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**Measuring Value: A Comparison of Performance Quality Measures  
and Outcomes Identified by Australian and North American  
Libraries**

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**Abstract**

Nearly ten years ago, Stoffle and her colleagues at the University of Arizona stressed that "Librarians must be sure that their work, activities and tasks add value to the customer." To accomplish this, libraries should "collect data and use them as the basis for decision making rather than rely on subjective impressions and opinions." In other words, libraries needed evidence to plan and manage their resources and services in ways that added effective value to the customer. However, many libraries while recognising the need to use data as good management practice, are unsure what evidence is needed, how to collect and analyse it, and finally how to use it to improve libraries. The Association of Research Libraries (ARL) in North America and CAVAL Collaborative Solutions in Australia have worked to address these issues by developing programs and training to assist libraries in identifying and measuring what is of value to customers and the outcomes of library activities.

How alike are American and Australian libraries in their perception of what data is critical for library performance? This paper compares evidence and outcomes identified by Australian and North American librarians as important to measure for library service quality. Data for this study comes from information provided by participants in programs and workshops run separately by ARL and CAVAL in 2004-05.

## Introduction

This preliminary study uses information acquired during the conduct of six half-day seminars on practical library assessment sponsored by CAVAL and conducted in Australia in 2004-05, other CAVAL sponsored workshops, and from site visits to seven academic research libraries in the United States from February through June 2005 as part of an Association of Research Libraries project on effective assessment. While the theme of practical library assessment was similar in both Australian and North American venues, the authors make no claim that these are comparable situations or that they were designed to produce comparable results. We believe this information though can illuminate and inform, encouraging further study in this area.

## Performance measurement

Performance measures are a method of evaluating organisational activities and services. As McClure and Lopata note: "Simply stated, performance measures ask decision makers to answer the questions: How well is the service or activity doing what its providers claim it should be doing? At what cost? And with what effects?" (McClure and Lopata 1996, p. 6). Effective use of performance measures depend on identifying what is important to assess and in acquiring the right data. As Kyrillidou notes, "What is easy to measure is not necessarily desirable to measure. It is always tempting to set goals based on the data that are gathered rather than developing a data-gathering system linked to assessing progress towards meeting established goals." (Kyrillidou, 1998, p. 6).

For many years, library input/output statistics served as an accepted form of performance measurement. Such factors as number of volumes, overall expenditures, and size of library staff were seen as indicators of library service quality. These statistics were maintained for North American research libraries by ARL and for Australian academic libraries by CAVAL, on behalf of CAUL (Council of Australian University Librarians).

In 1995, ARL added such “output and performance measures” as circulation [loans], instructional sessions and reference transactions. Beginning in 1999, ARL began development of “new measures” that would focus on library generated outcomes and impacts on the academic endeavour (Blixrud, 2003).

#### Performance measures in North American libraries

Although library statistics have long been used as a surrogate for performance measurement, the development and use of specific standards and measures to assess performance in North American libraries have been infrequently and inconsistently applied over the years. As described in early works by De Prosopo et al (1973) and in Lancaster’s seminal work, “The Measurement and Evaluation of Library Services” (1977), these measures generally collected and used input/output data to describe performance of specific library processes. For academic libraries, Kantor’s “Objective Performance Measures for Academic and Research Libraries” (1984) and “Measuring Academic Library Performance (1990) by Van House, Weil, and McClure attempted to offer practical, “workbook” approaches to measuring library performance focusing on outputs and using formulated measures. While these works were designed to encourage adoption of a best practices approach to measurement and assessment, academic libraries continued to experience difficulty in developing and applying performance measures. (Hiller & Self 2004)

#### Customer-Centered libraries and performance measurement

The concepts of the customer-centred library and evidence-based librarianship and information practice arose around the same time in the early to mid 1990’s, but the origins of each were quite different. The customer-centred library grew out of such antecedents as performance measurement, strategic planning, and the desire to demonstrate the impact of libraries on their communities. Evidence-based librarianship

and information practice arose from evidence-based medicine that was predicated on finding the best evidence possible to answer a question or problem and then appraising, applying and evaluating specific interventions

The adoption of the customer-centred library concept by many North American academic libraries during the past ten years became a critical factor in the development of assessment efforts that focused on library support for user needs. The customer-centred library has the following attributes:

- All services and activities are viewed through the eyes of the customers
- Customers determine quality
- Library services and resources add value to the customer

Data-based decision making is a cornerstone of the customer-centred library in which:

- Decisions are based on facts, research and analysis,
- Services are planned and delivered to maximize positive customer outcomes

Data are collected from multiple sources encompassing inputs, outputs and outcomes. Acquiring, analysing, and using the right data is critical to the design and delivery of effective library services. Customer-centred libraries such as the University of Arizona developed performance measures that in addition to using output data also attempted to measure outcomes. Library assessment in support of the customer-centred library has also begun to establish performance measures linked to the achievement of library goals and objectives rather than (or in addition to) focusing on specific processes. The Balanced Scorecard implementation at the University of Virginia Library is the most robust example of a library that uses performance measures in a strategic manner (Self, 2004). This

fusion of performance measures with organisational goals and objectives more closely resembles an evidence-based management model than an evidence-based information practice one.

“Making Library Assessment Work”: an ARL project

Nearly ten years ago the Association of Research Libraries (ARL), an organisation representing the 120 largest academic (and some government) libraries in North America, officially recognised the importance of library assessment as a key driver for change through its strategic objective to ‘describe and measure the performance of research libraries and their contribution to teaching, research, scholarship, and community service.’ (Kryillidou, 1998, p. 8) In addition to this customer-centred approach, most higher education accreditation agencies in the United States moved at that same time from an evaluation model that placed importance on input/output standards to one that focused on student learning outcomes. These non-governmental agencies accredit degree programs in academic institutions and exert a powerful influence on American higher education although they are not associated with funding bodies.

ARL supported the development and application of a number of innovative methods as part of its “New Measures” to assess library performance, including such tools as LibQUAL+™ (service quality), SAILS (information literacy), and Mines for Libraries (libraries impact on sponsored research). While the number of tested tools that could be used for performance measurement in libraries grew, anecdotal and other evidence suggested that a number of libraries experienced difficulty in assessment, especially in the areas of data analysis and use (Hiller & Self 2004). To acquire more verifiable evidence about assessment efforts, library assessment practitioners Steve Hiller (University of Washington Libraries) and Jim Self (University of Virginia Library) worked with ARL to establish a project to evaluate library assessment efforts and recommend approaches to move

assessment forward. (For more information on the project see Association of Research Libraries 2005, and Hiller, Kyriallidou & Self 2005) This project, "Making Library Assessment Work: Practical Approaches for Developing and Sustaining Effective Assessment" was launched in September 2004 with a call for expressions of interest from ARL Libraries. The proposal was originally viewed as a one year project consisting of on-site evaluations of assessment at 4 to 6 libraries followed by a written report (with recommendations) on moving assessment forward. Because far more libraries expressed interest than anticipated, the project was extended and split into two phases: Phase I involved seven libraries from February through June 2005; Phase II will cover 16 libraries from September 2005 through December 2006. These 23 libraries represent 20% of the ARL membership. This paper covers just those libraries involved in Phase I:

- University of Arizona
- Arizona State University
- University of Connecticut
- University of Illinois at Urbana-Champaign
- New York University
- University of Notre Dame
- University of Oregon

These comprised a representative group of ARL libraries by size, level of assessment activity and geographic distribution. Approximately 2 months before the scheduled site visit, a short survey was distributed to each library, which asked for the following information:

- Summary of recent assessment activity
- Inventory of statistics kept
- Important assessment motivators
- Organisational structure for assessment
- What has worked well

- Problems
- Specific areas for the project to address
- Expectations for this effort

Libraries took about a month to complete the survey and the results were used to build the schedule and focus of the site visit.

#### Use of performance measures

Results of the short survey on assessment confirmed that libraries were most concerned with how to effectively collect, analyse, and use data for library improvement as well as the ability of library staff to conduct effective assessment. Only three of the seven libraries identified performance measures as an area where they needed assistance or identified as a priority. Discussions during site visits showed that for five of the seven libraries, the problem was more fundamental as they needed basic assistance in determining what to measure and assess.

While all seven libraries were interested in measuring the impact of the library on teaching, learning and research, only one (University of Arizona) had made substantial progress in this area. All had done at least some work in trying to measure performance through the use of time, cost or usability studies of some specific processes as cataloguing, interlibrary loan/document delivery, stack maintenance, Web site usability, or staffing. These either responded to known problems or attempted to provide specific data for more effective management and cost savings. In most cases these focused on inputs/outputs and not outcomes, measuring activities not value. Many were done as specific one-time projects and not part of an overall sustainable effort to assess services or continuous improvement strategy. Indeed, the organisational issues of leadership, priorities, resources, culture, and staff abilities appear to play a substantial role in the sustainability and effectiveness of assessment.

Two of the libraries, the University of Arizona and the University of Connecticut were engaged in developing performance measures and standards. Each library took a different approach. The University of Arizona Library, a long-time leader in service quality assessment, has taken specific goals and objectives from their strategic plan and assigned performance measures called strategic quality standards to establish targets where progress can be measured during the next 3-5 years. These strategic quality standards represent expected outcomes of the library's contribution to teaching, learning and research. Some examples from the current 2006-10 Long Range Strategic Plan include:

- By 2010, 95% of the UA Libraries' customers using the UA Library website have the resources to satisfy their information needs
- By 2010, 95% of the UA Libraries' customers can locate needed information without mediation
- By 2010, 95% of our customers indicate satisfaction with the information resources made available through the Library
- By 2010, 50% of campus enrolment surveys indicate library services as having influenced students' decisions to attend UA

Each quality standard was assigned to existing cross-functional library teams that were given responsibility for establishing performance measures to meet the quality standard and monitoring progress.

The University of Connecticut administration directed academic programs in 2004 to develop a series of performance measures. The Library asked each of its areas to develop measures. As with any initial development and implementation, the process involves trial and error. For example, metrics for document delivery turnaround time at a branch campus represented only the time when the request/item was handled by that unit, not the entire process from request to receipt to delivery (which

would be the user perspective). While it is tempting to establish performance measures for the activity solely within the control of an area or unit, a broader perspective is needed to ensure that processes flow smoothly for the customer regardless of how the library is structured.

#### Measuring value in North American academic libraries

Based on an extensive literature review and observations from the first seven site visits in the ARL project, North American academic libraries continue to experience difficulty in the development and application of performance measures tied to the value of library resources and services. While organisational issues appear to play a major role in assessment effectiveness, there is recognition by the seven libraries visited as part of the project (admittedly a self-motivated group) that developing standards and measures that measure process and progress are critical to the continued centrality and success of the academic research library. When the ARL project is completed in late 2006, data from a much larger sample of ARL libraries will be available providing a more substantial base of evidence to evaluate assessment and performance quality.

#### Performance measures in Australian academic libraries

Statistics have been collected by Australian academic libraries since 1953 (Jilovsky, 2005). Since the early 1990's there has been a developing awareness of the role of performance measures. In 1995 CAUL (Council of Australian University Librarians) published a set of Performance Indicators kits, several of which were later revised. Currently an interactive web page on the CAUL Website allows data to be uploaded from individual libraries, thus facilitating benchmarking. The CRIG (CAVAL Reference Interest Group) Working Party on Performance Measures for Reference Services, established in 1994, developed the "ASK" set of indicators and measures. This group ran workshops and published several papers describing their research over the period 1994 to 2000 (CAVAL, 1998).

The CAUL Best Practice Working Group, convened by Felicity McGregor, University Librarian at the University of Wollongong, has played a leadership role. This has included the development of a 'Best Practice Handbook for Australian University Libraries' (Wilson & Pitman, 2000), support for libraries participation in quality audits of their Universities (Pernat, 2004; McGregor, 2003), and the implementation of the Rodski Client Satisfaction Survey (Saw and Clark, 2004).

Firm evidence in the interest of Australian libraries in assessment can be seen in the response to the offering of a CAVAL seminar on "Practical Approaches to Effective Library Assessment" by CAVAL in late 2004. Originally 3 half-day seminars were scheduled, in Melbourne, Sydney and Brisbane – in response to the demand a total of 6 seminars were held, including one in Adelaide. The 120 seminar participants came from all library sectors – special libraries, public libraries, and educational libraries.

Participants were asked in advance of the session to answer a question on the major assessment-related issues and concerns at their libraries. Academic librarians (approximately 50% of participants) listed these topics:

- Measuring the library contribution to information literacy
- The library's contribution to learning across the curriculum
- How to identify and survey non-users
- Evaluating effectiveness of information literacy programs
- Measuring library impact on teaching, learning and research
- Finding out what students and faculty need
- Asking the right questions on surveys
- Using assessment data to improve libraries
- Do students get what they need when working remotely
- What difference does the library make to student success
- Assessing the effectiveness of information literacy classes

- Presenting data and results to different audiences
- Using surveys with common methodologies and benchmarks
- Measuring achievement of strategic plan
- Providing the services our users require
- Measuring our services in a meaningful way
- Practical value-added ways to improve services
- Library organizational model for assessment

CAVAL followed these seminars with a series of full-day workshops on "Statistics, Measurement and Performance Indicators" which were held in Auckland, Wellington, Melbourne, Sydney, Canberra and Brisbane over the period March to May 2005.

#### Feedback from seminar and workshop participants

There was a clear acknowledgement from attendees at all of these events that they need to show value, that university libraries need to be working towards methodologies and strategies to show that they are making an impact on the teaching, learning and research endeavours of the university.

The national quality review system by AUQA (Australian Universities Quality Agency), which commenced in 2000, is no doubt a contributing factor. The process involves external auditors coming into the university every 5 years to 'confirm' the self review report already provided by the institution. Associated issues identified include understanding how to keep staff motivated to undertake extensive and regular reviews, when they see their daily tasks as the real priority.

One participant described preparing for a Quality Audit as a "Reality Check" which created quite a bit of quality-related activity across the University. This library is now refining their use of benchmarking and balanced scorecard measures, recognising that it needs to develop a

model that ensures the systematic completion of the continuous quality loop of Plan-Implement-Review-Improve.

There was much discussion of the merit of using surveys with common methodologies and benchmarks to ensure improvement initiatives are implemented and followed through. There is clearly a strong awareness of the wide uptake of LibQUAL+™, initially by North American academic libraries but now also by other international library communities.

LibQUAL+™ has now been used by several Australian University libraries, which is generating some debate over the merits of LibQUAL+™ and Rodski.

In the context of perceived links between employee satisfaction and customer satisfaction, a number of university libraries in Australia are considering conducting employee benchmark surveys to link data to their customer surveys and gain insights from different perspectives with a view to continuous improvement in services and productivity.

Other common issues identified included cost benefit analyses, effective communication of results to different stakeholders, the mechanics of assessment such as developing survey questions and knowing how to identify and survey non-users of the library. Establishing priorities so as not to overwhelm staff, given the huge range of assessment/performance measurement activities that could potentially be undertaken at all levels of the organisation. There was recognition of the importance of high level, whole of organisation performance measures such as measuring achievements against the strategic plan.

#### Comparing Australian and North American academic libraries

This research indicates that although there have been different drivers and different timelines for the two communities, there has been a similar initial pre-occupation with the development of tools (including statistics)

followed by the realisation that data collection is only one part of the process, and then the need to measure the impact of libraries on teaching, learning and research. However, the measurement of value is still elusive for most libraries. The feedback from attendees at the Australian seminars and workshops is that AUQA (Australian Universities Quality Audit) requirement has been a significant driver, which has been complemented by a watching brief on the RAE (Research Assessment Exercise) process used in the United Kingdom. For North American academic libraries, the development of better assessment tools by ARL and others coupled with an outcomes focus from accrediting agencies have spurred assessment activity. However, the ability of libraries to apply these effectively is mixed at best. Preliminary evidence from the ARL project suggests that library organizational issues – culture, resources, priorities, and staff abilities – may play a decisive role in the success or failure of assessment efforts. Additional research and evidence on the role these organisational issues play will enable libraries to better prepare for success.

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