgrading of photocopy and printing facilities."

"Increased funding for technology upgrades."

"Increase funding for collections, both print and electronic."

#### Respondent 62

"We increased hours for the main library from midnight to 2 am during academic terms."

"We created an electronic-preferred journal policy."

"We have reorganized some library departments as a result of assessment efforts."

#### Respondent 63

#### Respondent 64

"Worked with consultants to redesign signage in response to data from a wayfinding study showing that previous finding aids were ineffective."

"Redesigned library carrels and chose new seating based on user surveys responding to model designs and on focus groups on user preferences for study areas."

#### PROFESSIONAL DEVELOPMENT

## 18. Does your library provide assessment training for library staff? N=68

Yes, training is provided by the library	19	28%
Yes, support is given for training provided by our parent institution	22	32%
Yes, support is given for training provided outside of our institution	42	62%
No, there is no particular training provided	20	29%

# 19. If training is provided by the library, what kinds of topics are covered? Check all that apply. N=24

Assessment methods	14	58%
Basic statistics	11	46%
Survey construction	11	46%
Value of assessment	10	42%
Data analysis	9	38%
Data presentation	7	29%
Sampling techniques	6	25%

<sup>&</sup>quot;Web pages have been adjusted based on testing and feedback from students, faculty, and staff."

<sup>&</sup>quot;Access policies have been changed based on feedback from patrons."

<sup>&</sup>quot;Reserves policies and structure have been changed because of faculty needs and changes in technology."

<sup>&</sup>quot;Redesigned library home pages based on user surveys/interviews, Web logs showing heavily used resources, and user feedback on prototypes."

Report writing 3 13%
Other (please specify) 7 29%

20. For each of the following assessment-related professional development events that assessment staff have attended, please indicate whether they would or would not recommend the event to others as a good way to learn and network about assessment. Check "Have Not Attended" if no assessment staff have participated in an event. Check one category in each row. N=67

	N	Would Recommend	Would Not Recommend	Have Not Attended
Library Assessment Conference (e.g., Charlottesville 2006)	66	39	_	27
LibQUAL+® training sessions	66	54	1	11
Northumbria International Conferences on Performance Measurement in Libraries	65	10	1	54
Evidenced-Based Library and Information Practice Conference	64	9	2	53
ARL assessment-related meetings	64	56	—	8
ALA/LAMA sessions/discussion groups on assessment	61	34	1	26
ALA/ACRL sessions/discussion groups on assessment	61	37	3	21
Other	22	14	_	8

<sup>&</sup>quot;COGNOS PowerPlay and Impromptu, which are part of the COGNOS business intelligence software suite."

<sup>&</sup>quot;Data collection, data entry, qualitative software usage (once)."

<sup>&</sup>quot;Focus group techniques."

<sup>&</sup>quot;Focus groups, qualitative software training (NVIVO), Excel."

<sup>&</sup>quot;Human subjects regulations."

<sup>&</sup>quot;University's Planning & Institutional Research department provides consultation/advice services. Other training programs are in preparation, e.g., using the LibQUAL+<sup>TM</sup> survey process as a case study in developing broader expertise."

<sup>&</sup>quot;We are just beginning to provide training to the Assessment team."

# If you selected "Other" above, please specify which other assessment-related professional development event(s) assessment staff have attended. N=14

"ALA LRRT programs at ALA (depending on topic)."

"ALA/ORS sessions. LITA Preconference (and sessions? - usability). NFAIS (online usage statistics)."

"ARL online course, OLA 3-day special course."

"CARL meeting/workshop 2006."

"Creating an Environment of Continuous Assessment: Practical Approaches for Academic Libraries (OCLC Western Workshop)."

"I would also recommend ARL Assessment 'Boot camp,' New Orleans 2007. Re: Negative response for LibQUAL+<sup>TM</sup> Training Sessions: I attended one not sponsored by ARL, I believe it was NYLINK, and it was not helpful unless you've really not had any experience or knowledge of LibQUAL+<sup>TM</sup>. The presenters did not seem to have mastered the subject matter."

"In the Canadian/Ontario context: sessions at Ontario Library Association Super Conference and the Canadian Library Association Conference. Education Institute (OLA): audio conference sessions on research policies, issues, and methodologies. Also, ARL's online course: Measuring Library Service Quality with Danuta Nitecki and Toni Olshen."

"LibQUAL+™ Canada 2007 Workshop."

"Living the Future conferences (University of Arizona & ARL)."

"Meetings of local institutions conducting assessment undertaken as a follow-up to ARL Assessment Conference."

"Non-library national/regional assessment conferences and workshops."

"Sessions presented as part of the annual Ontario Library Association conference."

"State-wide assessment workshop for academic librarians."

"Web-based seminars and conferences."

# 21. Please describe any professional development needs that assessment staff at your library have that are not being met by the events above. N=15

"Basic statistics, data analysis, data presentation, survey construction, sampling techniques, focus group administration."

"Basic survey and focus group techniques, data analysis techniques, best practices on pre and post assessment communications."

"Basics of understanding data and data analysis."

"Classes in statistics and survey design."

"General overview of statistical analysis of data."

"I would greatly appreciate a listserv for assessment staff for the benefit of information sharing, communicating, partnering, and peer group support."

"In-house training on statistical methods, specific tools, e.g., atlas .ti, SPSS, etc."

"More practical instruction on how to formulate survey and interview questions. There's a lot of discussion about do's and don'ts, but no opportunity to learn in a collaborative, hands on environment. I'd like to have someone critique the questions I write."

"One of the primary challenges related to assessment is educating staff about its value and the need for it in the current climate. Many staff view it as an intrusion and a threat. Changing the culture is very challenging."

"Only Northumbria and the Library Assessment Conference provide consistent educational and networking opportunities. Northumbria is often impossible to attend; LAC has only had one conference. The various meetings at ALA (LAMA, ACRL, ARL) are scattered and uncoordinated, sometimes even scheduled over each other. There are very few \_sessions\_ on assessment. There seems to be no one place that people doing assessment (in any size library) can turn for support and education."

"Practical level assessment training for staff at all levels of the library. When you don't have an expert on staff where do you begin with assessment."

"Survey writing skills."

"Tailored training for implementing learned skills into institutional reality. Public presentation of results."

"The Assessment Officer intends to enroll in statistics and research courses in our College of Education to gain a more thorough grounding in statistics and assessment methodology."

"We had consultants come in for two-day session but might be useful to have extensive, affordable consulting that helped derive a plan when staffing is limited to do assessment."

# **CULTURE OF ASSESSMENT AT YOUR LIBRARY**

# 22. Please rate your agreement with the following statements on a scale of 1 to 5 where 1 is strongly disagree and 5 is strongly agree. N=68

(Adapted from "Culture of Assessment I.Q. (Institutional Quotient)" by Betsy Wilson, University of Washington.)

	N	1 Strongly Disagree	2	3	4	5 Strongly Agree
Assessment is evident in our library planning documents such as the strategic plan	67	1	8	8	20	30
Library administrators are committed to supporting assessment	68	1	5	8	25	29
Assessment results are used to improve my library	68	2	3	11	28	24
Assessment is a library priority	68	1	7	14	25	21
My library evaluates its operations and programs for service quality	68	1	5	13	28	21
My library has local assessment resources and experts	68	2	12	20	25	9
Staff accepts responsibility for assessment activities	68	3	8	36	17	4
There is support and/or rewards for staff who engage in assessment activities	67	6	13	19	25	4
Staff have the necessary assessment expertise and skills	68	2	23	30	10	3
Staff development in assessment is adequate	67	5	26	25	9	2

# 23. Does your library have assessment plans for departments/units or a library-wide assessment plan? N=67

Yes, the library has an assessment plan for every department/unit	3	4%
Yes, the library has an assessment plan for some departments/units	13	19%
Yes, the library has a library-wide assessment plan	20	30%
No, the library has no assessment plan	36	54%

## **Selected Comments from Respondents**

- "A library-wide assessment plan will be developed in the 2007–2008 fiscal year."
- "An assessment plan/program is in preparation."
- "As well, assessment is integral to, and included in all work described in the Libraries Workload Committee Report for Librarians/Archivists for the academic year 2007–2008 in the priority areas of Teaching and Learning, Research and Scholarship, Collaboration and Liaison, Collections, and Access."
- "Balanced Scorecard metrics serve, in part, as our assessment plan."
- "Development of an assessment plan may emerge from strategic plan."
- "Just developing a plan for assessment."
- "Many departments include assessment in their individual strategic plans."
- "Responsibility for assessment activities was only formally assigned in the past two months, but creating a library-wide assessment plan is a top priority for the library in the coming year."
- "The Assessment Librarian position has been in existence for approximately 3 months, however an assessment plan for the library system is under development, in addition to the assessment staff resource Web site. The developing assessment plan is a proposal for adoption by the library system."
- "The Information Access and Delivery services department is currently working on an assessment project to inventory what we collect and assess if we are collecting the right data and determining what we not longer need to collect. The group charter also includes determining the 10 highest priority measures."
- "The libraries-wide assessment plan occurs in the form of the annual report of the Office of Assessment & Planning."
- "The library system is currently in the process of further defining and articulating its assessment efforts and plans. Work is in the early stages, and ongoing among a number of individuals and groups."
- "The plan could be more 'formal.'"
- "The writing of a library-wide assessment plan is a priority for the Assessment Officer."
- "This is an area that we are currently developing in a committed way."
- "We are developing a library-wide assessment plan at this time."
- "We are working on an assessment plan tied to our strategic plan."
- "While we have indicated a strong desire for evidence-based decision making, we are still in the process of putting in place the necessary components. We had initiated the LSAC to begin work when it suspended activity while we completed our strategic planning work when our new Dean arrived. We now have key success measures to develop and then we will determine the best way to move forward with LSAC, a different committee structure and mandate, etc."

#### ADDITIONAL COMMENTS

24. Please enter any additional information regarding assessment activities at your library that may assist the authors in accurately analyzing the results of this survey.

"Although primary responsibility for coordination and planning of assessment activities rests with a standing committee, it should be noted that in 2007 the libraries created a full-time assessment position, Library Data Officer, reporting to the Dean of Libraries. Although the position does not have overall responsibility for coordination of assessment activities, it is charged with several of the responsibilities enumerated under questions 8–12; specifically: analyzes, interprets, and reports on data collected in assessment activities; consults with staff on assessment methods and needs; coordinates collection of data across the library; coordinates the reporting/archiving of the library's statistical data; fills requests for library data; performs assessment activities; provides training on assessment topics; and submits external surveys."

"Assessment activities at the seven service locations at Western Libraries are highly distributed. Western Libraries' system-wide assessment activities are coordinated by the Assessment Librarian."

"At our library, we are approaching assessment in a systematic way by first defining the mission of the Research & Assessment Unit. We are contracting a consultant to provide basic assessment training to unit members. We are also conducting a feasibility study for a local data mart to house data we collect."

"Conducted LibQUAL+™ in 2003 and 2006 but have not analyzed the differences yet."

"From 1998–2003, a standing library-wide team was in place to conduct user assessment activities. Since 2004, separate assessment activities have taken place but without library-wide coordination. A library-wide ad hoc committee was established to administer, analyze, and report the 2005 LibQUAL+<sup>TM</sup> survey. That group disbanded after the survey report was completed."

"Many items that were mentioned in this survey are in development stages at our library: data mining and a public Web site for assessment are two major initiatives that are in early planning stages, but will be realized in the near future. As part of the process of developing the CUL Assessment Plan, we conducted a Culture of Assessment IQ Test; the answers provided here are based on that survey. We will conduct this survey again, on tri-annual basis, in line with our planning cycle. We also offer a series of Assessment Forums to invite colleagues into the libraries to present their experiences with assessment to staff, and hopefully inspire some projects."

"Our unit with primary responsibility of assessment was only formed in the past year. We've had a standing assessment group, the Library Assessment Group, which has been in place since 1992: ad hoc 1992–1996 and made ongoing in 1997. This group is made up of 9 members including the two members of the Office of Assessment & Planning and works with the Director of Assessment & Planning on assessment projects and activities."

"The library's current approach to assessment has evolved from an interest group that formed as a subgroup of the library's committee on reference in November 2003. This voluntary group soon expanded to include staff from all library units, and this group evolved from an interest group to a formal 'resource group' in May 2005. This voluntary committee was extremely useful in educating staff about the need for assessment, in generating new activities, and in developing expertise. However, the need for a coordinated and programmatic

approach to assessment become evident, and the Library administration decided to assign responsibility for its assessment activities to an organizational unit in early 2007. An Assessment Director was hired in May 2007."

"This library has put extraordinary effort into building management information structures as necessary components of its assessment mandate. The principal is to empower staff broadly to conduct assessment and own the priority to assess. While the assessment function properly belongs to the full staff, the development of management information resources is the focus of a central department, which also designs and builds tools and provides a level of central coordination. Our goal is to build a scale-able, staff-driven, and user-focused activity of the enterprise."

"Though the Assessment Officer does and will continue to have primary responsibility for coordinating and planning assessment activities, the University Libraries intend to appoint an Assessment Committee to work with him on matters of assessment and statistics gathering/analysis. This committee will also be involved in writing the library-wide assessment plan."

"The library is just beginning this process. January/February 2007: first participated in LibQUAL+™ Survey. January 2007+ Assessment Librarian's position (job description) is under discussion."

"We have recently begun the process of moving to a more systematic and programmatic approach to assessment. Like many institutions, we have undertaken a great deal of ad hoc activity in the past and this is reflected in survey responses, but the contours of a formal assessment program are very much still emerging."

"We intend in the future to increase the use of our statistics (logbook, etc.). We also have a Statistics Committee that coordinates collection of data across the libraries."

#### RESPONDING INSTITUTIONS

University at Albany, SUNY
University of Alberta
University of Louisville
Boston College
University of Manitoba

Boston Public Library University of Massachusetts, Amherst

Brigham Young University
University of British Columbia

Michigan State University

Brown University University of Minnesota
University at Buffalo, SUNY Université de Montréal

University of California, Berkeley
University of Nebraska—Lincoln
University of California, Davis
New York Public Library

University of California, Irvine

University of North Carolina at Chapel Hill

University of California, Los Angeles North Carolina State University

University of California, San Diego
Ohio State University
University of Chicago
University of Colorado at Boulder
Oklahoma State University

Colorado State University

Columbia University

University of Oregon

University of Pennsylvania

University of Connecticut

Pennsylvania State University

Cornell University Purdue University
University of Delaware Rutgers University

Emory University University of Saskatchewan
University of Florida University of Southern California

Florida State University

George Washington University

Georgia Institute of Technology

Syracuse University

University of Tennessee

University of Texas at Austin

University of Guelph University of Utah

University of Hawaii at Manoa Vanderbilt University
University of Houston University of Virginia
Howard University University University of Washington
University of Illinois at Chicago Washington State University

University of Illinois at Urbana-Champaign Washington University in St. Louis

Indiana University BloomingtonUniversity of WaterlooUniversity of IowaWayne State UniversityIowa State UniversityUniversity of Western OntarioJohns Hopkins UniversityUniversity of Wisconsin-Madison

University of Kansas Yale University

Kent State University York University