When the Evidence Isn't Enough: Organizational Factors that Influence Effective and Successful Library Assessment

Steve Hiller, University of Washington Libraries
Martha Kyrillidou, Association of Research Libraries
Jim Self, University of Virginia Library

INTRODUCTION

A study published in 2004 by two of this paper's authors (Hiller and Self, 2004) reviewed the use of statistical data in library management. They found that few libraries were able to use data effectively and consistently in planning and decision-making. While the availability of library-related data, especially use statistics, had grown substantially with online systems, most libraries were not organized in manner to facilitate use of data. The organizational cultures were not accepting of data, and library staff did not possess the skills and abilities to utilize different research methodologies, analyze their data and present results in a way they could be used.

The findings from this 2004 paper served as a catalyst for the ARL sponsored project, "Making Library Assessment Work: Practical Approaches to Effective and Sustainable Assessment," The goals for this project were "to assess the state of assessment efforts in individual research libraries, identify barriers and facilitators of assessment, and devise pragmatic approaches to assessment that can flourish in different local environments." The initial two year project (2005-06), was led by Steve Hiller (University of Washington Libraries), Jim Self (University of Virginia Library) and Martha Kyrillidou (ARL), and involved site visits to 24 academic research libraries in the United States and Canada.   Each library received a report that evaluated their assessment efforts and recommended ways to move assessment forward at that library. These 24 libraries represented 21% of the 113 academic libraries within ARL and they were representative in size and budget of the ARL membership. A preliminary report on the first six months of the project was delivered at the 6th Northumbria International Conference on Performance Measurement in Libraries (Hiller, Kyrillidou and Self, 2006) and an update presented at the 2006 Library Assessment Conference in Charlottesville, Virginia (Hiller, Kyrillidou, Self 2006). The

success of the project led the Association of Research Libraries to continue this effort as an ongoing service called "Effective, Sustainable and Practical Library Assessment."

This study is based on the findings of the two year effort; it examines the organizational factors that facilitate and impede effective data use and the implications for assessment in research libraries. While local conditions and organizational cultures play important roles in the approach each library has taken to assessment, several other factors have emerged as keys to developing effective, sustainable and practical assessment. As libraries are increasingly asked to demonstrate the value they add to the academic enterprise and the difference they make to the work of faculty, students, clinicians and other researchers, just having good evidence is not enough if the library cannot effectively use that evidence to improve library services and address customer needs. This is not an evidence-based practice study but rather one that examines why evidence (the data on which a decision may be based) is not used more widely in libraries.

PROJECT METHODOLOGY AND INITIAL FINDINGS

The "Making Library Assessment Work" project generated much useful information that can be drawn upon to review organizational factors and effective assessment. Project information came from a variety of sources, including: a self-evaluation of assessment activities and needs done by each of the 24 participating libraries; extensive discussion with a designated contact at each library; a review of library and institutional sources such as annual reports, strategic plans, accreditation self-studies, ARL and IPEDS statistics; and the observations and discussion that occurred during a 1.5 day site visit.

Libraries that participated in the project were asked to provide the following information related to assessment in a survey done prior to the visit:

- Summary of recent assessment activity
- Inventory of statistics
- Important motivators for assessment
- Organizational structure for assessment

- What has worked well

- Problems or sticking points

- Specific assessment areas to address

- Expectations for this effort

Follow-up discussions with the contact and a review of other sources provided additional context for the survey responses. Interestingly, these often revealed a number of assessment efforts that were not reported by the designated contact. The assessment methods and tools most commonly used prior to the visit were:

- LibQUAL+™ (all 24 libraries)

- Data mining, including E-metrics and use statistics (24 libraries)

- Usability testing (20 libraries)

- Locally developed customer surveys (16 libraries)

- Process analysis/improvement studies (12 libraries)

- Space/facility related studies (10 libraries)

Problems, issues, and specific areas identified to address were mainly focused on data, especially quantitative data, and establishing a culture of assessment.

- Using data effectively (23 libraries)

- Data collection methods (18 libraries)

- Data analysis (18 libraries)

- Staff competencies in research methodology and data use (17 libraries)

- Building a culture of assessment (16 libraries)

Based on our findings at the 24 libraries, we identified the following factors as important for effective library assessment:

- Library leadership

- Organizational culture

- Identifying responsibility for assessment
- Library priorities
- Sufficiency of resources
- Data infrastructure
- Assessment skills and expertise
- Sustainability
- Analyzing and presenting results
- Using results to improve libraries

We found that the two most critical determinants for successful assessment were library leadership that promoted, supported and used assessment, and an organizational culture that was customer-centered and motivated to improve library services. If those two were lacking, it was unlikely that a library could perform useful and sustained assessment. If leadership and a customer-centered culture were in place, the effectiveness of the assessment program was dependent on the other factors listed above.

We now take a closer look at how these libraries acquired and used data in decision-making and the organizational factors that related to effective, sustainable and practical library assessment.

Acquiring the Evidence

> Evidence-based medicine and evidence-based management require a mind-set with two critical components: first, willingness to put aside belief and conventional wisdom; second, an unrelenting commitment to gather the facts and information necessary to make more informed and intelligent decisions, and to keep pace with new evidence and use the news facts to update practices. (Pfeffer and Sutton, 2006, p.14)

The primary motivators for engaging in assessment were the external ones of accountability and accreditation, and the internal ones of measuring achievement and improving library resources and services. Assessment has also grown in importance as libraries have become more customer-focused and outcomes oriented. The advent of "new measures" initiatives, especially by the Association of Research Libraries (ARL), helped refocus libraries on customer outcomes and to collect and use data that could assist libraries in improving services and adding value to the work of their communities.

North American academic research libraries have made great strides recently in acquiring data in three key areas that inform those motivators: customer satisfaction, use of electronic resources and Web usability. . The implementation of LibQUAL+™ as a customer satisfaction survey tool has grown from 12 academic research libraries in 2000 to more than one thousand libraries of all types and across the world (See references by Cook and Heath (2001) and Kyrillidou (2006) for additional information on LibQUAL+™). In the last five years (2003-2007), 99 of the 113 academic institutions that comprise the Association of Research Libraries have run LibQUAL+™ and it has become the de facto customer survey for academic institutions in North America. Indeed, all 24 ARL libraries that participated in the assessment project have done LibQUAL+™ during this period. The ability of LibQUAL+™ to provide baseline customer satisfaction plus comparisons internally (gaps between perceived level of service and the minimum and desired levels) and external comparisons with peer libraries have enhanced the utility of this method and provided a wealth of customer data. Cyclical surveying can also produce longitudinal comparisons and often provides indicators of improvement and change over time. The copious number of comments provided by survey respondents can constitute a rich source of qualitative information.

Complementing these customer satisfaction surveys are more sophisticated and accurate ways of counting use of electronic resources. While libraries have long been interested in tracking use of print and electronic resources these efforts were generally not done in a consistent or accurate manner. The development of standardized electronic usage definitions by Project Counter was a substantial step in the providing accurate and comparable use data by publishers and vendors to libraries. Libraries could now either get the data directly from producers or use a third party vendor to aggregate and organize this information. By combining accurate use data with cost information, libraries could now develop powerful cost-per-use data in managing collections and information resources. Once again, all of the 24 libraries that participated in the project were collecting some usage data systematically, especially as it related to online journal packages and bibliographic databases.

Many academic libraries have employed a qualitative method – usability – to improve access to and organization of their virtual space so customers can more easily navigate and find information they need. These methods were borrowed directly from more than a decade of research in human-computer interaction and were instrumental in furthering user-centered design. Usability studies had been conducted in most libraries with the majority focused on the Libraries Web site and digital library initiatives. The findings have led directly to changes in the design of library Web sites and digital libraries so that they are easier to use.

While data at a more global level was acquired for these three areas, the use of research to identify or improve deficiencies in specific library areas continued. These small-scale efforts tended towards process analysis and workflow studies in areas which involved a relatively large number of discrete actions such as cataloging, acquisitions, interlibrary loan, and building use. Related to process improvement were other efforts that identified a specific problem and mined existing data or developed new data collection methods. We found little evidence that libraries had engaged in any systematic effort to review the record of previous work in their areas of interest.

Using the Data in Decision Making

What makes it hard to be evidence-based?
   There's too much evidence
   There's not enough good evidence
   The evidence doesn't quite apply
   People are trying to mislead you
   You are trying to mislead you
   The side-effects outweigh the cure
   Stories are more persuasive anyways
   (Pfeffer and Sutton 2006)

While progress has been made in using evidence in decision-making, many libraries still had trouble using data effectively in management. As we noted earlier, nearly all libraries identified "using data effectively" but in addition to the above list by Pfeffer and Sutton, we also found that libraries in general don't understand the evidence, don't know how to present the evidence, and don't know what to do with the evidence

We found few libraries had staff with sufficient skills to analyze data and present results. This was most apparent with LibQUAL+™ data where the majority of libraries relied on the mean scores provided by ARL with few having used more sophisticated analysis tools. We found it surprising that several libraries had never reported the results of this survey to staff or their broader community. Well perhaps not that surprising, since these results might be perceived under a negative light when viewed outside the context of peer comparisons. Another group of libraries have only put up the ARL produced institutional report on their Web site without any context or analysis.

While some librarians questioned its validity, qualitative data was used more often in decision making and for improvement. Such qualitative methods as suggestion boxes, survey comments, observations, usability, interviews, and focus groups tended to provide information that was easier to grasp, identified problem areas, and provided the context to understand issues. This made much it easier to effect change in such areas as facilities improvements, specific services and Web site redesign. Using sound qualitative research methods can override skepticism about "someone's opinion".

Organizational Factors

> Given that organizational factors can be the most significant obstacles or enhancers of evidence-based practices, there has been the call for "dissemination research" that would bring more attention to the role of organizational life (Johnson and Austin 2006, p.86)

We found that most of the participating libraries were not organized in a manner that could easily identify research topics, prioritize them, develop and apply an appropriate research methodology, analyze and present results, and act upon those results. There was little evidence of a "research culture" or institutional research infrastructure that encouraged and supported data based decision making. That isn't surprising for libraries in general or non-profit social service organizations. Koufougiannakis and Crumley (2006) found that obstacles to research in libraries included funding, experience, time and support, access to research. Similarly, Hodson noted that in social service agencies, the major barriers to implementation of Evidence-Based Practice were: (a) lack of time to fulfill the EBP role, (b) isolation within their agencies in terms of

driving EBP principles, (c) lack of resources, and (d) a lack of a sound knowledge base of relevant evidence. (Johnson and Austin, 2006, p.90)

In general, we found a number of library staff skeptical of quantitative or qualitative data from customers, preferring instead to rely on their own assumptions and past practices to make decisions. The lack of staff competencies in research methodology and data analysis contributed to this skepticism. Our library specific reports often noted the lack of baseline skills in these areas and recommended increasing the staff knowledge base as shown in these two separate recommendations:

> While there is interest in doing good assessment, we found a need to raise the knowledge base of librarians and staff in such areas as research methodology and data analysis. Awareness and understanding of different methods is critical in taking a nuanced approach to assessment that produces results that can be used to demonstrate value and lead to improved services and programs.

> As the assessment team develops expertise itself, it should see that other staff develop skills in certain techniques. The team might sponsor training sessions, taught by themselves or outside experts, in such topics as statistical procedures, statistical reliability and validity, survey construction, sampling techniques, focus groups, interviewing skills, and presentation of findings.

Where we did find research taking place there were few examples of an institutional research agenda that identified and prioritized needs and either coordinated or served as clearing-house for library-related research. More common, especially in libraries where librarians had faculty status, were individual research studies that were done primarily to support promotion and tenure decisions. We noted at one library:

> The Library faculty have established an enviable record of high quality research and their efforts are well represented in noteworthy peer-reviewed publications. While library faculty should be free to pursue research areas of interest, the Library should establish opportunities and incentives to encourage convergence of faculty research abilities with areas of organizational research interest and need.

The lack of a coordinated approach to research often results in a plethora of individual research studies, an over-reliance on surveys (especially with the advent of inexpensive Web surveys), and a lack of awareness of assessment activities in the library. At each library we visited we found instances of surveys conducted by members that our contact person and library administrators were not aware of. There is also another danger to survey proliferation as we noted at one library:

> The Library has encouraged library faculty and staff to gather data using web survey tools. The campus support for survey design and implementation is rather informal, and there seems to be a belief that 'anyone can do a survey.' We applaud the efforts to gather customer information, but we disagree with the idea that surveys are easy and without cost. It is our view that surveys can do harm, if they are not designed properly. Simply doing too many customer surveys induces survey fatigue, making customers less likely to fill out future library surveys. Any survey that goes to customers has a cost for those customers—in time and annoyance. The Library needs to recognize this fact and spare its customers from survey overload.

It is difficult for library staff to engage in rigorous social science research given the lack of training, organizational infrastructure and support, and the time available to do such work. The primary work assignments of most librarians preclude extensive research and the applied nature of library management often requires information for decision-making within a short period of time. McKibbon (2006, p. 207) estimated "that it would take approximately 600 hours to complete a narrowly focused [systematic] review using a team of two to five reviewers." Few libraries can provide that amount of time. At one library we visited, the protocol was to use rigorous research methods to address specific issues or problems. When we asked how long it took from problem identification to problem resolution, the response was two years. That's too long for most libraries that operate in rapidly changing information and educational environments.

CONCLUSION

Clearly, a significant management research agenda remains to be answered within an evidence-based paradigm (Booth and Price, 2004, p. 207)

Hiller, Kryillidou, and Self. When the Evidence Isn't Enough: Organizational Factors that Influence Effective and Successful Library Assessment

Libraries have made some progress incorporating data in decision making and services improvement, but there is much work to be done. Koufougiannakis and Crumley (2006, p. 337) noted "that there is still a need to establish a solid evidence base in our profession." While the establishment of such an evidence base may remain elusive for a practitioner group such as librarians, there are steps that can be taken to provide a library organizational infrastructure and culture that is more receptive and supportive of good data acquisition, analysis, presentation and use. While leadership direction and support combined with a customer-centered organizational culture are the foundations for effective assessment and informed decision-making, other steps include:

- Establishing a formal assessment program
- Developing and defining an institutional research agenda
- Providing training in research methodology and assessment techniques
- Recognizing and promoting the value of using data in decision-making
- Partnering with others knowledgeable about the research process
- Achieving a balance between the research process and timeliness of management decisions
- Presenting and acting upon assessment results

Whether it is called assessment, evaluation or evidence-based practice, the desired goal for library decision-making is that "The best available evidence, moderated by user needs and preferences, is applied to improve the quality of professional judgements." (McKibbon as quoted in Booth and Brice, 2004, p.7).

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