“But What Does It Mean?” Using Statistical Data for Decision Making in Academic Libraries

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Abstract
Academic libraries in North America are turning increasingly to the use of statistical data to assist and support library management decisions. While some library data, primarily operational, have been available for years, the degree to which they have been used in library management varies widely. Recently, there has been a voluminous increase in library-related data, not only in transactional information from online library systems and electronic resources usage, but also from efforts to gain more direct user input through user surveys and focus groups. Libraries are also being asked by funding and accrediting bodies to demonstrate their impact on the user community by employing a series of metrics that are outcomes and data based.

As the data turn into a flood, many academic libraries are unsure what the data mean and how to analyse and use this information in library management.

Introduction
Academic libraries today are awash with numerical and statistical information. But what does it mean and how can we use data – both quantitative and qualitative – effectively in library management? My focus in this presentation will be on North American academic research libraries and specifically on some of the assessment work done at the University of Washington Libraries.

While North American academic research libraries have used statistical data for many years, they have often been limited to such areas as budget, collection use, and improving efficiency of specific operations, especially processing. Rarely have data been tied to broader performance or service quality measures at the institutional level where library quality and performance traditionally have been measured by size and budget. However, during the past decade, a number of changes have taken place that have eroded the concept of equating institutional collection size and budget with library quality. These include:

- Explosive growth in networked electronic information and consortial purchasing
- Noticeable changes in library use patterns
- New library organisational structures and strategic planning
- Instability of library and institutional funding
- Increased complexity of navigating the information environment
- Moves towards outcomes based assessment in higher education
- Accountability for library expenditures

These changes have been a catalyst for developing new methods of measuring library performance and service quality. In North America, the Association of Research Libraries (ARL) has sponsored several programmes to develop new assessment measures, including the E-Metrics project (dealing with measuring use of electronic resources), LibQUAL+™ (a survey tool to assess library service quality), and a number of workshops, courses and conferences highlighting assessment efforts and developing associated skills (Blixrud, 2001). A major effort to define and standardise data categories and collection methods in the United States can be seen in recently
released draft standard (Z39.7) Metrics and Statistics for Libraries and Information Providers produced by the National Information Standards Organization (NISO) which includes e-metrics for the first time (NISO, 2002).

The last decade has also seen a trend towards establishing more adaptable and nimble library organisational structures. This “new” organisation employs a formal strategic planning process, encourages innovation and risk-taking at different levels within the organisation, and becomes user-focused and outcomes-based rather than library process-centred. A user-centred library depends on establishing more formal assessment efforts that measure the needs of our user communities and evaluate the effectiveness of library services, programmes, and resources in addressing them. Developing a “culture of assessment” is one way to extend data-based decision making throughout the library and keep the focus on the user.

“A Culture of Assessment is an organisational environment in which decisions are based on facts, research and analysis, and where services are planned and delivered in ways which maximize positive outcomes and impacts for library clients. A Culture of Assessment exists in organisations where staff care to know what results they produce and how those results relate to customer expectations.” (Lakos, 2002, p 313)

While service quality assessment has become part of the academic library lexicon, the effective understanding, use and application of quantitative and qualitative data in management of North American academic libraries have lagged behind. In her recent report for the Digital Library Federation, Usage and Usability Assessment: Library Practices and Concerns, Denise Troll Covey (2002) wrote that the library managers, administrators and professionals at the DLF institutions she surveyed responded that their libraries needed to do more of the following for assessment to be successful:

- Collect only meaningful, purposeful data
- Develop the skills to gather, analyse, interpret, present and use data
- Develop comprehensive assessment plans
- Organise assessment as a core activity
- Compile and managing assessment data
- Acquire sufficient information about the library environment to understand trends

She went on to state that, “Several DLF respondents commented that they spend a great deal of time gathering data but do not have the time or talent to do anything with this information. Even if libraries gather the right measures for their purposes, developing the requisite skills to analyse, interpret, present and use the data are separate challenges.” (Covey, 2002, p 3). She concluded with this rather bleak assessment:

“The results of the DLF study suggest that individually, libraries in many cases are collecting data without really having the will, organisational capacity, or interest to interpret and use the data effectively in library planning. Libraries have been slow to standardize definitions and assessment methods, develop guidelines and best practices, and provide the benchmarks necessary to compare the results of assessment across institutions” (Covey, 2002, p 58).

Yet, I believe that the current situation is far more optimistic than the picture painted in the DLF report. While libraries may not have the results they hope for, or have demonstrated the integration of data collection, analysis, interpretation and use in management, there is far greater awareness of the issues involved, and the need to develop not only the skills to understand and use data effectively, but also the organisational structures that will facilitate
application. In this era of ubiquitous computer access and instant Web surveys, expectations may be unrealistic, since effective assessment cannot be done overnight but requires time, effort, organisational commitment and resources. The situation has changed dramatically since Chuck McClure wrote in 1986 that academic library middle managers were, “distrustful of the use of cost and performance measurement data ... and unlikely to use such data, even if available, for library decision making” (McClure, 1986, p 330).

Today, a strategic planning process with measurable goals and objectives is a part of many academic libraries. Library managers and administrators are keenly interested in assessment and want decisions to be based on data, evidence and cost. However, they are uncertain how to acquire, interpret and use the information they need. Finally, there are a growing number of success stories in using statistical data effectively in the management of academic libraries, and a developing infrastructure of national support in North American led by ARL.

Obstacles to Using Statistical Data

While the sheer amount of data is obviously one obstacle to using it for library management, there are other factors at play. The organisational structure of many libraries, with their extensive divisional hierarchies and lengthy consultation process, is clearly a barrier at times (Lakos, 2002). Relatively few academic research libraries seem to have the necessary staff expertise or positions with assessment or management information as a primary responsibility. Having someone responsible is important, as an effective assessment programme cannot be run by just a group or added on to someone’s already full plate of activities. The lack of standard performance or outcome measures and the relative rarity of linking performance to resource allocation mitigate the necessity for developing good metrics. The rapidity of change in the information and funding environments has made it difficult to identify and test meaningful measures that can be applied in a timely manner. It also means that the traditional social science research process may take more time than is available to produce results that can be used, and seems increasingly out of place in a world where the information was needed yesterday to make decisions today to be implemented tomorrow. As Peters notes in a recent article on e-resource usage statistics, “a robust future for library statistics involves breaking out permanently from the library and information science research community into the community of practice” (Peters, 2002, p 41). In addition to these potential barriers, an important one, which often goes unspoken, is that many librarians are just uncomfortable with numbers, being generally “people of the book”.

A disproportionate number of librarians studied in the humanities (Fasick, 1986) and have little training or experience working with statistical data. Indeed, many librarians in common with the majority of our society, are likely to be in some degree innumerate (defined by Paulos (1998) as the “inability to deal comfortably with the fundamental notions of numbers and chance”). In North America, such library educators as Chuck McClure, Peter Herndon, and Nancy Van House have focused on developing service quality measures and use of quantitative and qualitative analysis in management. They have done much to further awareness of the need for good applied research within libraries. It seems clear though that we need a more practical approach that addresses behavioural and organisational barriers as well as identifying importance (which is different from statistical significance) and how can we present and apply data to improve our libraries.

The Data

Determining what to measure and how to measure it must be balanced by the costs associated with obtaining the data and, more
importantly, the benefits of using them to improve libraries. Strategic planning in the library and the host institution may set measurable goals and objectives for which the data are needed. Performance measurement standards coupled with the development of national measures may also direct the type and method of data collection. The recent emphasis on accountability and outcomes and the shift to an electronic environment have led to much discussion and work on defining and developing appropriate performance measures.

When working with statistical data it is important to think critically about the numbers:

- Where do the numbers come from?
- How and why were they generated?
- What do they represent?
- Can you compare them?
- Do they make sense?
- Can we use the data to improve performance?

A one-time, one place set of statistics can be useful in its own right, but is infinitely more valuable when it can be compared with something else. The most common comparisons may be change over time, differences between groups, or differences between similar types of libraries. Comparisons can add context, and context provides a better sense of meaning.

However, comparability of data can be complicated. If we use internally generated data, we have more control and knowledge about the numbers but still need to be careful about comparisons. For example, in comparing information from surveys done at different times we need to ask such questions as whether the phrasing of the question was changed, whether the response scale was different, and does the respondent population composition differ between surveys. Other internal data collection also needs to be scrutinised for changes in data collection procedures. We need to exercise special care when our data come from a sample and how much we can reasonably infer from those data about the whole population or subgroups. When comparing internally generated data across institutions, the difficulties are often magnified. It is not surprising that the annual ARL Statistics (ARL 2002) has 35 pages of footnotes explaining differences in data collection or definition methods between member institutions.

Statistics produced by an external group or organisation may be even more difficult to work with unless it is clear as to how the data were generated. Regardless of where and how the data are produced, we need to determine if they make sense and can provide information we can use. That is not necessarily the same as performing statistical analysis. This process is essentially a qualitative control measure. Do we have sudden spikes or large magnitude data changes? Do survey results show something totally unexpected? This seems to be an all too common occurrence with electronic resource usage statistics where time periods are missed, or methods of counting have changed but can be a feature of any data set.

While the data may be structurally sound, it does not necessarily mean that we can use them. Data elements may be inappropriate and capture the wrong “kind” of information for your intended use. Gaps in the data may make it difficult to analyse trends. User surveys may have questions that just do not work – they may be poorly worded, open to differing interpretation, use an inappropriate response scale, or give us data we cannot use for service quality improvement. The more you know about your subject and your data, the better you can analyse and interpret results. Indeed, that is a good reason to develop or have expertise in-house rather than rely primarily on external consultants.
**Statistical Data and Analysis Presentation**

Many of the books and publications dealing with statistical applications in libraries are long on techniques and methodology, but short on presenting and communicating results. The literature dealing with library research often includes a section on publishing research results, but little on how to present and use results within libraries. For example, Hafner’s *Descriptive Statistical Techniques for Librarians* (1998) states boldly on the back cover, “Librarians need statistics, love them or not. Statistics persuade library decision makers and supporters in a way that rhetoric cannot.” While the book provides a thorough review of descriptive statistics, it spends little space on presenting data – just a few paragraphs describing charts. However, presentation is a crucial part of the process of using statistical data in academic library management – the link between data and action.

Presenting statistical data and analysis for library administration and management is different from presenting that same information for publication. Administrators and managers need to know:

- What is important?
- How can the information be used to improve services?
- How can the information be communicated internally and externally?
- What is the process for change? What will it cost?

The primary consideration is practical and applied. As Herndon notes:

“A paper submitted for publication “speaks” to the editor and editorial board of a journal, and their perceptions about reader interests. A published article communicates with fellow researchers, and, it is hoped a larger community. ... Of course, an internal report delivered to library managers “speaks” to the information needs of these individuals. Decision makers do not want to wade through a detailed and lengthy report.”

(Herndon, 1989, p 159)

The key to successful analysis, understanding and presentation is to keep it simple. Less is indeed more. Numbers that people can relate to, especially those that can be compared, are more persuasive than complex statistical analysis. Trend lines are more easily grasped than tabular data and graphical presentation is a powerful method of communicating the value of statistical data, even to the numerically challenged. Below are some elements that are important in communicating results effectively:

- Provide executive summary or equivalent
- Present brief context on scope and methodology
- Identify key findings (not all results)
- Mix text, data, and graphics
- Provide qualitative data (if available) or other context that buttress quantitative findings
- Avoid jargon (statistical and otherwise)
- Know your audience(s). Make it understandable to them.
- Identify potential action items and/or follow-up

As Edward Tufte notes in his seminal work *The Visual Display of Quantitative Information*:

“Often the most effective way to describe, explore and summarize a set of numbers – even a very large set – is to look at pictures of those numbers. Furthermore, of all methods for analyzing and communicating statistical information, well-designed data graphics are usually the simplest and at the same time the most powerful.” (Tufte, 2001, p 9)

Tufte goes on to provide the characteristics of graphical excellence. Graphs should:

- Show the data
• Induce the viewer to think about the substance rather than about methodology
• Avoid distorting what the data have to say
• Make large data sets coherent
• Encourage the eye to compare different pieces of data
• Reveal the data at several levels of detail
• Be closely integrated with the statistical and verbal descriptions of the data set

Tufte further states (p 11) that, “Graphics reveal data. Indeed, graphics can be more precise and revealing than conventional statistical computations.” With graphing capabilities available in most statistical analysis, spreadsheet and word processing software, it is comparatively easy to generate charts ... although not necessarily good ones.

At the University of Washington Libraries, we have viewed user needs assessment as the key to developing, maintaining, and strengthening the user-centred library. The University of Washington, located in Seattle, Washington, is a comprehensive research institution with 25,000 undergraduates, 10,000 graduate and professional students, nearly 4,000 faculty, and thousands of other researchers and clinicians. The University Libraries has conducted large-scale surveys of faculty and students on a triennial basis since 1992 and supplemented this and other survey data with qualitative information from focus groups, observation and usability studies. Surveys are sent to all faculty and a sample of students, with 1,345 faculty responding in 2001. We have tried to build a multidimensional picture of our user community, their library and information needs, the ways they use libraries, and their satisfaction with library services and resources.

A key element of our assessment programme is presenting results from surveys and other assessment efforts both internally within the library as well as to our user community. Initial results and analysis are first posted on an internal library site, often within two to four weeks of data receipt, and then on our public web page, at http://www.lib.washington.edu/surveys/. Written and oral presentations are made to library administrators, managers and appropriate departments within the Libraries as well as to faculty and administrative groups. We supply our library liaisons with information they can use as they work with faculty and students in their subject areas. A report is written and distributed for internal use by email and Web, as well as the Libraries’ quarterly newsletter and the official University weekly newspaper. We find the Web is an excellent vehicle for presentation and communication. It is easily accessible, always there, uses a mix of formats and images, can be updated quickly, and provides linkages to other information, including data sets.

Our local surveys (as well as the LibQUAL+™ surveys at the University of Washington) show that we have very high satisfaction and low dissatisfaction.

Table 1 Triennial Survey – Response rate

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<tbody>
<tr>
<td>Faculty</td>
<td>3720</td>
<td>1345</td>
<td>36%</td>
<td>40%</td>
<td>31%</td>
<td>28%</td>
</tr>
<tr>
<td>Graduate Students</td>
<td>1500</td>
<td>597</td>
<td>40%</td>
<td>46%</td>
<td>41%</td>
<td>56%</td>
</tr>
<tr>
<td>Undergraduates</td>
<td>2000</td>
<td>497</td>
<td>25%</td>
<td>39%</td>
<td>23%</td>
<td>41%</td>
</tr>
</tbody>
</table>
Institutional surveys of graduating seniors show they rate the quality of library services highest among academic activities such as instruction and advising. It is reassuring to see that the Libraries is viewed positively but it doesn’t really tell us much. Moving beyond satisfaction, our assessment efforts have looked at use, importance, and needs. Results have revealed a very heterogeneous academic community who have different library needs and use libraries in different ways. Undergraduates use libraries differently from faculty. Faculty in the health sciences have different needs from those in the humanities. The data support the development of different strategies to address the needs of these user groups. A single approach will not work.

For example, our surveys show a decline in the frequency of library visits and an increase in remote computer use of libraries between 1998 and 2001. While approximately 85% of faculty and graduate student survey respondents reported that they used libraries at least weekly in 1998 and 2001, an increasing majority were doing so remotely rather than visiting.

**Table 2 In-Person Library Use 1998 and 2001**

<table>
<thead>
<tr>
<th>Group</th>
<th>2001</th>
<th>1998</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>38.7%</td>
<td>47.3%</td>
<td>-18.2%</td>
</tr>
<tr>
<td>Graduate students</td>
<td>59.5%</td>
<td>77.7%</td>
<td>-23.4%</td>
</tr>
<tr>
<td>Undergraduates</td>
<td>60.4%</td>
<td>70.3%</td>
<td>-14.1%</td>
</tr>
</tbody>
</table>

**Table 3 Remote Computer Use 1998 and 2001**

<table>
<thead>
<tr>
<th>Group</th>
<th>2001</th>
<th>1998</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty</td>
<td>78.7%</td>
<td>73.2%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Graduate students</td>
<td>75.4%</td>
<td>63.7%</td>
<td>18.4%</td>
</tr>
<tr>
<td>Undergraduates</td>
<td>54.1%</td>
<td>42.9%</td>
<td>26.1%</td>
</tr>
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</table>

![Fig 1 Faculty Use Patterns by Academic Area 2001](Percent using each category at least weekly)
The only category of in-library use that increased between 1998 and 2001 was the weekly or more often use of library computers by undergraduates, which rose by 34%. This rise likely reflected the installation in late 1998 of a 350 seat computer laboratory with 24 hour access in the Undergraduate Library. While faculty in the humanities, social sciences and arts visit libraries more often than those in the sciences and health sciences, there is no difference by subject area in the frequency of use from campus offices or laboratories.

Our survey programme gives us the opportunity to develop and frame specific questions that can provide information we can use for planning and decision-making within the library. However, responses, especially on use patterns, are perceived behaviours, not actual use. The ability to tap into other data can help verify and add another dimension to survey responses. Entrance gate counts had declined somewhat in many of our libraries, but were substantially higher in the undergraduate library, so it was difficult to spot trends. Fortunately, we have kept very detailed statistics on loans, reserves, and in-library use of material in the on-site collections. We can easily chart this data in a time sequence (Fig 2). In looking at actual loans, the numbers remain relatively stable, perhaps somewhat inflated by a higher proportion of renewals since we initiated self-renewal through the Web. However, if we look at in-library use and reserve use, those numbers drop sharply. Statistics showed that in seven years, total use of materials had gone down by more than 1.1 million items – 33% – while in-library use declined by more than 50%. Further analysis revealed that the sharpest decrease had occurred in those libraries with a high proportion of journals and general news or business information. When this information was presented to library administration using these charts, the situation was easily grasped.

Fig 2  UW Libraries Print Collection Use 1995/96 to 2001/02

![Graph showing UW Libraries Print Collection Use 1995/96 to 2001/02](image-url)
Ironically, if we looked just at the ARL statistics we would have missed the sharp decline in in-library use, as the ARL categories are initial circulations (first time loans but not renewals) and total circulations (loans and renewals). Reserve use and in-library use are not included. There is a general downward trend but it is a relatively modest 8.5% overall decline between 1995 and 2001 in the mean and a 17% decline in the median.

Using Statistical Data for Effective Management

Analysing, understanding and presenting your data are crucial components of the assessment process. However, the application and use of those data in library management is the ultimate test. No matter how good the survey, cost or usage data, if they are not applied, you have not only missed an opportunity for data-based decision making but also implicitly sent a powerful message to library staff that data do not matter. As Covey concludes in the user surveys portion of the DLF report:

“Many DLF respondents reported surveys whose results were never analysed. Others reported that survey results were analysed and recommendations made, but nothing happened after that. No one knew, or felt comfortable enough to mention, who dropped the ball. ... The problem could be loss of momentum and commitment, but it could also be lack of skill. ... Libraries appear to be slow in acquiring the skills needed to use survey data.” (Covey, 2002, p 14)

For example, LibQUAL+™ has been a powerful catalyst in developing a culture of assessment in North American academic research libraries. During the past three years there have been more conference presentations focussing on LibQUAL+™, and more words written about LibQUAL+™ than any other library assessment effort. Yet, the research nature of the project has taken precedence over how to understand and apply results, and the ability to use the data at individual institutions has proved to be challenging. Local survey coordinators from the 2001 survey expressed a number of difficulties in trying to use the results. These included “a dearth of in-house statistical skills for understanding the survey methodology and working with the data; a lack of organisational culture that encourages assessment; concern about low sample sizes as compared to print surveys; negative feedback from faculty about the survey; lack of time and money to work with the results; and the need for more documentation accompanying the data.” (Waller and Hipps, 2002, p 10). ARL and Texas A&M have devoted more effort to the issues associated with data analysis, presentation and use (e.g. the Library Service Quality Academy in May 2002 and other workshops) as a result of input from participating libraries.

Some of the key elements to using the data effectively include:

- Timeliness
- Prioritisation of costs and benefits
- Identification of organisational responsibility
- Communication with staff and stake-holders
- Validation with other information sources

In our rapidly changing information environment it is critical that data be analysed, interpreted, presented and used in a timely manner. In some large organisations, it takes so long for the process to move along that results can easily be outdated. It is much easier then to make no decision than to decide on a course of action. When designing a process for data collection, it is vital to identify the method and time needed to enter data and analyse results.

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The data may show a number of areas that need action, but in most libraries the ability to make changes may be limited due to time, staffing, complexity, and resource availability. It is important to prioritise – identify those actions that are not only crucial to programme improvement – but also can be done in a timely manner with limited resources. A quick win can also demonstrate to staff that assessment works and to stakeholders outside the library that their input is important.

Identifying those in the organisation responsible for action is a necessary link to using data effectively. A flexible organisation where communication is strong, service improvement is encouraged, responsibility is identified, and decision-making is decentralised will facilitate action.

Staff and stakeholders should be kept informed. Results and analysis should be made available and presented in a way that is timely and understandable. Staff and stakeholders should be told how you the data have been used to improve services and how important staff and user feedback is. As a result, staff will better understand the value of data and users will see that the library is responsive.

Finally, the more ways that the results can be validated with complementary information, the easier it will be to convince library staff (as well as stakeholders) of the need for change. Survey data corroborated with usage statistics and focus group interviews can provide a powerful three-dimensional picture of an issue. Your results may also show the need to collect data in new or different areas using different methods. And, if you cannot “use” the data to understand or improve services, perhaps it should not be collected.

During the past ten years at the University of Washington Libraries, we have collected an impressive amount of data related to user needs and priorities, use patterns, library satisfaction and the impact of libraries and online resources and services on work. We have invested substantial funding and resources to keep in close contact with our community of faculty and students. So, what have we learned, how have we used our data and what have we done to improve the University of Washington Libraries? I will briefly highlight two areas in which we have used assessment information to make substantive changes: facilities planning and access to online information.

**Library Facilities**

The library as a place is important for students, especially undergraduates. It is a place where they work ... and do much more. For faculty, the library as a place has value as a construct and as a social good, but is primarily a place where the intellectual content they need for their work is made accessible and stored. As content becomes more easily available in a networked environment, faculty and research need for the physical library lessens.

We have used our data in facilities planning for new and renovated library spaces. Since students are our primary users, we design and renovate our libraries to provide student support. This means providing varied seating and user spaces to handle both individual quiet study and collaborative group work, adding computers (both desktop and laptop) that can access not only networked resources, but also have application software for students to do their work – wired teaching areas for both library and class instruction. In the new construction, we increased the proportion of library space for user work areas and in our major renovations, we reduced the amount of space given to housing collections.
We reviewed our hours of opening using survey data (including comments). Changes began in 1998 and included opening libraries for more hours during the week before Autumn Quarter, adding a weekend day of opening and evening hours for three smaller units so that all library units were open weekday evenings and at least one weekend day during the academic quarter, and opening undergraduate library 24 hours a day. Satisfaction with library hours has increased, especially among undergraduates.

We have also used our data in considering consolidation of library units. We have a large decentralized library system with many branch libraries. Three social science libraries were consolidated into our main humanities-social science library in 1995, and our decision was buttressed by our survey and use data. We are currently reviewing our service points and collections locations and, in addition to using existing data, have developed and distributed an in-library use survey during Spring 2002. The survey asked what people did in a specific library, why they came there, and what the libraries could do better to support their use. More than 4,000 completed surveys were returned with initial results confirming undergraduate use of the library as a work place.

**Provision of Electronic Information**

Recent surveys (and focus groups) have shown desktop access to electronic information to be the highest priority – especially for faculty and students. However, importance has varied by subject area, especially for faculty. We also asked about trade-offs given relatively flat funding. Based on survey data and focus group results, we have picked up a number of electronic journal packages, have cancelled print subscriptions where electronic is available in the sciences and health sciences, and now order new titles only in electronic when available. Electronic access to older journals was also identified as a high priority for a number of areas in the sciences, and we have moved aggressively to pick up access to archival collections – using some book money to do so. For undergraduates, we now subscribe to several large full-text sources covering general interest periodicals and have expanded our efforts to provide online course reserves.
Table 4  Top Three Library Priorities for Faculty and Students

<table>
<thead>
<tr>
<th>Library Priority</th>
<th>Faculty</th>
<th>Graduate Students</th>
<th>Undergrads</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full-text to desktop</td>
<td>73.5%</td>
<td>72.8%</td>
<td>54.9%</td>
</tr>
<tr>
<td>Online access to older journals</td>
<td>59.6%</td>
<td>61.8%</td>
<td>40.0%</td>
</tr>
<tr>
<td>Maintain quality of print collection</td>
<td>57.4%</td>
<td>53.3%</td>
<td>24.5%</td>
</tr>
<tr>
<td>Electronic reserves</td>
<td>23.8%</td>
<td>37.5%</td>
<td>49.5%</td>
</tr>
</tbody>
</table>

Fig 4  Faculty Priorities by Academic Area

Fig 5  Subscribe to Journals in Online Format Only
Conclusion

There is keen interest among North American academic research libraries in using quantitative and qualitative data in library management. However, there are a number of obstacles to overcome before this becomes the norm rather than the exception. Usage data need to be standardised and consistent. Different approaches are needed to provide librarians and other staff with the skills to make them numerically and statistically literate. These might include short courses and workshops, as well as hiring staff with expertise in these areas. Organisational attitudes appear to be the most critical factor. Library organisations need to be strategic, flexible and user-centred with a philosophy that encourages the use of data in decision-making.

References


http://www.niso.org/emetrics/


