Interactions Between the Academic Business Library and Research Data Services

Terrence B. Bennett and Shawn W. Nicholson

abstract: The use of numeric data has historical significance in the research of many academic disciplines, but today it is burgeoning. Responses from academic business librarians to a 33-item questionnaire are the basis for this study that investigates the interactions between academic business libraries and other local units supplying numeric data services. In addition to observations about physical location and administrative oversight, special attention is given to the coordination and promotion of data services between the business library and research data service centers. This pilot study reveals some interesting and surprising trends confronting academic libraries and research data centers, while opening new avenues for further research.

Introduction

The impetus for this investigation arose from the authors' own experiences with business reference and research data services in academic institutions. Our informal observations indicated widely divergent practices among institutions with respect to the existence and location of research data services—and the awareness and use of these services by academic business librarians. We hoped that a more structured investigation of these observations would point up some consistent patterns and trends and perhaps even guidelines for suggesting best practices. While the focus of this study is limited to a specific academic discipline, the resulting observations are relevant beyond the area of business librarianship.

We found little prior research in this area, and also determined that current trends may yet be difficult to establish, since models for offering academic research data services seem to be undergoing considerable transformation. We assessed that this topic is a growing concern to practitioners based on indications in the field and in the recent literature. For example, in their survey of business librarians worldwide, Ruth Pagell

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and Edward Lusk note that respondents listed "knowledge of business resources, with a recognition of a needed shift toward statistics" among the most frequently cited competencies needed by academic business librarians.[1]

Previous Surveys of Research Data Services: Literature Review

Despite the paucity of prior publications concerning the intersection of research data services and business libraries in academic institutions, there is a significant body of literature describing issues and trends in general reference services, in business librarianship, and data services specifically, which mirrors the wide variation in how these services actually are offered. The increasing attention to these matters, while coming from different interest groups, often converges in similar conclusions of how best to meet the needs of end users. This supports the usefulness of our attempt to analyze these areas in tandem.

In their general examination of "The Changing Nature of Reference and Information Services," Donald Frank et al. assess the accuracy of predictions made in 1985 about the reference librarian of the future.[2] They conclude that reference librarianship is currently in the midst of an "eclectic period," characterized by "ongoing change."[3] Classical and experimental reference services have merged into "a constantly evolving eclectic model of providing information services in a continually changing information environment."[4] Their conclusions reinforce our own observations about academic business librarians: "Using formal and informal instruction, reference librarians have indeed adopted an increasing role in guiding users through the ever-expanding morass of electronic information. . . . The electronic information explosion has multiplied the variety of information formats and interfaces clients encounter, and has provided additional challenges to librarians as educators and facilitators of end-user access."[5]

In the early 1990s, Westerman attempted to bring attention to the growing concerns of how evolving technologies were affecting access to data within academic business libraries.[6] Focusing exclusively on data tapes, he offers a schematic on the level of assistance provided from within the respondent's library. The overwhelming preponderance of libraries offered "a limited" level of assistance and acknowledged "that the data was run by a computing service in a separate administrative branch from the library."[7] Directors of academic business libraries have long acknowledged the difficulty in communicating between the library and the computer services center. In an effort to find common ground, a joint conference of academic business library directors and directors of computer centers was held in 1996.[8] Reporting on the discussions from breakout groups Michael Enyart notes, "one recurring theme . . . was the growing belief [that] the role of libraries and computing was changing and converging [and, moreover,] that change definitely entailed at least a coordination, or at most a consolidation, of both departments."[9] Wendy Treadwell and James Cogswell, reporting on the University of Minnesota's machine readable data center project—an effort that developed a library-centered approach to delivering data—also indicate that "since the early 1960s . . . computing centers" provided access to machine-readable data files while libraries were "simply not part of this model."[10] By addressing organizational issues that arose from housing data services within the library and the need to "establish relations with vari-

ous departmental data labs on campus," they touch on a central concern of this present study.[11] Although merely anecdotal evidence, their feeling that the process and results were beneficial to all parties is encouraging.[12] Similarly, William Walters, in a discussion of collection development issues surrounding numeric data, confirms the need for the delineation of "scopes and organizational role."[13]

Melissa Lamont, in her analysis of "Critical Human Factors in Emerging Library Technology Centers," offers a contemporary example of the changing nature of reference services that is closely allied with our study.[14] She emphasizes that technological innovations alone have little to do with the success of library services like social science data centers. Much more critical is the extent of staff education concerning the technology; the creation of awareness among potential users of the resources and services offered; and—because such services are likely to overreach traditional organizational boundaries—the ability of administrators to provide the training, support, and funding, and to encourage the nontraditional patterns of communication needed for learning and awareness to take place.

Chris Ferguson and Charles Bunge make similar observations in discussing the need for librarians to complement their traditional service values with the technical expertise demanded of them by the increasing digitization of library resources.[15] The authors echo Lamont and Frank et al. citing the frequently emerging theme of reevaluation of librarians' roles in order to keep up with the dizzying pace of change. For instance, to uphold the reference librarian's traditional value of "equity and equal access to information," the authors maintain that in the digital environment, "this value will take the form of making technology work for everyone."[16] In order to make this happen, the authors point to the need for increasing collaboration between academic libraries and campus computing centers, which must work together to provide users access to, among other tools, "a large array of appropriate data sources."[17]

David Gerhan's article, "When Quantitative Analysis Lies Behind a Reference Question," addresses this need for specialized reference services much more directly.[18] Largely a primer for academic reference librarians, this instructive article asserts that it is not enough for reference librarians to be able to identify the sources for successful data retrieval. In order to deliver accurate and complete data reference service, it is also essential that the reference librarian understand how the user intends to statistically manipulate the data retrieved. While it may not be practical for all reference librarians to become statistics experts, the emergence of instructional articles such as this one indicates the growing need for data manipulation to be combined with traditional reference services.

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Whether discussing general trends in librarianship or examining the specific needs of certain users, all of these works support our observation that users of academic li-

braries are increasingly likely to require research data services. While formal mechanisms must be in place to allow these interactions to occur, it appears that such mechanisms must exist within an organizational structure that is sufficiently flexible to adapt to changes in the availability and delivery of both services. With these ideas in mind, the following study attempts to quantify academic business librarians' state of knowledge regarding the use of research data and services.

Methodology

The Survey / Scope of the Investigation

We developed a survey consisting of 33 questions that sought to identify—from the perspective of academic business librarians—trends and patterns concerning business library services, research data services, and the administrative coordination and working relationships (if any) between the two (see Appendix for a copy of the survey). We first distributed this survey to all attendees at the annual meeting of Academic Business Library Directors (ABLD) in May 2001. We realize that this group does not represent a random cross-section of all academic business libraries, but because of the exploratory nature of our study we believe it was important to initially target institutions known to have strong business libraries (and that were also likely to offer research data services), that could offer us immediate feedback before we distributed the survey to a larger population.

This was followed up with distribution of a Web-based version of the same survey (with slightly expanded introductory remarks, which arose from the initial group's request for further clarification) via two listservs—SLABF-L: Special Libraries Association Business & Finance Division and BUSLIB-L: Business Librarians. In order to keep our study manageable, and to be able to include some discipline-specific questions in our survey, we only looked at business librarians for this exploratory study. We realize, however, that research data services are significant to many academic areas. Therefore, certain issues that are relevant to the provision of research data services are not discussed here; these issues may have surfaced if our investigation had not been focused on a single academic discipline.

A Problem of Semantics: Defining Research Data Services

We are aware that one of the very phenomena that we set out to explore—the way that research data services are defined and made available at colleges and universities—is marked by such extensive variation that it is even difficult to identify a common vocabulary to describe these services. For example, while one institution may offer such services from a separately identifiable, highly visible electronic data services center, a comparable institution may incorporate similar services with general reference within the library, or offer them through a marginalized quantitative lab associated with an academic department in the social sciences that is little-known to the rest of the institution.

Based on comments in returned surveys and informal verbal feedback from some potential respondents, we are aware that, despite our best efforts to explain clearly the services we were trying to define, some business librarians did not fully understand our intentions and may have selected themselves out of the respondent pool in the

belief that there were no such arrangements at their institutions. The low number of responses and number of incomplete responses was, itself, very telling. We attribute much of the non-response to persistent confusion about the nature and structure of data research centers at academic institutions.

We realize that there is confusion inherent in our terminology, and we grappled with our word choice and labored over explications to our phrasing in the preface to our survey. We settled on "research data services centers" as the most suitable generic phrase to describe any of a number of different types of units at academic institutions that offer resources with considerable numeric content. Because we knew that specific set-ups of such units were so varied, we pointedly decided not to augment our definition with examples—lest a potential respondent select out of the survey because our specific examples did not match the local institution's arrangement. Nonetheless, from information available at the Web sites of certain institutions that gave us non-anonymous responses we know that some respondents incorrectly answered no to the question: Does your institution have a research data services function? Further research will have to be designed in a way that avoids the negative effects of this confusing terminology.

Survey Results

Respondents

We specifically requested that the survey be completed by the person in charge of business library services, and the variation in titles / levels of responsibility of respondents is consistent with the variation among business library directors. See Pagell and Lusk for more detail about the diversity of academic business library directors.[19] From a total of 35 responses, 33 were deemed valid. While we allowed respondents to remain anonymous, we know from our targeted sample that our respondents were primarily from four-year colleges and universities in the United States—although we had at least one response from Canada and at least one response from a community college. This number of responses cannot bear up to statistical analysis. However, an examination of these responses allows for some interesting observations and points towards several paths for additional research and analysis.

Location of Business Library and Research Data Services Centers

Since it was our specific intention to investigate the interactions between business library services and research data services at academic institutions, we first sought information about the location of both the business library and the data services center(s). Thirty percent of respondents indicated that research data services were *not* offered at their institution and, therefore, did not complete the remainder of the survey. [One respondent indicated initially that data services were not offered at the institution, but provided responses to follow-up questions that clearly indicated that such services were indeed available within the central library and several academic departments—this exception is further evidence of the semantic confusion discussed above.] Of the remaining 70 percent of respondents, 39 percent of these indicated that the business library was located within the business school building, 30 percent said it was part of the central library,

and 13 percent indicated that the business library occupied an identifiable area within the central library. The remaining business libraries were either in a separate building, or part of a shared library building (e.g., the business and engineering library) (figure 1).

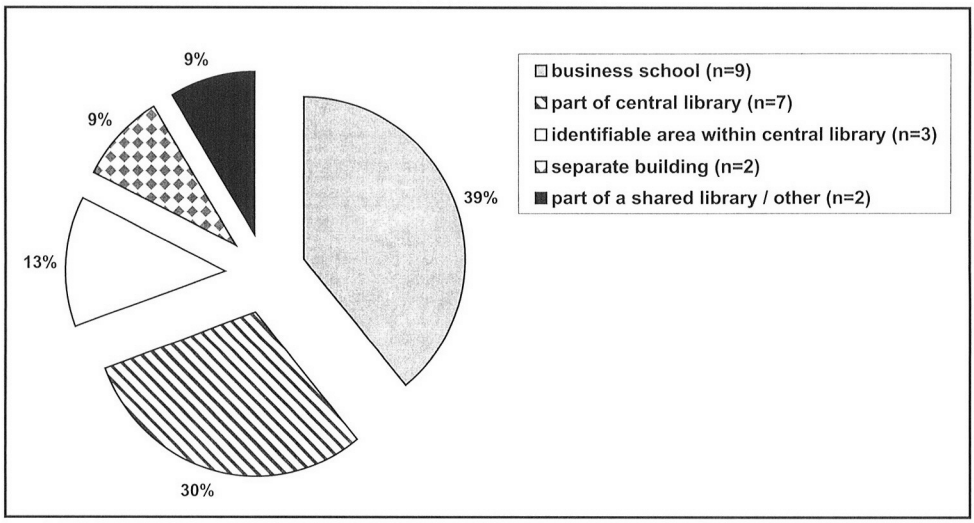

Figure 1. Location of Business Library. Of the respondents who indicated that research data services are offered at their institution (n=23) the chart above shows the location of the business library within these institutions.

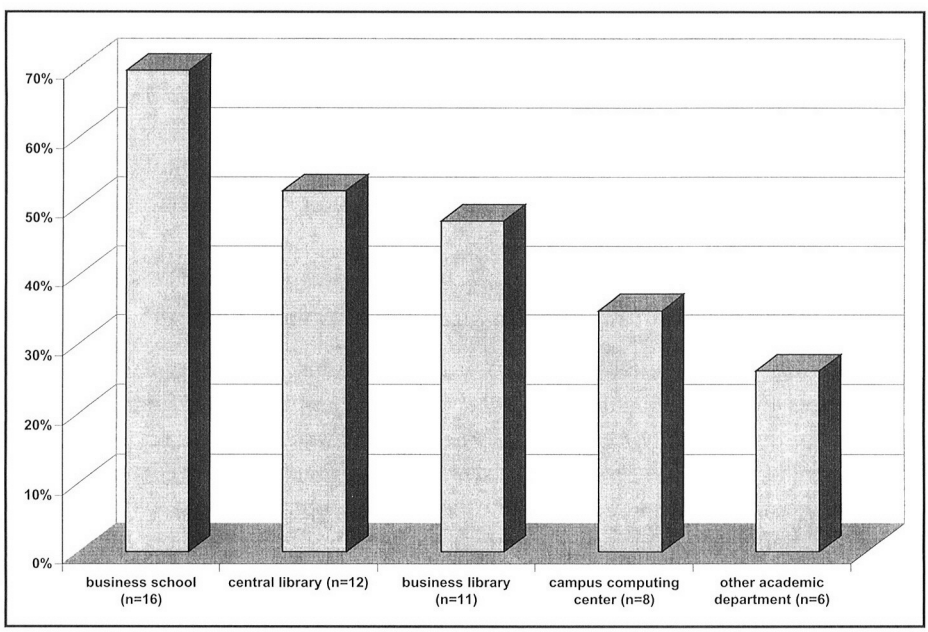

Figure 2. Location of Research Data Service Centers. For the respondents who indicated that research data services are offered at their institution, the chart above shows the location(s) of the data service centers within these institutions. The total exceeds 100%, as most institutions indicated that data services are offered at multiple locations.

Of the respondents who indicated that research data services *are* offered at their institution, fully 70 percent of these indicated that such services are offered at the business school (among other locations; only two institutions reported that the business school was the *only* location where research data services are offered). Other units offering research data services include the central library (52 percent; again, only two institutions reported this as the sole location), the business library (48 percent; not the sole location at any institution), the campus computing or information systems department (35 percent), and other academic departments (26 percent) (figure 2).

Interaction Between Business Libraries and Research Data Services

As noted above, among the respondents who indicated that research data services are offered at their institution, most of these (83 percent) noted that such services are offered from more than one campus unit. Thus, it is useful to look closely at the responses to the following question: With which one of the data service centers selected . . . does the business library have the most interaction? Business libraries interacted the most frequently with data services centers located within the central library (43 percent of respondents), with an almost equal number (39 percent) citing the business school data services center for frequency of interactions. But the response to this question seems to be largely correlated with the location of the data services centers (figure 3). In every instance that the central library was one of the units that offered research data services, this was the unit noted to have the most interaction with the business library—even though in only 40 percent of these cases was the business library also located within the central library.

Among the 48 percent of respondents who indicated that data services were offered at the business school and *not* at the central library, 91 percent of these indicated that they interacted most frequently with business school data services.

Among the 39 percent of respondents who indicated that data services were offered by both the business library and the business school, fully 67 percent of these interacted most frequently with data services in the business school (and not surprisingly, in 83 percent of those cases the business library was located within the business school, thus reinforcing the logical hypothesis that physical and administrative proximity would drive the frequency of interaction).

It was also interesting to note that despite our efforts to account for all possible scenarios concerning the types of arrangements that might exist between business libraries and data service centers (probably resulting in a prohibitively extensive survey, in retrospect), we still had some respondents indicate that their specific situation might not be adequately reflected by the survey responses. For example, one respondent noted that the business library interacts most frequently with the data services unit in the central library, and that "a librarian in the business library also serves in the data services unit, along with another librarian and staff from the computing center." However, "Data requests in the business library most frequently result in referrals to data services offered by the business school" since the business library patron is not looking for the social science data offered by the library data services unit.

			Data center location with which business library has most frequent interaction							
			Business school		Central library		Computing center		Other	
Business Library Location	No.	%	No.	% Total	No.	% Total	No.	% Total	No.	% Total
Business school	9	39%	7		0		0		0	
Part of central library	7	30%	1		4		1		1	
Identifiable area within central library	3	13%	0		3		0		0	
Separate building	2	9%	0		3		0		0	
Part of a shared library / other	2	9%	1		0		0		2	
	23	100%	9	39%	10	43%	1	4%	3	13%

Figure 3. Interactions Between Business Libraries and Data Service Centers. For the respondents who indicated that research data services are offered at their institution, the chart above shows the location of the business library and the data service center with which the business library has the most frequent interactions.

As in many cases, the exception answers—those that could not be answered from the choices provided in the survey—proved to be very informative, and supported our impression that there is a wide divergence across institutions as to the manner in which research data services are offered, and the extent to which these services are known to business library staff and their patrons. For example, one respondent indicated that the architecture and planning library works most closely with the business library in offering data services to their users, and stated, "I'm sure that there is science data out there too."

Coordination of Administration and User Services

When asked to rate on a 1-to-5 scale their working relationship with research data services (with 1 representing a "distant" and 5 a "close" relationship), most business librarians indicated that they worked closely with research data services (average: 3.64) (figure 4). Not surprisingly, the largest proportion of business libraries that noted a close working relationship with research data services also indicated that the two units had the same administrative oversight (43 percent). However, it was surprising to discover that only 10 percent of the instances where the two units had both the same administrative oversight and a close working relationship were at institutions where the business library and the data services center were both located in the business school.

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Despite this variation in levels of administrative oversight, most respondents indicated a low frequency of referrals from the business library to the data services center (average: 2.50 on a 1-to-5 scale), with fully 95 percent ranking this frequency at 3 or below (figure 5). Among those who described the types of referrals from the business library to the data services center, a large majority (71 percent) indicated that such refer-

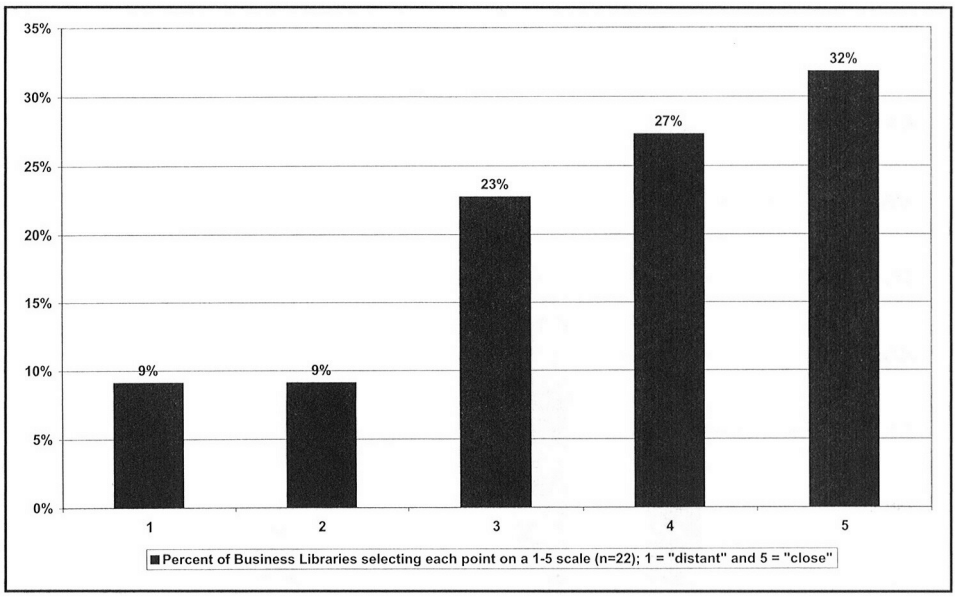

Figure 4. Working Relationships Between Business Libraries and Data Service Centers. For the respondents who indicated that research data services are offered at their institution, the chart above shows the perceived working relationship of the business library and the data service center. On a 1-to-5 scale (with 1 representing a "distant" and 5 a "close" relationship) the average among all respondents is 3.64.

rals were either for specific databases not held by the business library or because the patron required statistical manipulation of data that was beyond the expertise or level of service offered by the business library.

Marketing and Promotion

In view of the above-noted low levels of interaction between business libraries and data service centers, it is interesting to look at how data services are promoted to potential users. In response to the query: Who informs the campus community about data products? most respondents (87 percent) indicated that it was the business library; 52 percent cited both the business library and the data services center; and 35 percent listed the business library, the data services center, and at least one other library unit or academic department. It was surprising then that only 57 percent of respondents stated that the business library includes a link from its Web site to the data services center, but not unexpected that only 35 percent noted that data services provided a link to the business library.

Other Results / Unexplored Issues

We also asked about administrative and budgetary authority of business librarians, funding and collection management policies related to data services, formal or informal liaison relationships between business libraries and data service centers, frequently used or frequently requested data products, and the academic background of persons

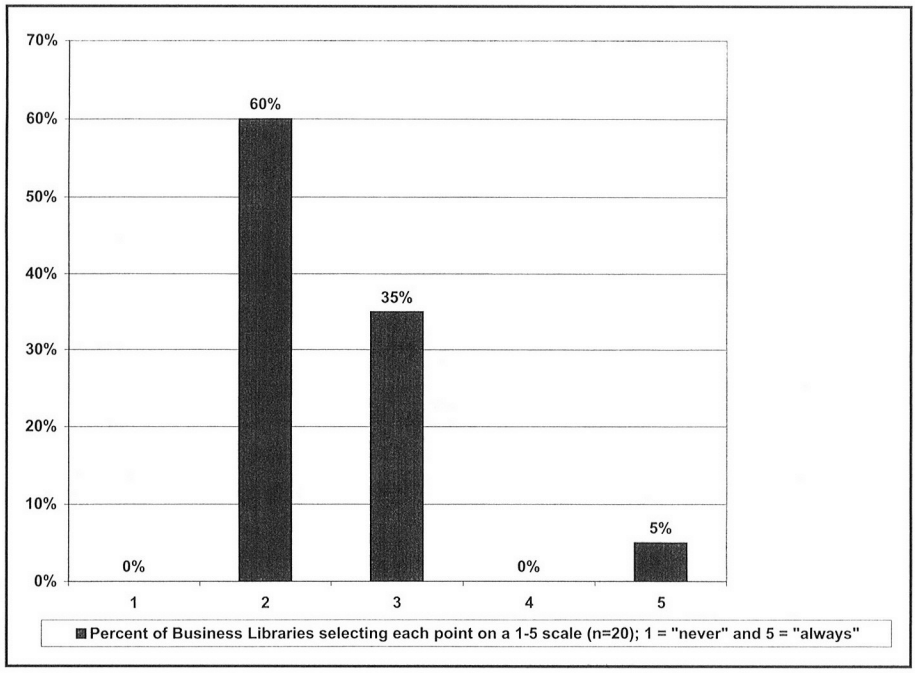

Figure 5. Frequency of Referrals from Business Libraries to Data Service Centers. For the respondents who indicated that research data services are offered at their institution, the chart above shows the frequency of referrals from the business library to the data service center with which the business library has the most frequent interactions. On a 1-to-5 scale (with 1 representing "never refer data requests" and 5 "refer all data requests"), the average among all respondents is 2.50.

in charge of data service centers (see Appendix for specific questions). In general, the responses to these questions reflected the wide divergence of practices among institutions that we expected to find—a divergence so broad that we were unable to identify noticeable trends or common practices. It is worthy to note, however, that 39 percent of respondents stated that the person in charge of the data services center possessed an MLS, whereas another 26 percent had an MBA, other masters, or a PhD. Of the MLS data service librarians, 67 percent were at institutions where the data services center was located within the central library.

A significant issue that we did *not* explore in this survey—and one with critical implications for academic librarians in all disciplines who receive requests for data with increasing frequency—is the matter of training and expertise in understanding and manipulating data. While we only considered questions of who is primarily responsible for handling data requests, we did not delve into the rich avenues of inquiry concerning the extent to which various data providers actually help patrons use the data. It would be very interesting to supplement our investigation with an exploration of levels of expertise among data providers in academic institutions, as well as measures that are being utilized to enhance that expertise. Complementary lines of inquiry would involve examination of formal coordination and cross-referral among librarians and research data services staff, as well as an exploration of patron expectations of expertise and value-added services from various data providers.

Conclusion /Consideration for Further Research

This study sought to identify some best practices for interactions between academic business libraries and other units providing numeric data, in order to suggest guidelines to those institutions that are initiating or revisiting processes to meet the research data needs of business library users. The survey responses point out vast differences not only in the way that academic business libraries interact with other units supplying research data services, but also with the very way that research data services are defined. Because of the transitional nature of how numeric data services are offered (some institutions are just beginning to establish data centers or locate such centers within the library or to hire data specialists), it became a bigger task than we anticipated to gather sufficient quantifiable information that would allow us to offer strong recommendations about how best to offer these services.

In explaining the results of our investigation, we cannot overlook methodological shortcomings (definitional and sampling issues). As stated previously, we do not purport to have a response rate that allows us to draw concrete conclusions about the entire population of academic business librarians. Nonetheless, we believe that the data we have permit us to report some interesting observations in such areas as interdepartmental referrals and closeness of working relationships. For example, the noticeably low frequency with which business libraries refer questions to a data service centers coupled with the surprisingly high degree of reported closeness in working relationship points up the interesting nature of reference services at the responding institutions. Not surprisingly, the line of administrative oversight foretold significant implications for referrals and working relationship between the business library and the data service center.

Although the relative lack of research evidence leaves many of the key questions unanswered, the further development of research data services within business libraries and/or at other locations within their institutions brings many key issues to the forefront. Understanding these issues will involve further research into questions such as: (a) How do we best define research data services? (b) Is there a statistically significant correlation between administrative oversight and the nature of referrals? (c) How do we identify and measure the influence of other units supplying research data services? (d) Is there evidence that physical proximity drives frequency of interaction?

It will be very interesting to continue to study this field as it unfolds. Administrative oversight, physical configurations of service areas, matters of staffing, training, budgeting, and overall elimination of redundant efforts are issues of concern to all service providers. The academic library community—in business and other disciplines—will want to monitor how these concerns are successfully addressed.

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Appendix

Data Service Questionnaire

Interactions Between Academic Business Librarians and Campus Data Services

The purpose of this survey is to gain insight into the interaction between academic business librarians and individuals in their institutions who provide numeric data services.

Numeric data services for academic researchers are offered in a variety of ways. For example, several institutions have a separate data center within the library; other institutions have a data lab associated with an academic department; and others have not yet developed a formal numeric data services center, relying instead on informal mechanisms for providing data for research. In short, there are a number of arrangements through which data support for academic research is offered by persons or units whose resources include considerable numeric content.

Our research is intended to discover how numeric data services are offered at various institutions and then to consider specifically how academic business librarians interact with campus data service providers—as numeric data is frequently used to support business-related academic research. We are seeking only one response per institution, preferably from the person in charge of providing business library services. Follow-up research may focus on this issue from the viewpoint of numeric data service providers.

About the Business Library

Although we use the phrase "business library" in the following questions, we also mean to include all business library services at institutions that do not have a separate business library.

1. Which best describes business library services at your institution? The business library:
   - is housed within the business school building.
   - has its own building.
   - is part of a shared library building (e.g. the business and engineering library).
   - occupies an identifiable area within the central library.
   - is a part of the central library's services and collections.
   - other (specify):

2. Please provide the title and/or position of the person to whom you report:

3. Do you have decision-making authority over the budget for the business library?
   - Yes
   - No

About Data Services

4. Does your institution have a research data services function?
- Yes
- No

If you answered no, please skip to the demographic data beginning with item #27.

5. Which of these provides data services at your institution? (check all that apply)
- The business library
- The central library
- The business school
- Another academic department (specify):
- Campus computing/information systems
- Other (specify):

Most of the remaining questions presume that both the business library and at least one other unit at your institution work with data. If this is not true for your institution, please answer all questions that are applicable to your situation.

6. With which one of the data services centers selected in Item #5 above does the business library have the most interaction?
a. Specify one from above list:
b. Not applicable—the business library provides comprehensive data services and does not interact with any other campus data service centers.

Coordination of Administration and User Services

[Please respond to the remaining questions with reference to the one data services center specified in item #6, above.]

7. How would you rank the working relationship between the business library and the data services center? Select from the scale below with 1 being a distant working relationship and 5 being a close working relationship.

The two units have a distant relationship <————> the two work very closely together.

1 2 3 4 5

7a. Describe some specific features of this working relationship that explain the above ranking:

8. Administratively, how would you rank the business library and the data services center? Select from the scale below with 1 indicating separately administrated units and 5 indicating that the two units have the same administrative oversight.

Separate administrative oversight <————————————> Same administrative oversight.

1 2 3 4 5

8a. Describe some specific features of this administrative relationship that explain the above ranking:

9. How would you rank the frequency of referrals to the data services center for data requests that are initiated in the business library? Select from the scale below with 1 indicating that the business library never refers data requests and 5 if the business library refers all data requests.

Business library NEVER refers <————————————> Business library refers ALL requests.

1 2 3 4 5

9a. Describe some specific features of these service referrals that explains the above ranking:

10. Does a business librarian serve as a liaison to the data services center?
- Yes
- No

11. Are any business librarians specifically assigned to work with data?
- Yes (how many?)
- No one has been specifically assigned, but most handle data-related duties.
- No

Collection Development, Acquisition, and Storage

12. Does the business library have a collection development policy for data?
- Yes
- No

13. Who makes decisions about the acquisition of business data? (check all that apply)
- The business library
- The data services center
- The units make these decisions together
- Neither unit makes these acquisition decisions (explain):

14. Which statement(s) best describes the storage of business data? (check all that apply)
- The business library maintains a collection of business-related data.
- The business library holds a collection of documentation—manuals, guidebooks, and codebooks—for business data maintained by the data services center.
- The data services center maintains business data, and the associated documentation is only found within the data services center.
- Other (describe):

15. In what formats does the business library collect data products? (check all that apply)
- Print
- Microfiche
- Magnetic tape
- CD-ROM
- Diskette
- Online / remote
- Web
- In all formats
- Not applicable

16. In what formats does the data services center collect data products? (check all that apply)
- Print
- Microfiche
- Magnetic tape
- CD-ROM
- Diskette
- Online / remote
- Web
- In all formats
- Don't know

Funding

17. Which campus unit is responsible for funding the purchase of data? (check all that apply)
- Library
- Data services center
- Computer center
- Academic department(s) (specify):
- Other (specify):

18. How much does the business library spend annually for data products in all formats?
- Dollar amount per year (if exact amount is unknown, please provide an estimate or a range):
- Don't know
- Not applicable

18a. Approximately what percentage of the business library's total annual budget is the above amount?

19. How much does the data services center spends annually for data products?
- Dollar amount per year (if exact amount is unknown, please provide an estimate or a range):
- Don't know

Marketing and Promotion

20. Who informs the campus community about data products? (check all that apply)
- Business library
- Data services center
- Other library division / unit (specify):
- Academic department(s) (specify):
- Other (specify):
- No one

21. Does the business library provide a link from its Web site to the data services center?
- Yes
- No
- Don't know
- Doesn't have a Web site

22. Does the data services center provide a link from its Web site to the business library?
- Yes
- No
- Don't know
- Doesn't have a Web site

Products

23. Please list the five most highly used data sources in the business library.
1.
2.
3.
4.
5.

24. Please list the top five data sources for which business library users are referred to the data services center:
1.
2.

3.
4.
5.

25. Which data sources would you like to have at your institution that you currently don't have?

26. Additional comments: describe any other features of the interaction between the business library and the data services center at your institution that have not been addressed here.

Demographic Information

27. What is your job title?

28. (Optional) What is the name of your institution?

29. At the data services center with which the business library has the most interaction:
- What is the job title of the person in charge?
- Don't know

30. What is the academic background of the person in charge of the data services center? (check all that apply)
- MLS (or other library degree)
- MBA
- Other masters (specify):
- PhD (in what discipline?)

31. (Optional): What is your name?

32. May we contact you to discuss this topic further?

33. If yes, what is your e-mail address?

Notes

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