Transforming the evidence base for effective academic health sciences library services and resources: the readiness of library leaders in the US and Canada

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Introduction

The transformative potential of outcome measures of excellence as tools for evaluating and demonstrating the usefulness and effectiveness of library resources and services has been suggested by library leaders and researchers for decades. One of the early and strongest proponents of this perspective among academic health sciences library leaders was Virginia Holtz, who served as director of the University of Wisconsin Center for Health Sciences Libraries for more than two decades. Her 1986 Janet Doe Lecture at the 86th Annual Meeting of the Medical Library Association in Minneapolis argued that the search for "gold standard" measures of excellence for the profession must necessarily take into account the shared knowledge, values, beliefs and experience of our community of library scholars and practitioners (1).

Holtz, and Nina Matheson, in her now-famous 1982 Report for the Association of American Medical Colleges and the National Library of Medicine (2), also argued that this shared Kuhnian "paradigm" (3) was being dramatically changed as our profession, as well as the creators and users of biomedical information and knowledge, were adapting to new information management technologies and a more nuanced understanding of the role of information in the biomedical sciences and the practice of medicine. They argued that effective measures of excellence would need to take into account a paradigm shift, from our previous shared professional concern with how to organize and manage places called libraries or physical collections of information containers within those organizations, to a new professional focus on how to understand and address the needs and preferences of information users and how to match those needs and preferences with appropriately accessible and usable units of information in a virtually networked global information space.

Holtz briefly suggested a number of potentially more effective new measures such as: ease of access, comprehensiveness of accessible information services and resources, versatility of information management programs, speed of service, effectiveness of education programs for personal information management, cost per unit of information accessed or service used, and degree of information services integration within the goals and programs of the host institution or user community (1, p. 313). However, our profession has been slow and often reluctant to adapt such measures as a new gold standard, despite our current, almost universal acknowledgement that libraries are now just one small part of a global biomedical and health information infrastructure powered by the Internet and World Wide Web.

Previous Work of AAHSL

At the time of Holtz's 1986 Janet Doe Lecture, the *Annual Statistics of Medical School Libraries in the United States and Canada* (4) and their sponsoring organization, the Association of Academic Health Sciences Libraries (AAHSL), had been in place for nearly ten years. As Shedlock and Byrd's 2003 review of the by then 24-year history of those statistics clearly shows (5, 6), AAHSL (which, like the Association of Research Libraries, primarily reflects the views of library directors) has continued to focus this comparative measurement process on descriptive measures of library collections, expenditures, personnel, use of resources and, periodically, demographic measures of the libraries and the populations they serve. For a nine-year period between the 7th and 15th editions of the *Annual Statistics* (1983-1992), the Association did experiment with reporting a few ratio or performance measures, such as: reference transactions per hour, the ratio of expenditure subtotals to totals, expenditures per user, and resource uses or availability per user, but none of these measures rose to the level of Holtz's gold standard or reflected the new paradigm where information per se and information users are central concerns (7, pp. 122-44).

In addition, the primary evaluative metrics implied by these statistics, and emphasized by the rank order tables included for most data elements until the 15th Edition of the *Annual Statistics* (7, pp. 95-121), have been the relative size and scope of the collections, budget, personnel and services provided by each library. This continues to be true, even though by 1993 the AAHSL membership had recognized that rank order tables were of "limited or no value"

when the characteristics of the schools and programs served are so diverse (5, p. 181). Thus, since the elimination of these tables in the 16th edition of the *Annual Statistics* (8), the editors have worked primarily to refine the existing measures and to make them available electronically for member library directors to compare their collections or operations with libraries serving schools they identify as true peers. Also, until very recently, most AAHSL leaders have continued to view the "size of library collections or operations as [an appropriate, if limited] measure of excellence" (5, p. 181).

With the formation of an Outcomes Assessment Committee in 2003, and this committee's merger with the *Annual Statistics* Editorial Board as the Assessment and Statistics Committee in 2005, the AAHSL leadership acknowledged the need for a more focused initiative to reassess the traditional measures included in the *Annual Statistics* and to evaluate potential new measures and strategies for evaluating the quality and effectiveness of the health information resources and services we provide for students, teachers, researchers, clinicians, and the general public. The work of these AAHSL committees, and of a number of earlier task forces charged with providing a framework for strategic planning and self-evaluation, has been informed and shaped by a growing national and international recognition by library, informatics, and health sciences professional groups and government agencies that the quality and effectiveness of professional services need to be evaluated, at least in part, based on measures of the results, outcomes, or impact of those services.

Briefly, the following are some of the key national and international quality and outcomes measurement programs and movements that have informed the work of AAHSL leaders, committees and task forces, as well as these investigators. The Association of Research Libraries' LibQUAL+ [TM] initiative is a suite of evaluation tools and services that many research libraries have been using since 2001 to solicit, track, understand, and act on users' opinions of service quality (9). A cohort of up to 36 AAHSL libraries has participated in the annual LibQUAL+ surveys since 2002. The international Northumbria Conferences have helped to stimulate wide-ranging current research on the development and use of performance measures in libraries and many of the conference papers have informed the work of AAHSL committees and task forces (10, 11). The evidence-based medicine movement, which seeks to apply the research

methods of clinical epidemiology to systematic reviews of published reports of clinical research and then make the results of those reviews readily available to clinicians treating and caring for patients (12, 13), has more recently led to an evidence-based librarianship movement, with strong participation from the international academic health sciences library community (14, 15). That work and the previous EBLIP conferences have also informed the work of AAHSL.

AAHSL's current efforts to understand and begin fostering appropriate use of performance and outcome measures of excellence among its member libraries have also been informed and strengthened by at least three key national strategic planning initiatives. The earliest of these was the integrated advanced information management systems (IAIMS) planning efforts in academic health sciences centers (16) that grew out of the previously-cited Matheson-Cooper Report (2) with funding from the National Library of Medicine starting in the early 1980's and continuing to the present. AAHSL library directors have played key leadership roles in these institution-wide efforts to plan for and implement integrated, managed networks of information systems and resources to deliver convenient and comprehensive access to clinical, research and academic health sciences information.

These IAIMS planning initiatives naturally led to the first AAHSL initiative, in partnership with the Medical Library Association, to investigate strategies for planning and evaluation within academic health sciences libraries. The final Challenge to Action report from this initiative (17) did not suggest specific performance or outcome measures but provided general guidelines and a framework for library strategic planning and self-evaluation. Recognizing the sea changes in technology and in the health care environment that have occurred since that 1987 report, AAHSL created a Charting the Future Task Force in 2001 to create a vision for the future and to help academic health center leaders recognize the potential for their libraries to lead in the strategic management of knowledge resources. The final 2003 report of this task force (18) also shied away from recommending specific performance or outcome measures, focusing instead on descriptive examples of challenges, successful practices, and opportunities for the library to contribute to positive clinical practice, education, research, and community service outcomes in academic health centers.

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<u>Study Questions and Hypotheses</u>

Given all these previous initiatives and the growing number of research reports and efforts by other associations such as ARL, we felt it was time to ask our AAHSL peers about their understanding of, and readiness to undertake a strategic initiative to develop, more specific performance and outcome measures of excellence for academic health sciences libraries. More specifically we wanted to know the extent to which AAHSL member libraries are already using specific performance or outcome measures or contributing to institution-wide outcome measurement efforts. We also wanted to understand the individual and collective willingness of AAHSL library leaders to work on a potential initiative to transform the evidence base for evaluating our library resources and services from measures of inputs and outputs to measures of outcomes. We hypothesized that most AAHSL library leaders would agree that additional outcome measures would be useful to demonstrate the cost effectiveness and quality of our library resources and services. However, we also hypothesized that a minority of these leaders would demonstrate a readiness and willingness to begin systematically collecting the data needed for such measures.

<u>Methods</u>

This study was designed as a Web-based survey of all US and Canadian academic health sciences library leaders participating in the AAHSL email listserv. This listserv currently includes all AAHSL library directors and a large number of other leaders from these libraries at the associate director or department head level. In the email invitations to participate in the survey, we also encouraged library directors to share the invitation with their senior management who were not on the listserv. Thus, we estimate the total potential respondents to have been well over 300 individuals, although the primary population surveyed was the 156 directors of libraries serving US and Canadian allopathic and osteopathic medical schools.

The first invitation to participate in the study was distributed by email to the AAHSL listserv on February 5, 2007, with follow-up email reminders on February 16 and 22. The deadline for responses was set for February 23 and we closed the survey instrument on February 26. The 300-word email invitation to participate in the survey included both an anonymous Web link to the survey instrument and an attached Microsoft Word document version of the survey

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questions to facilitate sharing the questions with staff and thinking about the responses before responding online. The invitation message also included the key study questions, a very brief background statement about previous AAHSL deliberations on this topic, our goal of presenting the results at upcoming meetings, the target population we wanted to respond, and a brief description of the number and type of questions included.

The survey instrument was designed by the investigators using the commercial SurveyMonkey ™ tools (19). The survey questions were drafted, edited and revised over several weeks with the help of senior staff at each of the investigators' libraries and a final draft version of the SurveyMonkey instrument was pre-tested and revised with the help of members of the Assessment and Statistics Committee of AAHSL. The instrument included eight preliminary demographic questions to categorize the responses by the participant's position, age, sex, years of experience as well as by their library's total budget, institutional reporting relationship, and public or private status. The main part of the survey included twelve questions in various formats including: fixed-choice ratings of specific types of potential outcome measures and of statements about such measures; five-point Likert scale questions to categorize the level of agreement or disagreement with statements about such measures; and questions with multiple-choice response options, structured to permit either more than one choice or just one. Many questions provided an open-ended "other" choice option or included a second part asking the respondent to describe other possible choices not included in the main question. The survey concluded with an invitation to provide general anonymous comments about the study or survey process.

Results

Survey responses: Over the three weeks that the survey was open, 125 individuals opened the SurveyMonkey questionnaire. Of these 106 answered at least one of the twelve main survey questions. The remaining 19 incomplete responses were rejected as unusable. Of the 156 potential AAHSL library director respondents, 72 responded (over 46%) to this survey, based on their responses to the leadership position question. One of these identified her or himself as the "acting director" and two others noted that they had other titles besides director (CIO/ASVP and Assoc. Vice President). Only 34 other library leaders responded and these were

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equally divided between those at the associate director level and department heads (16 each, plus two others who identified themselves with other senior staff titles).

The following is a brief profile of other characteristics of the respondents and of their libraries. Forty-seven percent of these individuals were over 55 years old and only one was 35 or younger; 67% were female; 34% had more than 30 years of professional experience; 48% had been in a leadership position for over 15 years; 64% worked in publicly-funded schools; 47% had annual library budgets over $3.5 million; and, finally, 41% worked in libraries that reported to a university librarian or provost's office, 36% reported to a dean or other health sciences leader, and 23% had other reporting relationships.

The following is a very preliminary analysis of the primary survey results. Future reports and analyses will explore in more detail the relationships among the variables represented in the demographic data collected from the respondents and among the varying responses to the twelve survey questions.

Importance & use of outcome measures: The survey first asked respondents to evaluate fifteen specific types of quality, effectiveness, and outcome measures that we identified from the published resources cited in the introductory sections of this paper. First we asked respondents to rank the relative importance of each type of measure (Urgent to Implement/Desirable/Not Important) and then to indicate the degree to which each is currently being used in the respondent's library (Use Now/Plan to Use/Considering/Do Not Use). Between 100 and 104 of the 106 respondents ranked the importance or indicated the current use of each type of measure. Table 1 shows the four types of measures that were ranked most, and the four ranked least, important based on the percentage of respondents who indicated each was "Urgent" or "Desirable" to implement or, conversely, "Not Important." None of the fifteen types of measures were ranked "Not Important" by much more that a quarter of the respondents and the top two measures were ranked "Urgent" to implement by about half of the respondents.

Table 2 shows the four types of measures that these respondents most often indicated their library "Use[s] Now" or has a definite "Plan to Use" as well as the eight they most often

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indicated their library "Do[es] Not Use" or is just "Considering." Only three of the fifteen types of outcome measures are currently used by more than half of the respondents' libraries and none of the remaining twelve are used by more than about one-third. The four types of measures ranked least important correspond very closely with the measures used least often, but three of the four ranked as most important are also among those used least often. More specifically, those types of measures that would involve assessment of the impact of resources and services on some user constituency were ranked high in importance and urgent to implement, but were among those least used.

When asked to list other potential types of quality, effectiveness, and outcome measures, 24 respondents either offered specific suggestions or provided comments about the types of measures listed in the question. The most common additional type of measure suggested related to funding; that is, return on investment (ROI), expenditure ratios or cost-effectiveness. Three respondents suggested additional use or usefulness measures, especially for electronic resources; three others suggested measures of the library's impact on patients or consumers, and two others suggested the impact of library liaison or outreach services. Other single outcome measure suggestions included the library's impact on teaching hospital effectiveness, clinician effectiveness years after graduation, faculty recruitment and retention, hospital and school administrative effectiveness, and the institution's sense of community and morale. Three respondents commented critically about the difficulty of developing valid and workable outcome measures and three suggested other strategies to get useful qualitative feedback on the library's impact, such a focus groups, anecdotal evidence, and library faculty advisory committees.

Urgency to collect & to develop standards: Two additional survey questions asked for respondents' opinions on a five-point Likert scale from 1 (Not important) through 3 (Desirable) to 5 (Urgent) about the need for academic health sciences libraries to begin systematically collecting these kinds of measures and about the need for our national associations to develop specific guidelines or standards for such measures. Sixty-nine percent of the 105 respondents who answered both of these questions indicated that collecting such measures is urgent or very desirable and only 2% felt this is not important. Another 71% indicated that developing standards or guidelines for these measures will be urgent or very desirable and only 6% felt that

this will not be important (see Table 3). Of the 98 respondents who thought it would be at least "somewhat desirable" to have associations like AAHSL develop guidelines or standards for these outcome measures, the large majority thought funding for this effort should come from both the re-assignment of current association budgets (76%) and special project grants (77%).

Relationship to traditional measures: We also asked for these library leaders' views about the relationship between the traditional measures collected in the AAHSL *Annual Statistics*, qualitative descriptions of successful practices such as those presented in AAHSL's Charting the Future report (18), and the suggested new quantitative outcome measures. Fifty-one percent of 105 respondents thought we should stop collecting some of the traditional *Annual Statistics* measures and add some new quantitative outcome and effectiveness measures. Another 39% thought we should keep the traditional measures and supplement them with new outcome measures. Only 4% thought we should discontinue the traditional measures and replace them entirely with outcome measures. These responses paralleled the views of the 103 respondents who indicated how they thought it would be best to measure library outcomes and effectiveness. Seventy-one percent indicated that descriptions of successful practices need to be supplemented with specific quantitative outcome measures, rather than relying entirely on qualitative descriptions of successful practices (7%) or specific quantitative outcome measures (17%) alone. In another related question, 53% of 98 respondents indicated that qualitative descriptions of successful practices are not as acceptable as quantitative measures for the academic administrators to whom their libraries report, but 35% felt that qualitative descriptions are just as acceptable and 12% felt that such descriptions are more acceptable to administrators.

Potential barriers: An additional question focused on these leaders' views about the relative significance of potential barriers to developing standards and workable methods for collecting and using outcome measures. We suggested four potential barriers to the development of workable outcome measures: the lack of definitions or standards, the lack of technical expertise, the need for significant new funding, and resistance to change. A large majority of the respondents who rated each of these barriers indicated they were "significant" or "very significant," although nearly 40% thought that both the lack of technical expertise and resistance to change would be "relatively insignificant" barriers (see Table 4). This question provoked

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more comments and additional suggestions (36 altogether) than any other in the survey. Table 5 lists seven additional potential barriers that were suggested by more than one respondent, with the lack of staff time and the need for additional staff education and training being suggested most often. Beyond these an additional thirteen potential barriers were suggested by individual respondents.

Use of data collection & analysis tools: A final set of four questions asked about the library's use of Web tools to collect and present summaries and current trends for key measures of library performance, outcomes, or excellence, alone or in comparison with other peer institutions. These could include library-managed "dashboards," "data marts," or "data farms," as well as institution-wide programs for systematically collecting and presenting "measures of excellence." Fifty-four percent of 102 respondents indicated they were not currently using or planning to use computer or Web-based tools to collect or present effectiveness data within their library. Of those respondents who indicated they were using (16%), planning to use (7%) or considering (24%) such tools, 24 provided brief descriptions. Table 6 lists the six tools or strategies described by more than one respondent. The LibQUAL+ suite of data was cited most often, along with locally developed Web-based data collection and analysis tools.

When asked about institution-wide outcome data collection efforts, such as the Measures of Excellence initiative at the University of North Carolina at Chapel Hill (20), 58% of 101 respondents said either that such an initiative at their host institution did not exist (22%) or that they did not know about such a program (36%). Twenty-five respondents indicated that such an initiative was underway at their institution and another three noted that such data collection efforts varied from department to department or from the school to the hospital. Of these twenty-five respondents, almost all (24) indicated that their library was contributing data to this broader institution-wide measure of excellence program and a large majority (17) said they make use of this institution-wide data to help justify, plan or improve their library resources or services. Four respondents provided more specific descriptions of the data they contribute to these institution-wide measures of excellence initiatives and nine respondents gave examples of the ways they make use of such data. These are briefly summarized in Table 7.

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General comments: The survey concluded with an open-ended opportunity for the respondents to provide general comments about the survey instrument or the study questions. Most of these were very positive comments about the overall goals of the study and the structure and content of the survey itself. However, many expressed strong reservations about the potential for developing workable standards and methods for collecting useful outcome measures, noted additional potential barriers or challenges to such an effort, or gave specific recommendations for other strategies to measure library effectiveness. Table 8 provides a brief summary of these comments.

Discussion:

The results of this survey strongly support our two hypotheses. First, a large majority of the health sciences library leaders who responded indicate through their answers to questions and their comments that, at least in principle, they recognize the importance and potential value of outcome measures, particularly those that relate to assessing the impact of services and resources. However, they disagree about whether specific quantitative measures or descriptive qualitative measures would be more effective, and a large minority is very skeptical about our ability to measure outcomes reliably or to agree on definitions for such measures.

More specifically, our first hypothesis is supported by the high ratings respondents gave the importance and urgency of our example set of specific types of outcome measures, as well as the additional types of outcome measures respondents suggested. Most respondents also supported having AAHSL or other professional organizations devote resources to developing outcomes measures and standards. Many positive comments about the survey and its goals also emphasized the desirability of outcome measures.

Our second hypothesis is supported by the low percentage of these respondents who indicated they were using or planned to use outcomes measures and by many comments expressing reservations about the feasibility or appropriateness of quantitative measurement strategies. While most leaders indicated they would like to have and use outcome measures, few have actually developed or used them in their libraries. When asked about the barriers to collecting and using outcomes measures, respondents thought that the lack of accepted

definitions or standards for these types of measures would be the most significant barrier. Nearly one-fourth thought this barrier would be nearly impossible to overcome. Many additional comments also emphasized this skepticism. "Exceptionally difficult to overcome" and "almost impossible to measure" were phrases repeated among the comments. Other comments touched on the difficulty of reaching agreement among diverse institutions on definitions of outcomes measures and the most appropriate types of data to collect to support them. Others expressed doubt that this kind of data could be collected, even if adequately defined. This problem of reaching a useful consensus about outcome measures was illustrated by the kinds of additional measures respondents suggested as quality, effectiveness, or outcome measures. Most of these were, in fact, mostly traditional input, output, and usage measures.

The skepticism these leaders expressed about outcome measures was also reinforced by the large number who said they were unwilling to abandon traditional measures of library inputs and outputs and to fully embrace outcome measures as replacements. In addition, many respondents said the academic administrators to whom they report are also skeptical that outcome measures should replace traditional measures.

We were also disappointed to learn that 76% of respondents indicated that their parent institutions do not have (or that they did not know about) an institution-wide program of outcomes measures or quality indicators similar to the University of North Carolina at Chapel Hill's Measures of Excellence initiative, which was linked to the SuveyMonkey instrument. Admittedly, as some respondents pointed out, not all of the UNC-CH measures are true outcome measures. Only about 25% of respondents said their institution had such measures or that the library contributed to such measures. In addition, the specific measures that three respondents said their libraries were contributing to these datasets were not true outcome measures. They included only library use, inputs, or user-perceived quality measures. We had hoped that the UNC-CH attempt to document university-wide measures of "excellence" was part of a growing national trend and that these initiatives might provide another opportunity and incentive for academic health sciences libraries to develop useful outcome measures. A more focused, in-depth follow-up with the 24 respondents at institutions with quality or excellence measurement initiatives will be needed to determine if this hope is realistic.

Conclusion:

Overall, the responses to this survey suggest that initiatives to move forward within the academic health sciences library community to help individual libraries develop valid and reliable outcomes measures for internal and peer-library comparison purposes will be welcomed and supported. However, there is much less consensus about the feasibility and usefulness of a national initiative to develop a uniform set of standard outcome measures as part of datasets such as the AAHSL *Annual Statistics*. Such an effort would need to overcome considerable skepticism surrounding issues of validity and reliability, as well as concerns about the staff and other resources needed to collect, report, and effectively use such standard measures at the local level.

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Table 1: Importance Rank of Outcome Measure Types

Most Important types of measures	% "Urgent"	% "Desirable"
*Impact on faculty research productivity** (n = 103)	50	48
*Impact on patient care effectiveness** (n = 103)	47	50
****Cost effectiveness of consortia** (n = 103)	41	55
*Impact on teaching effectiveness** (n = 103)	36	61

Least important types of measures	% "Not Important"
*New knowledge generated by the library** (n = 102)	26
*Impact on faculty & student collaboration** (n = 102)	25
*Administrative efficiency of operations** (n = 102)	20
*Cost per unit of service used** (n = 103)	19

** = Corresponds with "Most Used" measure in Figure 2

* = Corresponds with "Least Used" measure in Figure 2

Table 2: Current Use of Outcome Measure Types

Most used types of measures	% "Use Now"	% "Plan to Use"
Service quality measures (n = 102)	57	7
Comprehensiveness of accessible resources (n = 101)	57	5
****Cost effectiveness of consortia** (n = 103)	54	5
Student learning after library instruction (N = 100)	35	11

Least used types of measures	% "Do Not Use"	% "Considering"
*Impact on faculty & student collaboration** (n = 101)	68	17
*New knowledge generated by the library** (n = 100)	64	18
*Cost per unit of service used** (n = 102)	58	22
Impact on student learning (n = 101)	57	29
*Administrative efficiency of operations** (n = 101)	57	13
****Impact on teaching effectiveness** (n = 102)	54	33
****Impact on faculty research productivity** (n = 100)	52	29
****Impact on patient care effectiveness** (n = 102)	50	32

** = Corresponds with "Most Important" measure in Figure 1

* = Corresponds with "Least Important" measure in Figure 1

Table 3: Importance of Systematically Collecting Outcome Measures and Developing Measurement Guidelines or Standards

	Collecting	Guidelines/Standards
	(% of responses)	(% of responses)
Not important	**2%**	**6%**
Somewhat desirable	**10%**	**6%**
Desirable	**19%**	**18%**
Very desirable	**37%**	**45%**
Urgent	**32%**	**26%**
Total respondents (n)	**105**	**105**

Table 4: Significance of potential barriers to a workable system of library outcome measures

Potential barriers	Very significant (% of responses)	Significant (% of responses)	Relatively insignificant (% of responses)
The lack of definitions or standards (n = 103)	22	72	6
The lack of technical expertise (n = 102)	8	53	39
The need for significant new funding (n = 102)	17	74	10
Resistance to change (n = 101)	15	47	39

Table 5: Additional potential barriers to developing outcome measures suggested more than once by survey respondents

Times suggested	Suggested barrier
7	The lack of staff time to collect new data
5	The need for re-education and training of staff
4	The difficulty of finding measures acceptable to local administrators
4	The variability of local circumstances, making standards difficult to develop
2	The research problem of controlling for extraneous variables
2	That needed data is often beyond the library's control, or not available at all
2	The rapidly changing information management environment

Table 6: Library data presentation or analysis tools and strategies cited more than once by survey respondents

Times mentioned	Tool or strategy described
5	LibQUAL+ suite of statistics
5	Locally developed Web-based data collection & analysis tools
4	User surveys, computer and Web-based
3	Home grown charts and PowerPoint presentations
2	OCLC's WorldCat collection analysis tools
2	The SIRSI data farm tools (e.g., Director's Station)

Table 7: Respondent descriptions of the types of library data contributed to institution-wide measures of excellence initiatives and of library uses of institution-wide measures

Types of library data contributed	
• Book & journal counts	• Database counts
• Education sessions	• Reference statistics
• LibQUAL+ measures	• Surveys & focus group data
• Library funding	• Staffing levels
• Expenditures per student	
Uses made of institution-wide data	
• To guide library decision-making	• To facilitate being proactive
• To connect library with campus priorities	• To support new campus initiatives
• To justify budget for clinical resources	• To justify clinical librarian salary
• To support budget presentations	

Table 8: Respondent comments about the study and survey instrument

No. of respondents	Types of comments
11	Thanks for conducting the study
7	Positive comment about the content or structure of the survey
6	Agreement with the desirability of outcome measures
6	Critique of the wording of some question(s)
6	Strong concern about the potential of outcome measures
5	Noted one or more barriers to workable outcome measures
4	Provided specific recommendations for other strategies