CHAPTER SAMPLER

Supporting Faculty Outreach

Building the Librarian-Faculty Connection Through Consultation and Assistance

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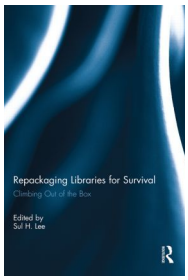

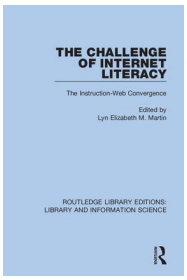

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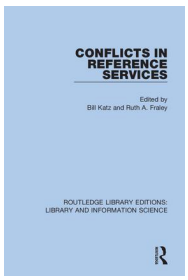

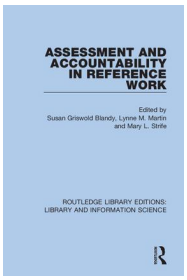

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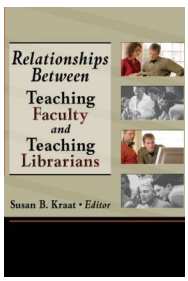

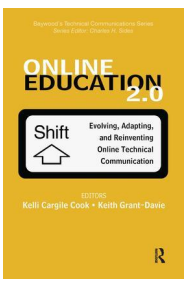

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Repackaging the Library: What Do Faculty Think?

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ABSTRACT. *Ithaka S+R's Faculty Survey 2009, the 4th iteration since 2000 of this survey of faculty members at colleges and universities across the United States, offers insights into how faculty attitudes about electronic media and technology have evolved over the last decade. In this article, the authors focus on the aspects of the survey that most directly relate to the work of research libraries, including commentary on information discovery and use, the evolving role of the library, and changing attitudes toward access and preservation of journal current issues and backfiles. The responses to this survey point to some of the more valuable services libraries offer (or could offer), as well as highlighting the many challenges facing libraries and putting an exclamation point on the widely shared view that the libraries cannot rely on what have been their traditional strengths.*

It is a pleasure and privilege to have been asked to participate in "Climbing Out of the Box: Repackaging Libraries for Survival" and to contribute to this collection of articles. We are in the very early stages of a dramatic transformation, where the primary mechanism for transmitting knowledge is shifting from print on paper to digits on the wire. The fundamental challenge facing all of us who operate in the scholarly communications environment is that the infrastructure that has served us so well for centuries is not optimized for storing, preserving and disseminating knowledge in digital form.

Research libraries are an absolutely critical component of the traditional knowledge dissemination infrastructure. But as one looks to the future and

imagines the extreme case—a day when all knowledge is available in digital form—it becomes obvious that the buildings, shelves, and systems designed to efficiently and effectively store and make accessible books and other physical objects will no longer be valuable. Someday the "warehousing" role of libraries may not be necessary at all, or at the very least will be profoundly diminished. This is not to argue that we will see such a day soon, but large amounts of content, led by journal literature over the last decade, are now used primarily in electronic form. Consequently, in response to user preference and pressures to reduce costs, libraries are canceling print subscriptions in favor of electronic access and moving print off shelves. Moreover, publishers increasingly are naming the e-journal as the copy of record and are beginning to consider ceasing print publication. "Climbing out of the box" will require that libraries shift the emphasis of their activities away from the management of physical objects to the provision of services to support and care for electronic content.

Our contribution to this conversation is to share initial findings from a survey of faculty at institutions in the United States conducted during the fall of 2009. This survey, the fourth in a series that has been conducted every 3 years since 2000 (2000, 2003, 2006 and 2009), offers insights into how faculty attitudes about electronic media and technology have evolved over the last decade. In this article, we focus on aspects of the survey that most directly relate to the work of research libraries, including commentary on information discovery and use, the evolving role of the library, and changing attitudes toward access and preservation of journal current issues and backfiles.

Before presenting our findings, we would like to offer some general context about our research and highlight how we think the results should be used. We surveyed a large number of faculty at 4-year colleges and universities in the United States. Since no definitive census of this population exists, there is inevitably risk of sample and response bias in the results. The ways in which we have worked hard to manage this bias are discussed briefly in the *Methodology* section, and we have also developed increasing confidence over the years in the reliability of the results as we have developed tracking data from survey to survey. Nevertheless, these results should not be regarded as definitive statements about faculty attitudes as a population. This is business-oriented market research, not academic social science. When we refer to faculty in the ensuing discussion, we are discussing the views of the faculty who responded to this survey. Over the years, these responses have proven to predict future developments and trends, but we do not assert that they are representative of all U.S. faculty.

Our objective is to offer data that will provide valuable input to libraries (and societies and publishers and others working in scholarly communications) as they develop strategies to continue to serve the academy during this time of change. The availability of responses to the same questions over

a period of time is extremely important to the interpretation of our findings. We present many of the findings in terms of the percentage of faculty that have responded to a question in a specific way (e.g., rating a view as "very important"), but we regard the absolute value of those responses as less important than the trend represented by a series of responses over time. These trends are the data that we believe most reliably point to the direction in which faculty views are headed, and that should be most useful in guiding the development of strategies. We encourage readers to compare the findings with your own experiences interacting with faculty and combine them with data you collect in your local institutions to develop your strategies for the future. We hope these results contribute to the collective understanding of the rapidly changing environment, and that they prove helpful in pointing the way to effective approaches.

METHODOLOGY

Since 2000, our faculty surveys have examined how new technologies are impacting faculty attitudes and behaviors. Every 3 years, we have conducted large-scale studies of faculty members to learn more about their attitudes toward the ongoing transition to an increasingly electronic environment. These surveys have been limited to faculty at colleges and universities in the United States that grant bachelor's degrees or higher. They have been designed to allow for stratifications in each of the major arts and sciences disciplines, as well as in a number of professional fields. We conducted these surveys in the fall of 2000, 2003, 2006, and most recently 2009, updating the questionnaire to match the rapidly changing environment but keeping many questions unchanged to allow for tracking and analysis of the evolution in faculty attitudes and practices (Guthrie & Housewright, 2008; Housewright & Schonfeld, 2008; Schonfeld & Guthrie, 2007). Unless specified otherwise, all findings presented in this report are based on the 2009 responses.

The faculty responses were collected from a survey that was mailed to 35,184 faculty members in September 2009. The names and addresses of these faculty were purchased from a commercial service's list of 661,000 faculty in 34 higher education disciplines. Certain fields were oversampled to ensure adequate responses for analysis, with an every nth randomization mechanism to select the target number of faculty members in each field.

A total of 3,025 complete responses were received and tabulated, for a response rate of approximately 8.6%. Demographic characteristics, including discipline, are self-reported, and disciplinary weightings are utilized to construct aggregate findings. Table 1 and Table 2 contain information on the breakdown of responses across demographic categories. In 2006, we deposited the data set with ICPSR for long-term digital preservation and access, and we intend to do so again with the 2009 data set.[1] code following the

TABLE 1 Respondents by Institution Size

Institution size	Respondents	Share (%)
Very large	893	29.5
Large	482	15.9
Medium	1038	34.3
Small	361	11.9
Very small	251	8.3

word "Share" in Table 1 without my version of Word crashing. Please note that the Table 1 Head ends there.

With thousands of survey responses and hundreds of data points for each returned survey, this summary report can only scratch the surface of the amount of information available to us. We have focused this analysis and the report on findings to the data that we think are most relevant for leaders of research libraries.

DISCOVERY AND THE EVOLVING ROLE OF THE LIBRARY

Scholarly use of information services has changed substantially in recent years. Research practices and teaching methods are shifting and evolving in ways that seem to vary by discipline. The availability of new network-level services, such as digital content resources, a variety of new kinds of discovery tools, new services for information organization and use, and scholarly and pedagogical interaction and collaboration tools, have been the most important factors in motivating these changes. This section examines some of the most important trends in information discovery and use, as well as the profound challenges posed for information service providers and intermediaries, caused by the fact that these services are increasingly provided online rather than locally.

Traditional research practices relied on access to physical materials held in a library and locally implemented library-provided tools for discovery of these materials (e.g., books, journal articles, manuscripts). Today, there are numerous alternative avenues for information discovery, and libraries

TABLE 2 Respondents by Disciplinary Grouping

Disciplinary grouping	Respondents	Share (%)
Area studies	191	6.3
Humanities	652	21.6
Social sciences	1154	38.1
Sciences	791	26.1
Other	237	7.8

are challenged to determine what role they should appropriately play in this new environment. Changing behaviors and practices increasingly put the academic library at risk of being disintermediated from the discovery process, a possibility that, if realized, could cause libraries to be irrelevant in one of their core functional areas. This section examines how patterns of information discovery and usage by faculty members are changing and the implications of these changes for their perceptions of traditional and emerging roles of the library.

Information Discovery and Use

Since our first faculty survey in 2000, responses have indicated that faculty members are steadily shifting towards reliance on network-level electronic resources, while relying less on locally provided tools for discovery. This section examines this trend through the lens of several questions posed to faculty about their information discovery and usage behaviors.

Versions of this study since 2003 have asked faculty to select their "starting point" for research from a list of four broad categories:

- the library building,
- your online library catalog,
- a general-purpose search engine on the Internet or World Wide Web such as Google or Yahoo, and
- a specific electronic research resource / computer database.

As Figure 1 illustrates, the library's physical edifice and catalog have declined steadily as starting points for research. The research process is no longer likely to begin with a face-to-face consultation with a librarian, a visit to the library's special collections service points, or a search of the online library catalog. Rather, our respondents most often turn to network-level services, including both general purpose search engines and services targeted specifically to academia. These services have steadily grown in importance to a growing share of faculty members, and there is every reason to expect this pattern to continue. Although they may rely on resources licensed by the library, their pathway for discovery of these materials no longer goes through the library, except in a very technical sense; their access is only facilitated by the library "behind the scenes."

Of all disciplines, respondents in the sciences remain the least likely to use library-specific starting points; only about 10% of these scientists start their research at either of the library-specific starting points, whereas approximately 30% of the humanists do so (see Figure 2). Most of this difference is explained by their relatively different usage of the online library catalog. We expect this difference is because of the fact that humanists are

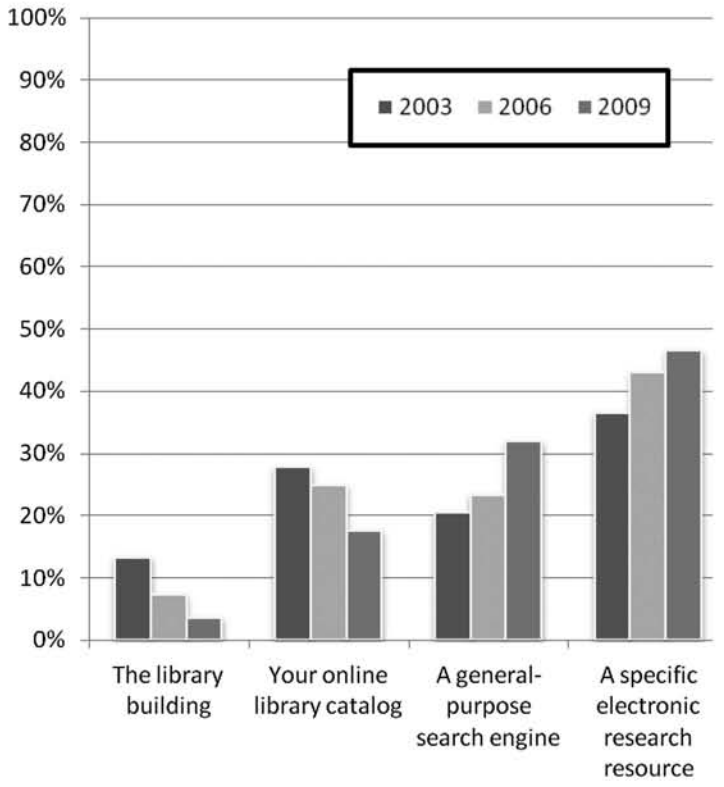

FIGURE 1 Starting Point for Research Identified by Faculty in 2003, 2006, and 2009.

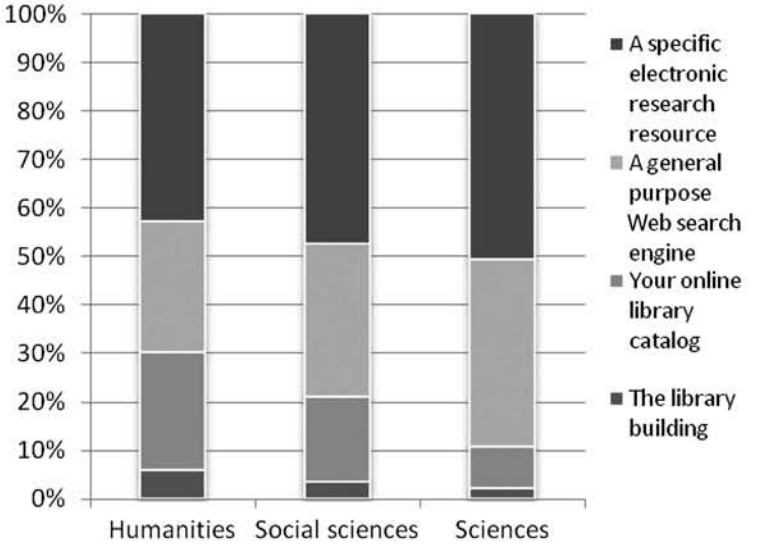

FIGURE 2 Starting Point for Research Identified by Faculty, by Disciplinary Grouping.

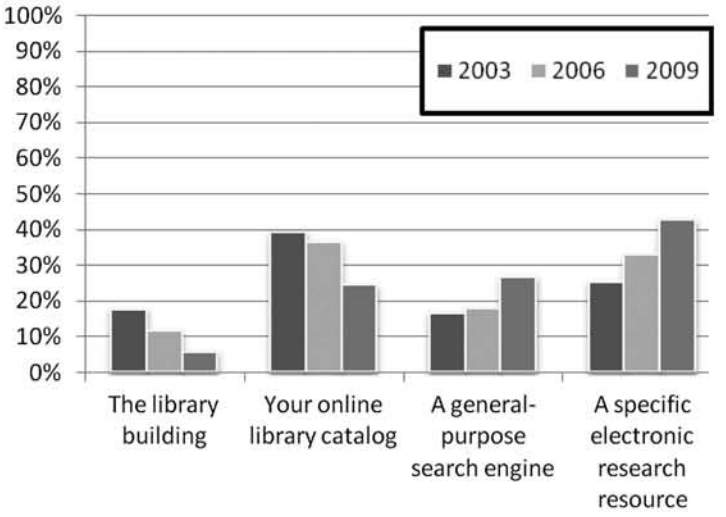

FIGURE 3 Starting Point for Research Identified by Humanities Faculty in 2003, 2006, and 2009.

generally more reliant than are social scientists and scientists on monographs for their research and teaching. Monographs have not made as complete a transition to digital formats as have journals.

Still, notwithstanding their reliance on books, respondents in the humanities have also trended steadily away from library-specific starting points and toward the network level (see Figure 3). These data indicate that network-level services are increasingly important for discovery, not only of monographs and journals but also of archival resources and other primary source collections. And, as book digitization projects advance and the opportunities to use full-text search more broadly in the discovery of monographs grow, this pattern seems likely to develop further.

In the 2009 faculty survey, we drilled deeper into this issue, asking faculty members who report starting their research with a specific electronic research resource a question about whether this resource is discipline-specific or covers multiple disciplines. Our respondents tend to prefer electronic resources specific to their own discipline over those that cover multiple disciplines (see Figure 4). This pattern holds across disciplines, although these social scientists are relatively more reliant on multidisciplinary resources than are the humanists or the scientists. We speculate that the use of resources focused on a specific discipline may simplify the research process for scholars, reducing their need to sift through unrelated materials in their search for items of interest. And targeted resources may be able to offer discovery mechanisms and other tools that speak directly to a discipline's unique research needs and practices, further facilitating an efficient and effective research process.

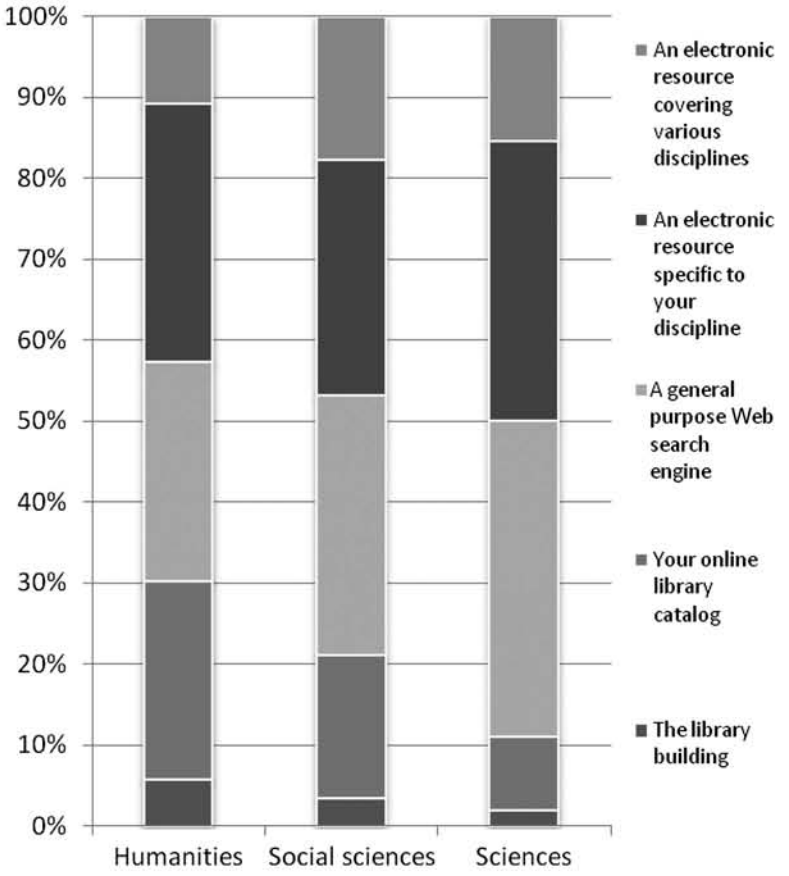

FIGURE 4 Starting Point for Research by Disciplinary Grouping, With Responses of "A Specific Electronic Research Resource" Broken Down Based on the Complementary Question "Which of the Following Types of Specific Electronic Research Resources Would You Be Most Likely to Start With?"

The Changing Roles of the Library

As faculty research and teaching practices continue to shift in response to their rapidly changing information environment, their uses of the library also change, as does their perception of the value the library offers. Faculty used to rely almost exclusively on the library for the scholarly materials they needed for research and teaching, and librarians guided faculty to and otherwise facilitated the discovery of these materials. As scholars have grown better able to reach needed materials directly online, going to or using the library is not essential to carrying out research and so faculty are turning to other options, as the previous section on shifting discovery practices illustrated. The library must evolve to meet these changing needs. To do so effectively requires awareness of how faculty members evaluate

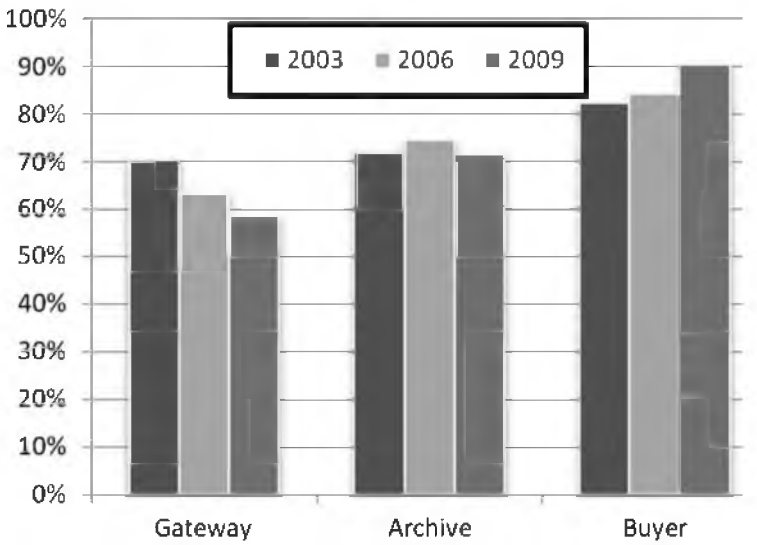

FIGURE 5 Percent of Faculty Rating These Roles of the Library as Important in 2003, 2006, and 2009.

different existing library roles and react to potential changes in library services. Since 2003, the Faculty Survey has asked about faculty perceptions of the importance of three traditional functions of the library:

- "The library is a starting point or 'gateway' for locating information for my research" (which we refer to as the "gateway" function)
- "The library pays for resources I need, from academic journals to books to electronic databases" (which we refer to as the "buyer" function)
- "The library is a repository of resources—in other words, it archives, preserves, and keeps track of resources" (which we refer to as the "archive" function)

Figure 5 illustrates the gradual decline in the perceived importance of the gateway function over time and the gradual increase in the perceived importance of the buyer function among our faculty respondents. Over time, the gap between roles has grown substantially. While the buyer role has always been important to the most faculty members, it is now *by far* the most important of the three: while 90% of faculty members view this buyer role as very important, 71% and 59% now view the archive and gateway roles as very important, respectively. As individual faculty subscriptions have declined in favor of an increasingly broad set of library-licensed resources, faculty perceptions of the importance of the library as their "purchasing agent" has steadily increased.

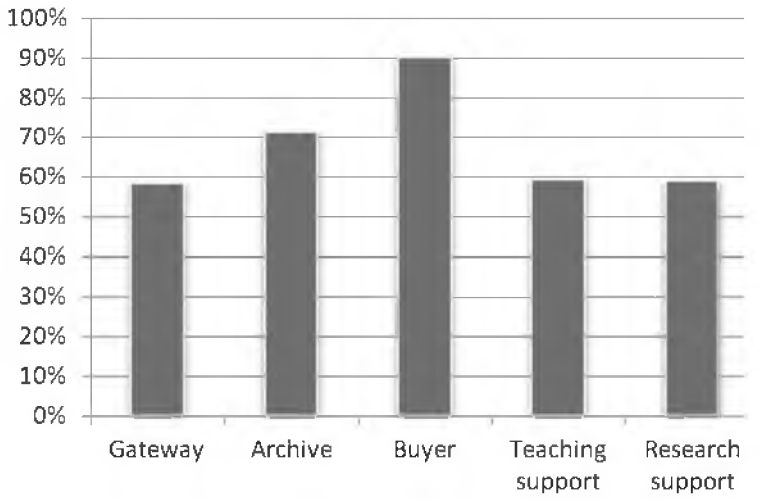

FIGURE 6 Percent of Faculty Rating These Roles of the Library as Important.

The gateway, archive, and buyer functions are among the core traditional roles of the library. But many believe that these historical roles will not be the main focus of libraries in the future, and envision the transformation of the library from an institution focused on acquiring, maintaining, and providing services centered on a local print collection into a more electronic hub offering a variety of services to support campus needs for research, teaching, and learning (Esposito, 2006; Lewis, 2007; Ross & Sennyey, 2008). Many libraries have made significant investments in such a transformation, reducing print collections or moving them to less central locations to enable the use of prime real estate for new learning and collaboration services such as information commons (Lippincott, 2010). In addition, libraries are taking on new research-support roles, providing digital information curation and management services and even establishing a new professional identity for themselves as "informationists" (Brandt, 2007; Oliver, 2005).

To evaluate the impact of these transformative services, our 2009 faculty survey asked faculty about their perceptions of two additional roles for the library beyond the three already reviewed:

- "The library supports and facilitates my teaching activities" (which we refer to as "teaching support")
- "The library provides active support that helps to increase the productivity of my research and scholarship" (which we refer to as "research support")

As Figure 6 illustrates, a roughly equal share of faculty members rate these roles as very important, and the importance of both of these roles is rated

at almost exactly the same level as the library's gateway function. Both fall short of the high importance expressed for the library's buyer role. In the absence of tracking data, we are not prepared to speculate on whether recent library investment in these roles has positively affected their value to faculty members or if they will over time come to be among the most widely valued roles of the library. There are strong indications, however, that many libraries will increasingly focus on these roles going forward, both developing new services and seeking to direct faculty attention to existing activities. It is our intention to track the change in perceptions about these services with future surveys. As libraries continue to invest in developing new emphases on these sorts of services, active evaluation of their impact will be crucial to help libraries direct limited resources to the most valuable activities.

There are several deeper patterns in response to this question that may have important strategic implications for libraries. Significantly more of our faculty respondents who consider themselves as "more of a teacher" rather than "more of a researcher" rate both the library's teaching (67% vs. 45%) *and* research (62% vs. 51%) support roles as valuable. And faculty members at the very largest research universities are less likely to appreciate the library's research and teaching support roles. Taken together, these patterns suggest that the relationships built through engaging faculty in supporting their own teaching activities (which have historically proven harder to scale at the largest institutions) may be an especially beneficial way to build relationships with faculty members more broadly.[2]

As is the case with most discussions in academia, disciplines matter (see Figure 7). Virtually all faculty respondents in all disciplines uniformly rate the buyer role as very important. A large majority of the humanists also value several other library roles highly, but for social scientists and scientists the buyer role is by far the most important role of the library. It is striking how faculty members have come to universally perceive the library role as purchasing agent for institutional information resources as essential.

But for other library roles, there are noteworthy disciplinary differences in faculty perceptions. Almost three-quarters of the humanities faculty who responded indicated teaching support is a very important role of the library, while a notably lower share of social scientists and scientists saw teaching support as very important. This finding raises some questions for validation locally and for further study. Is this role really most strongly valued by humanists, and if so, why? Alternatively, is there some reason that perceptions vary so significantly? As numerous libraries have invested in building information commons over the past decade, are there alternative or additional teaching roles that would be valued by social scientists and scientists?

The library's role as archive is very important to a very high share of the humanists (82%), a relatively close second to the buyer function. For social scientists and scientists, however, the archiving role is a distant second, with 66% and 65%, respectively, ranking the archival role as very important.

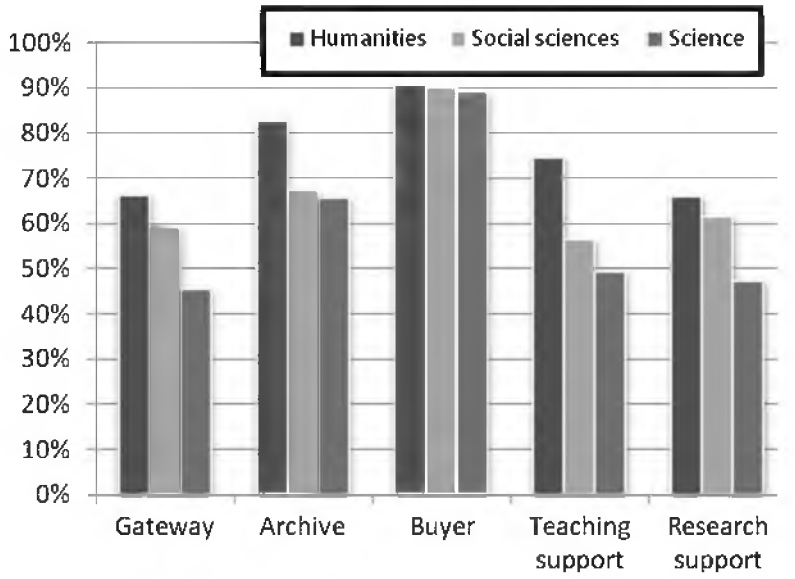

FIGURE 7 Percent of Faculty Rating These Roles of the Library as Important, by Disciplinary Grouping.

Perhaps this pattern is unsurprising, given the humanities' continuing reliance on print monographs, paper archives, and special collections, which have not yet seen the same dramatic format and preservation shift to the digital and the network level as have journals. Over the next few years, it will be interesting to track this question as more and more monographs are readily available to faculty members as e-books.

Finally, the library's role as a gateway demands attention. Helping users "locate information for their research" has become a far more competitive endeavor than it was in the days of print, and the library now competes with Google, publishers, aggregators, and other network-level services to serve its constituents. The fact that the perceived value of the gateway role has declined is a point that must be factored into libraries' resource allocation decisions; the trend over the last decade makes an even more powerful argument that libraries need to consider very carefully the investments they make in search and discovery services. The decline in the library's perceived role as a gateway among our respondents matches the shift to network-level discovery and has been steady and consistent over the last 10 years, holding across disciplinary groupings (see Figure 8).

A particularly small share of scientists (less than half) see this gateway role as very important, and notwithstanding efforts to provide advanced alerting and discovery services to faculty members at some institutions (Schecker, 2008), the scientists in our surveys have expressed dramatically declining reliance on the library since 2003. Libraries need to regularly assess whether their constituents continue to use and value the gateway services that they

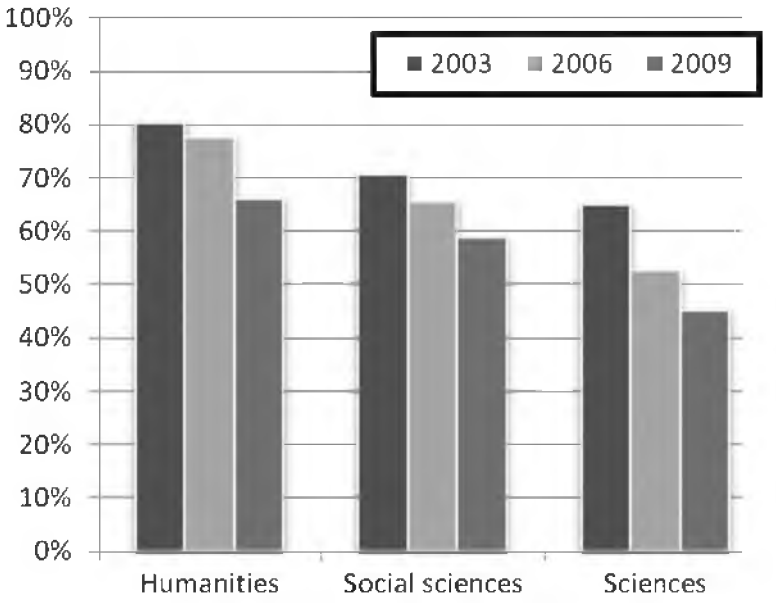

FIGURE 8 Percent of Faculty Rating the Library's "Gateway" Role as Very Important, by Disciplinary Grouping in 2003, 2006, and 2009.

provide to ensure that the level of investments being made are justified by the benefits being delivered and valued by their constituents. Libraries should also give careful consideration to ways to deliver these services more efficiently through collaboration and participation in services delivered "in the cloud" or at the network level.

Despite the reported declines in importance of all the library's roles other than as a buyer, the 2009 study saw a slight rise among respondents in their perceived general dependence on the library (see Figure 9). Given the trend established in previous surveys, these data surprised us. In fact, in each disciplinary category, faculty rated their dependence on the library higher in 2009 than they had in 2006, and in some cases at their highest level since 2000. We do not have definitive evidence to explain whether this is an aberration or represents a reversal of the trend, but one possible explanation for the increase is the substantial growth in the value placed on the buyer function by the respondents. As mentioned previously, 90% of our respondents rate the value of the buying function as "very important," a result that is universal across disciplines. If this is in fact the reason for the general increased perception of dependence on the library, this would represent a kind of victory for libraries. When we presented findings from these surveys early in the decade, librarians generally expressed frustration that faculty were not more aware that many of the resources they were accessing via the Web were paid for by libraries. Libraries have taken a variety of steps to raise awareness of that role. In addition, increased attention to open access,

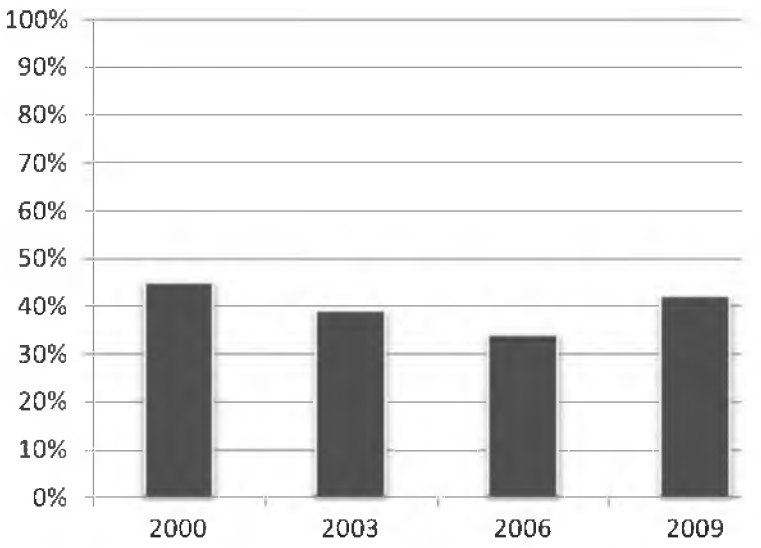

FIGURE 9 Percent of Faculty Responding "Very Dependent" to "How Dependent Would You Say You Are on Your College or University Library for Research You Conduct?"

which libraries have played an active role in raising, makes it clear that many resources are not free and require the payment of often substantial subscription fees. Finally, the challenging economic climate of the last two years and the resulting cuts and cancellations to subscriptions surely must also have brought into higher relief the important role libraries play in making resources available to the campus community.

Summary

Network-level discovery tools include disciplinary resources and powerful search tools that dramatically improve research efficiency while also increasing effectiveness. Faculty members responding to our survey indicate that discovery practices across all disciplines have continued their marked shift to the network level. These faculty members are reducing their use of local library services for discovery purposes and therefore seem to put less value on the library's traditional intellectual role as a gateway to information. However, these faculty members continue to strongly support the library's collection and preservation roles.

The positive response to two new roles introduced in our most recent survey, teaching support and research support, suggest an opportunity for libraries to further develop campus relationships. But notwithstanding noteworthy library investments in everything from the information commons to data curation services, faculty members across disciplines do not yet value the library's teaching and research support activities nearly as highly as they

do acquisition and preservation. Based on our respondents, developing research and teaching services that are valuable to scholars in the science and social science fields seems to have been a particular challenge for libraries.

All this suggests a key dilemma for the libraries (and their parent institutions) as they make strategic decisions about where to invest resources and direct staff. On the one hand, the fields whose practices are most traditional also appear to contain the library's greatest supporters; therefore, if the library shapes its roles and activities based on what is currently most highly appreciated by faculty, it may lose a valuable opportunity to innovate and position itself as relevant in the future. On the other hand, if the library develops new and innovative roles and services that address unmet needs, becoming newly relevant and even essential to those scholars who have moved farthest away from it, in the near term it may lose the support of its most ardent supporters. Can the academic library reengage with scientists? If not, is it realistic to expect humanists to remain loyal given that the trend indicated by faculty responses in the humanities over the years demonstrates declining support for the library's gateway role? While there is more support for the library's gateway role in the humanities than in the sciences, the trend is totally consistent. This would indicate that humanists may be following in the footsteps of their peers in other disciplines, a pattern which may only accelerate as a broader range of humanistic scholarly materials is made available in digital form. Addressing this dilemma is perhaps the most urgent strategic challenge facing academic library leaders.

No libraries possess the resources to pursue every strategic opportunity they confront. For this reason, many may face a strategic choice between investing to reengage with scientists and certain social science fields or building on their existing strength with humanists to develop durable services for an increasingly online future. In contemplating such decisions, it is necessary to examine the range of feasible services needed or wanted at a disciplinary level. Moreover, many libraries will find it useful to consider unique assets and opportunities on their own campuses in the context of this broad strategic backdrop, perhaps investing in individualized strategy analyses for their own institutions (University of Minnesota, n.d.; NYU, n.d.; Studying, n.d.). Certainly, in this environment, academic libraries can benefit from a culture of regular experimentation, assessment, redirection and reinvestment to keep pace with this dynamic environment.

THE FORMAT TRANSITION FOR SCHOLARLY WORKS

As more and more new scholarly works are produced in digital form, and as increasing waves of digitization have brought a wide range of primary and secondary scholarly materials online, faculty attitudes and behaviors regarding digital scholarly materials have evolved rapidly, altering needs and

expectations for scholarly materials in physical form. Scholarly journals have been at the forefront of this transition. Responses to our surveys suggest that a tipping point has been passed for current issues of journals, and that, with certain narrow exceptions, print editions of current issues of scholarly journals will rapidly become a thing of the past. And although faculty attitudes on journal backfiles do not yet appear to have experienced the same nearly-complete shift, they are changing in parallel with library resource constraints such that backfile print collections will increasingly be replaced exclusively by digitized versions. Our findings raise key strategic questions for publishers and libraries alike on when and how to wind down print publishing and collecting programs and on how digitization will reshape collections management for print collections of journal backfiles.

Current Issues of Scholarly Journals

Faculty responses to our survey confirm what we all have observed: that journals have continued their transition to digital format, with growing acceptance and in some cases enthusiasm for the substitution of electronic for print journal materials. Long-standing disciplinary patterns continue to hold: humanists remain more attached to print than their colleagues in the social sciences and, especially, the sciences. Our survey indicates that faculty are widely prepared for a complete transition away from print to digital-only for current issues of scholarly journals.

For current issues acquisitions, there is widespread agreement that the ongoing transition meets the needs of faculty. Nearly three-quarters of faculty agreed strongly that it would be "fine" with them for their library to cancel current issues of a print version of a journal while continuing to make them available electronically, a figure that has steadily and substantially risen over the years (see Figure 10). This trend is surely going to continue through a complete transition, as publishers increasingly identify the electronic format is the "version of record" and in many cases have added content, features, and functionality to their electronic versions that are not available in print.

This attitude is almost universally shared by our respondents in the social sciences and sciences (see Figure 11), with less than 10% of these faculty members holding a negative perception about print cancellations. Even among humanists, strong support for this point of view has continued to grow over time, and a solid majority of humanists have asserted their comfort with such substitution for current issues of journals.

There are, certainly, differences even between humanists. Art historians and Asian studies faculty are the only disciplines in which less than a majority support the transition of current issues to electronic media, while philosophers are relatively more accepting of this transition than are most

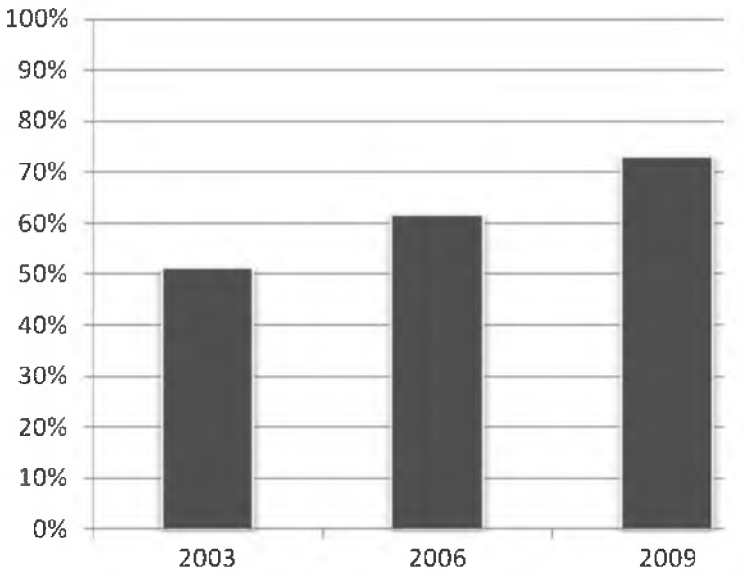

FIGURE 10 Percent of Faculty Strongly Agreeing With the Statement: "If My Library Cancelled the Current Issues of a Print Version of a Journal but Continued to Make Them Available Electronically, That Would be Fine With Me" in 2003, 2006, and 2009.

humanists. But even among more "conservative" faculty, attitudes have continued to shift and comfort with this transition has continued to grow. For example, although still less accepting than their peers, art historians' comfort with the transition has grown at about the same rate as their humanist peers.

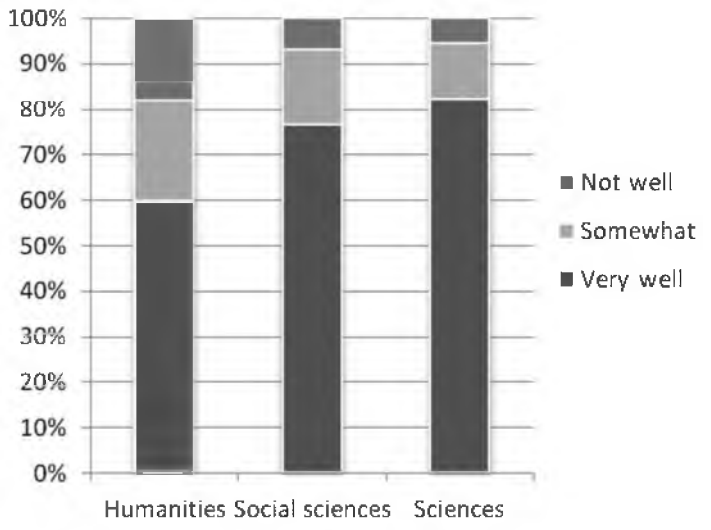

FIGURE 11 Percent of Faculty Strongly Agreeing With the Statement: "If My Library Cancelled the Current Issues of a Print Version of a Journal but Continued to Make Them Available Electronically, That Would Be Fine With Me," by Disciplinary Grouping.

Although humanists are not yet as uniformly accepting of this transition as the other disciplinary groupings, attitudes are relatively positive; less than 20% of humanists strongly disagree with the assertion that it "would be fine" with them to cancel print current issues in favor of electronic.

This growing acceptance of digital current issue substitution validates the choices of many libraries to transition their subscriptions to electronic-only. Although a sensitive and nuanced approach is needed—as already mentioned, several disciplines remain less comfortable with such a transition even for current issues and local circumstances (and powerful faculty!) must be considered—these national findings suggest that libraries may be able to move relatively aggressively in switching most remaining print subscriptions to electronic-only with minimal impact on their constituents.

Backfiles of Scholarly Journals

Although there is great and growing agreement that current issues can be migrated to an electronic-only format, especially now that electronic is often the "format of record," faculty responses to questions about the retention of journal backfiles are somewhat more mixed. For backfiles, a variety of providers, including but not limited to publishers, have digitized thousands of journal titles, at various levels of quality that may at times diverge to at least some degree from the original published print version, with a variety of provisions for digital preservation and postcancellation access. It is therefore understandably more difficult for faculty members to contemplate removing a resource currently available to them than to consider foregoing purchase of the new digital "format of record," especially if the opportunity costs associated with retaining print are not borne by faculty members but rather by the library. Even so, the trend line indicates that faculty support for a backfiles format transition is increasing.

Our study gauged the reaction of faculty to an extremely strongly worded statement, asking if they would be "happy" with their library having "hard-copy collections discarded" and replaced entirely by electronic collections. Although respondents prepared to agree with that statement were a distinct minority, attitudes on this question seem to have changed significantly between 2006 and 2009. More than a third of respondents now agree strongly that they would be "happy" to see hard-copy collections of scholarly journals discarded and replaced entirely by electronic collections (see Figure 12). And exactly half of respondents respond at least somewhat positively to this notion,[3] indicating that although faculty members may not be "happy" to see print backfiles go, an increasing number are not strongly opposed to the idea.

Unsurprisingly, respondents in the social sciences and sciences are more comfortable with such a substitution than are their colleagues in the humanities, but attitudes have shifted substantially among all disciplinary

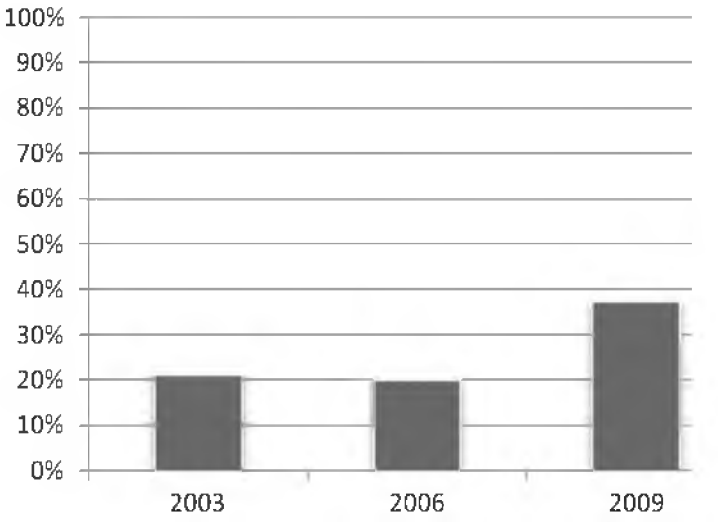

FIGURE 12 Percent of Faculty Agreeing Strongly With the Statement: "Assuming That Electronic Collections of Journals Are Proven to Work Well and Are Readily Accessible, I Would Be Happy to See Hard-Copy Collections Discarded and Replaced Entirely by Electronic Collections" in 2003, 2006, and 2009.

groups since 2006. Even among scientists, the majority of respondents are still not "happy" about the prospect of wholesale electronic-for-print substitution, but the jump in comfort level in the 2009 responses may signal the beginning of a broader shift that should be assessed in a future survey (see Figure 13).

When asked about their continuing need for access to backfiles in print form, a complementary picture emerges: only slightly more than a third of faculty respondents indicated their sense that it would *always* be *crucial* for *their own* college or university library to maintain print journal collections (see Figure 14). These overall figures mask dramatic differences among individual disciplines' reactions to print backfiles deaccessioning. Faculty in business, economics, and several of the sciences are among the most enthusiastic about the transitioning of print backfiles to electronic only, offering an opportunity for immediate impact, whereas humanities disciplines like art history and classics are not ready for local print holdings to be replaced with electronic resources.

Declining faculty reliance on local print collections may pose a challenge for libraries, as local investment in print preservation efforts may go unrecognized and unrewarded just as efforts to withdraw local print holdings may elicit controversy. Notably, looking at responses to these questions by faculty at large research institutions compared with those at smaller ones shows that there is no more interest in local print preservation efforts among faculty at the largest institutions, which are assumed by many to bear the lion's share of responsibility for preservation, than at other institutions. New

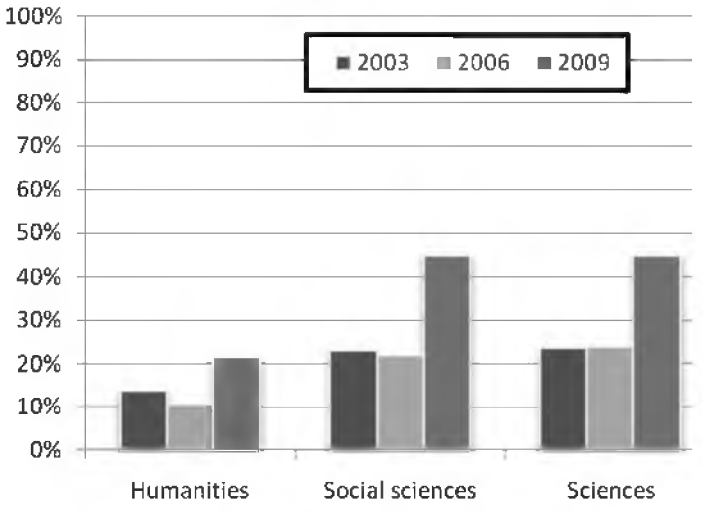

FIGURE 13 Percent of Faculty Agreeing Strongly With the Statement: "Assuming That Electronic Collections of Journals Are Proven to Work Well and Are Readily Accessible, I Would Be Happy to See Hard-Copy Collections Discarded and Replaced Entirely by Electronic Collections," by Disciplinary Grouping, in 2003, 2006, and 2009.

methods to more efficiently distribute these responsibilities and costs across the library community and balance the economics, system-wide needs, and perceptions of faculty are needed and are the principal motivation behind the library movement to develop print repositories (Reilly, 2003).

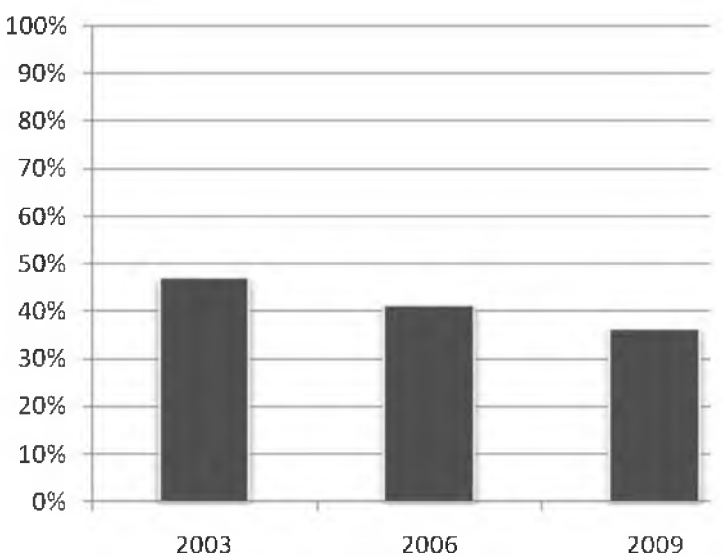

FIGURE 14 Percent of Faculty Agreeing Strongly With the Statement: "Regardless of How Reliable and Safe Electronic Collections of Journals Are, It Will Always Be Crucial for My College or University Library to Maintain Hard-Copy Collections of Journals" in 2003, 2006, and 2009.

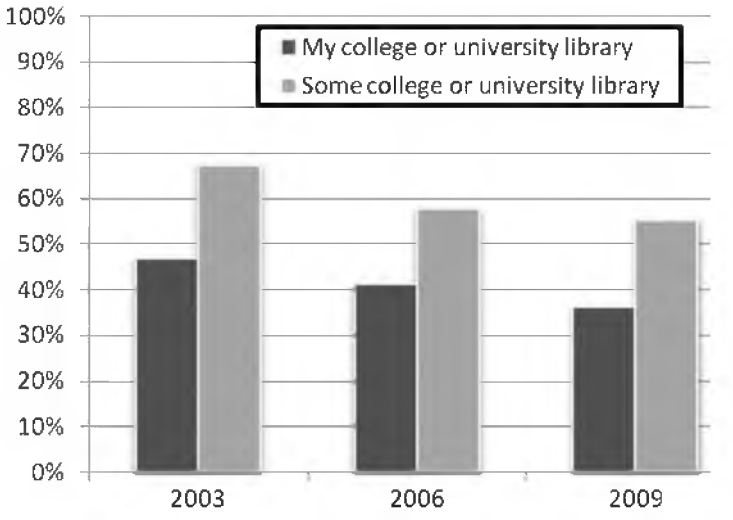

FIGURE 15 Percent of Faculty Agreeing Strongly With the Statement: "Regardless of How Reliable and Safe Electronic Collections of Journals Are, It Will Always Be Crucial for _____ to Maintain Hard-Copy Collections of Journals" in 2003, 2006, and 2009.

In comparing the previous statement about local retention with a similar question about retention *somewhere* in the library community, it is clear that, although these faculty continue to value print preservation, they seem to be feeling less of a need to have immediate access to print journals locally. Both figures have drifted downward over the last decade (see Figure 15). They have varied predictably by discipline—both numbers are substantially higher for humanists than for scientists. Overall, over time and by discipline, concern that print be maintained *somewhere* has consistently trumped interest in local print preservation. These attitudes do not give libraries a clear mandate with respect to print preservation: they neither indicate that local print collections remain functionally relevant to faculty work processes nor suggest that faculty are increasingly willing to see local print collections discarded and rely on remote access; rather, they seem to demonstrate a slowly declining valuation of print preservation in general.

These faculty attitudes may in the long term prove challenging to the print repository strategy that many libraries and consortia are today pursuing. Today, a slim majority of our faculty respondents agree strongly that print collections should be retained remotely following their digitization, but long-term trends indicate a continuing decline in prioritization of these activities. Just as decreasing faculty support for local print preservation activities shapes the environment for library investment in these areas, so the declining mandate from faculty members to support remote preservation activities may have an impact over time. A print repository strategy therefore must also incorporate system-wide efficiencies in print collection management

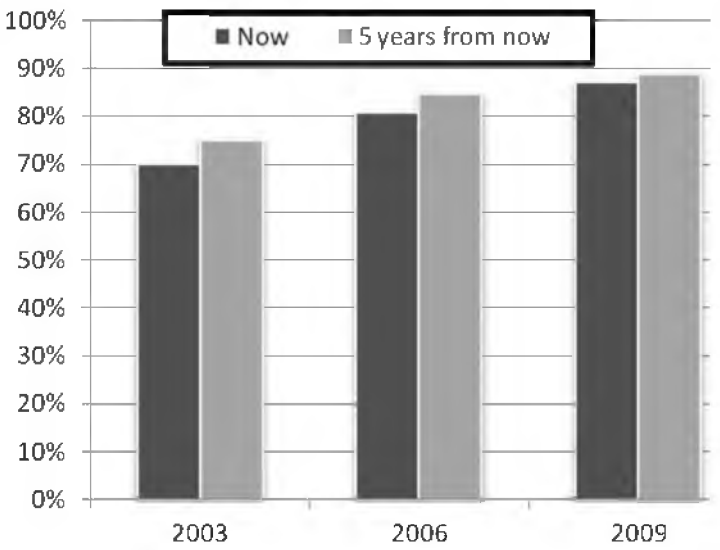

FIGURE 16 Percent of Faculty Responding "Very Important" to the Question: "How Important Is the Long-Term Preservation of Electronic Journals to You Today?" and to the Question "Thinking About 5 Years From Now, How Important Do You Think the Long-Term Preservation of Electronic Journals Will Be to You?" in 2003, 2006, and 2009.

that reduce the burdens of preservation while still prioritizing the responsible maintenance of print.[4]

Preservation of Electronic Journals and Other Scholarly Materials

Our survey respondents' attitudes with respect to electronic preservation of journal materials appear much less complex; these faculty members' sense of the significance of long-term preservation of electronic journals has steadily increased since 2003 (see Figure 16). Interestingly, faculty assessments of the importance of these preservation activities have grown even faster than faculty themselves expected. There is now virtually unanimous agreement on the importance of long-term e-journal preservation, suggesting that faculty care most about the preservation of those materials that they make greatest use of today and expect to be important to them in the future.

Libraries may be able to harness this near-unanimous agreement to garner support for a more holistic view of the preservation of the intellectual contents of journals across formats, linking up their diverse preservation activities into a coherent vision. Publishers may also find guidance in these findings, which suggest that a transparent program for long-term electronic preservation of their publications may be viewed positively by, and afford value to, many of their faculty constituents. In any case, effective and

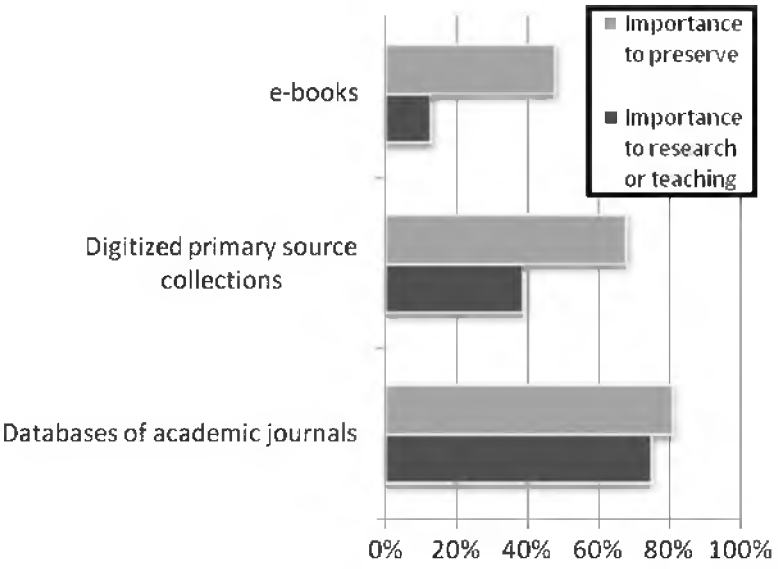

FIGURE 17 Percent of Faculty Responding "Very Important" to the Questions: "How Important Is This Item to Your Research or Teaching?" and "How Important Is the Long-Term Preservation of This Type of Digital Materials?"

sustainable models for the preservation of electronic journals are likely to be widely supported by faculty (Sustainable, 2010).

Although scholars across disciplines highly value the electronic format for journals, opinions on the importance of other types of digital materials vary more widely. Broadly speaking, our respondents, regardless of field, indicate a general preference that digital materials be preserved. We also asked faculty to rate the importance of various forms of electronic content to their research and teaching. While there is parity in faculty views about the importance of preservation and access in the case of journal databases, in the cases of both e-books and digitized primary source collections, far more faculty feel that it is important that these materials be preserved than feel that these types of materials are important to their research and teaching at this point in time (see Figure 17).

We do not have evidence as to why this may be the case, although we speculate that it reflects a general sense of the importance of preserving electronic materials, as well as possibly an indication that they expect these other electronic materials to be more important in the future.

Summary

In the eyes of the faculty we surveyed, electronic versions of journals are now utterly mainstream. Although print journals may continue to play a limited

role for faculty with specific needs that are otherwise poorly met, digital versions are clearly the medium of choice for these faculty members, even among humanists. Bringing together the preservation and business models to wind down journal print publishing and collections programs in the next several years would seem to be advisable, prudent and generally accepted. It is likely that such a step, if handled thoughtfully and strategically across the system, would reduce expenditures by publishers and libraries alike.[5]

Especially in the case of backfile journal collections, structural changes in system-wide library collections management processes may be needed in order to facilitate a print-to-electronic transition that will support remaining faculty needs for some print materials and effectively balance local flexibility with system-wide preservation priorities. Beyond preservation of print versions, there are also opportunities for publishers and other backfile suppliers to ensure that their digitized versions not only meet faculty access requirements but can also serve as a substitute for print for a preservation perspective. The time to lay the groundwork for this transition is now.

THE GENERAL SENSE OF LIBRARY IMPORTANCE

Many aspects of the faculty responses to our specific questions about library roles convey a challenging picture for libraries. There is considerable evidence that the importance of some of the library's roles could be decreasing, and libraries may understandably feel threatened by these changes. Consequently, in addition to these questions about the specific roles of the library, we asked faculty about their more general impressions of the changing importance of the library in the digital age. Their answers suggest that although usage patterns and evaluations of specific library roles have shifted, overall support for the library as a campus entity remains strong; libraries are still generally operating from a position of strength.

For example, we asked faculty whether money should be redirected from the library to other needs. Whatever practical changes have occurred in their behavior, extremely few of our faculty respondents feel that the print-to-electronic transition has made the library and librarians obsolete. When presented with a strongly-worded statement suggesting that "colleges and universities should redirect the money spent on library buildings and staff to other needs," only about 10% of faculty indicated strong agreement (see Figure 18). Support for such a radical reconsideration of the library does vary slightly by discipline—virtually no humanists agreed with this statement, and a handful of disciplines may reach closer to 20% agreement—but remains low across the board. Moreover, these responses did not increase markedly between 2006 and 2009.

We also asked faculty members about their level of agreement with the strongly worded statement, "Because faculty have easy access to academic

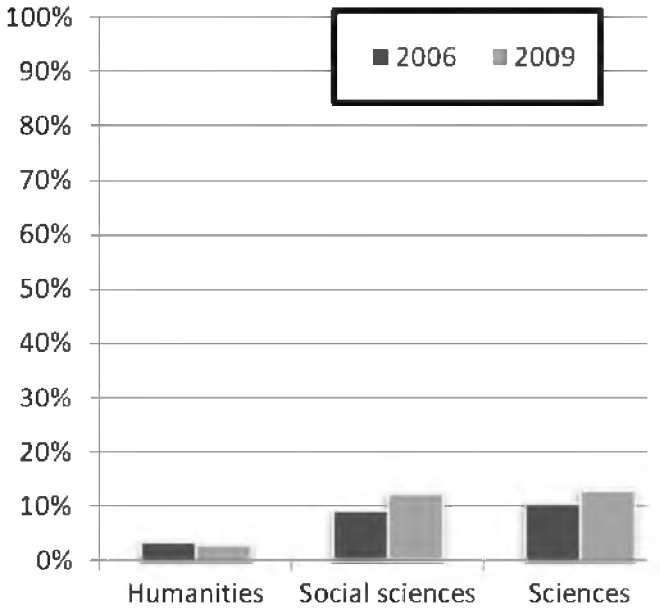

FIGURE 18 Percent of Faculty Agreeing Strongly With the Statement: "Because Scholarly Material Is Available Electronically, Colleges and Universities Should Redirect the Money Spent on Library Buildings and Staff to Other Needs."

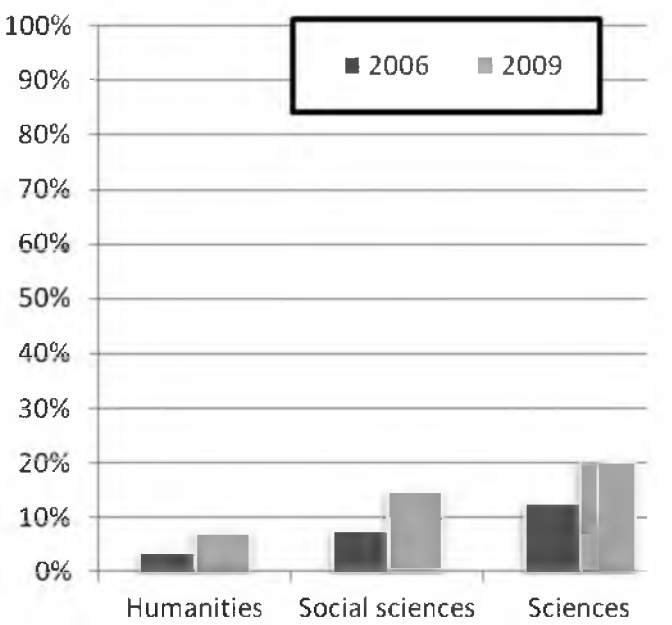

FIGURE 19 Percent of Faculty Agreeing Strongly With the Statement: "Because Faculty Have Easy Access to Academic Content Online, the Role Librarians."

content online, the role librarians play at this institution is becoming much less important." Few of our faculty respondents agreed strongly with this statement—an average of just 14%. Faculty in the sciences were comparatively more inclined to agree strongly with this statement (20%), than were the social scientists (15%), and the humanists (7%). The low overall levels of agreement with this statement suggest that librarians continue to have strong support from faculty in their campus communities. But in each discipline, agreement with these statements has approximately doubled since 2006 (see Figure 19).

CONCLUSION

As content migrates from print to electronic media, our survey suggests that faculty expect significant changes in the relative importance of various library activities in support of research and teaching. These faculty members continue to regard the library as important, but some roles of library are becoming less important than they used to be. Most notably, the ubiquity of the network and the rapidly increasing availability of electronic resources on that network is diminishing the centrality of the library in helping faculty discover and use content. This trend is not only evident in the attitudes expressed in this survey, but is observable in the behaviors of faculty and students evident everywhere we look. Although these attitudes and behaviors are most advanced in the sciences and social sciences, the trend in the humanities is consistent. As scholarly resources become available in digital form, users want to use them in that form, and they will use whatever tools are most convenient to get to them.

There is every reason to believe that this trend will continue, and that libraries' role in providing access to widely available resources will diminish. Libraries should think very carefully about the level of investment they make in tools and resources to aid in discovery—it will be difficult to compete with the likes of Google in areas that benefit from economies of scale in technological development. The one caveat to this general statement would be if libraries are able to identify and implement valuable services that rely on geographic proximity. Efforts to embed librarians in departments represent such an effort, and should be monitored closely. Another is the development of discovery services that are specifically targeted toward high value collections that are available to a campus constituency. Both of these strategies depend on geographic or institutional proximity and could prove to be of sustainable importance to a campus community.

By contrast, faculty in our survey express strong and increasing support for the role libraries play in acquiring, paying for, and preserving scholarly resources. These are areas of great and continuing importance to these faculty members, implying that continued attention and investment in these areas

will be welcomed. With the nature of those activities also changing due to the transition in medium—preservation of e-resources is very different from preservation of print—libraries will need to work collaboratively and strategically to manage this transition in ways that take system-wide needs and available resources into account.

While the changes we have seen in attitudes and behaviors related to journals have been profound and rapid, these materials represent a relatively small amount of the collective footprint of library activity. With Google digitizing millions of out-of-print books and the Kindle, the iPad, and the Nook offering easy access to hundreds of thousands of e-books, the transformation of libraries that looms ahead is massive and unprecedented. If books experience a print-to-electronic transition similar to what we have seen for journals, a significantly larger share of libraries' core activities may be impacted profoundly. The responses to this survey point to some of the more valuable services libraries offer (or could offer), as well as highlighting the many challenges facing libraries and putting an exclamation point on the widely shared view that the libraries cannot rely on what have been their traditional strengths.

NOTES

1. The data set for the Faculty Survey 2006 is available at http://dx.doi.org/10.3886/ICPSR22700.

2. Karen Williams's forthcoming "Transforming Liaison Roles" report (part of the Association of Research Libraries' *New Roles for New Times* series) may offer valuable insight on these questions, especially in the context of large institutions. See http://www.arl.org/rtl/plan/nrnt/nrntliaison.shtml

3. While we measure "strong agreement" as responses of 8-10 on a 1-10 scale, positive responses include the wider range of responses from 6–10.

4. Ithaka S+R's "What to Withdraw Initiative provides a framework for balancing these considerations from a system-wide perspective to enable library action (Schonfeld & Housewright, 2009).

5. It certainly would do so for nonsubscription costs for libraries (Schonfeld, King, Okerson, & Fenton, 2004).

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One Thing Leads to Another: Faculty Outreach Through Internet Instruction

Kate Borowske
Karen Campbell

SUMMARY. Establishing meaningful connections to faculty is a continuing challenge for academic librarians. One library's efforts at faculty outreach received unexpected assistance from the Internet, when faculty and student curiosity about this resource created opportunities for new library staff to build connections to faculty and establish their credibility on campus. In the process, the library made progress towards meeting another challenge: determining the role of the Internet in the library. Internet instruction is now integrated with library instruction and is available to faculty and students in a variety of formats. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-342-9678. E-mail address: getinfo@haworth.com]*

KEYWORDS. Library instruction, Internet instruction, faculty outreach, bibliographic instruction

Bush Library supports the undergraduate and graduate programs of Hamline University, a small, private university in St. Paul, Minnesota. In a

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year of organizational and personnel change within the library, the staff was organized into functional teams. With most staff either new or in new positions, a lot of energy developed; a little healthy competition was coupled with an unusual sense of urgency. New staff were constantly looking for opportunities, anxious to establish departmental liaisons, and combat a poor image resulting from several years of inadequate funding.

To smooth the transition, the library staff decided to try a "bonding activity." The resulting workshop on the Myers-Briggs Type Indicators enabled two staff in particular, the graduate school librarian and the technology librarian, to effectively build on their strengths, pairing a "thinker" and a "doer." Their adventures follow.

THE LIBRARY, THE CAMPUS, AND TECHNOLOGY

The undergraduate dean charged librarians to lead faculty in learning and applying new technology. A long standing technology literacy requirement had recently been abolished; instead e-mail and Internet training were inserted into the Introductory English curriculum, to be taught by computing staff and library staff cooperatively. The faculty Library Task Force established a Technology Subcommittee; the technology librarian served on this committee, drafting a "Technology Blue Sky Vision" for Bush Library.

The Academic Computing Center was undergoing its own changes, including a move to a newly equipped and ethernetted building with good teaching facilities, wiring of the library building with fiber-optic cable, installation of networked computers with direct Internet access (including Mosaic), and reassignment of the former in-library computer lab to a Library Bibliographic Instruction room.

These events served as catalysts to a series of opportunities for librarians at Bush Library. Two local professional organizations provided additional stimuli: a Minnesota Library Association conference session on Internet instruction provided information and inspiration in its discussion of faculty seminars; discussions within our local consortium, CLIC (Cooperating Libraries in Consortium), provided additional models of outreach. Many opportunities flowed from these catalysts; the first appeared in the graduate school.

OPPORTUNITIES IN THE GRADUATE SCHOOL

Hamline has four graduate degree programs. The majority of students are part-time, the majority of faculty adjunct. Faculty outreach in the best

of situations is difficult; the difficulties increase when most are adjunct. While the library's liaison to the graduate school was able to establish contact with many of the school's administrative staff, her initial attempts at outreach to the faculty failed to capture their interest.

INTERNET SEMINARS

An invitation to the graduate school librarian to teach part of a half-day Internet seminar for Graduate Public Administration students was an encouraging first step. A staff member from Academic Computing was scheduled to teach the basic Internet protocols; the graduate school librarian was to speak briefly about the library's online catalog and databases. Two sessions of this seminar were scheduled for January.

Shortly after the session was scheduled, and just after the brochures went out, the co-presenter from Academic Computing left Hamline. Asked whether she would consider teaching the entire seminar, both the Internet protocols and the library databases, the graduate school librarian agreed. This was in spite of the fact that she was just learning gopher, had little experience with Mosaic, and didn't understand how everything fit together to make up "the Internet." When told of this upcoming seminar, the technology librarian offered her assistance. When the magnitude of the task–designing a half-day seminar for twenty people, not to mention learning more about the Internet–sank in, her offer for assistance was gratefully accepted.

One of the most useful resources used in the development of the seminar was the listserv, NETTRAIN, where experienced Internet trainers share advice and training materials. A previous experience at a poorly-designed Internet workshop provided inspiration of a different sort: how not to do it. The seminar was broken down into modules, primarily as a way of dividing up the work for this large project. Four modules were developed: an Internet overview, e-mail and listservs, gopher, and the World Wide Web. The gopher module included a demonstration of the library's gopher and a brief introduction to the library's OPAC and FirstSearch. A "script" was developed for the seminar, with each of the demonstration sites mapped out in advance. This enabled the instructors to work as a team, one working at the keyboard while the other spoke. An added benefit was the record of the session that this script provided; subsequent seminars are based on the script of the session preceding it.

An informal title for the seminar was used as a guide for the overall instructional goal: "Getting a Foot in the Internet Door." The seminar was designed to include several short hands-on periods. Tutorials were devel-

oped for each of the Internet protocols, and for CLICnet and FirstSearch. Tutorials would create a structure for students' first attempts at the Internet during the hands-on periods as well as providing a safety net for their earliest independent efforts following the seminar. Additional materials designed included: an "Emergency Road Kit," a guide to solving common problems such as hung connections; a glossary of Internet jargon; and a resource list of print and online information for further study. After the seminar these guides and tutorials were made available on our library display rack and World Wide Web homepage (www.hamline.edu/library/index.html).

While in the process of planning this seminar, the graduate school librarian received a note from Graduate Liberal Studies administration asking who on campus might be able to provide Internet training to students in this program; enclosed with the note was a newsletter from a similar liberal studies program describing their training opportunities. When told about the January Internet seminars being developed for Graduate Public Administration, she asked whether a seminar could be scheduled for her students; two seminars were ultimately scheduled. There were now four half-day seminars scheduled in January for graduate students.

The day of the first of these January seminars it became quickly apparent that there was enough material for a two-day seminar; during students' hands-on time the instructors met to make the adjustments necessary to cover the most important information in the scheduled four hours. More adjustments were made before the second seminar; the last two seminars ran comfortably within the time allotted.

Three additional seminars were scheduled for Graduate Public Administration the following semester. Because these particular seminars were to be open to the general public it was decided it would be more appropriate to teach them as a teaching overload rather than part of the librarians' regular duties. These seminars have further raised the credibility of library staff as resources and trainers on campus.

An invitation was also extended to teach the Internet section of a Public Administration Computer Skills course, a summer semester course in which students would learn to use spreadsheets, presentation software, and asynchronous conferencing in addition to the Internet. The technology and graduate school librarians taught five half-day class sessions and participated in the "listserv with training wheels" established for the course, answering students' questions as they practiced their newly-acquired skills.

ONE-ON-ONE SESSIONS

As the first of the Internet seminars were being developed and taught, a number of graduate students, faculty, and administrative staff expressed curiosity about the Internet and the library's other online resources to their library liaison. Anxious not to miss an opportunity, she offered to meet with them in one-on-one sessions. These were intensive sessions, each lasting nearly two hours. The immediacy of this format provided instant feedback on the most effective approach, and the most effective metaphors, for teaching the Internet. Most importantly, these sessions demonstrated the tremendous need among graduate school students, faculty, and staff for very basic instruction in using the library's online resources. An interesting discovery was that, while most of them said they wanted to "learn the Internet," they were especially interested in the library's online catalog and databases.

The success of these informal one-on-one sessions, and the previously mentioned discussions within our consortium regarding faculty outreach and training, inspired the library's departmental liaisons to extend official invitations to faculty for one-on-one sessions. This was not the success hoped for: there were only three responses. The session with the single graduate faculty respondent, however, led to an opportunity to meet with her class, one of the graduate school's first off-campus groups, for a library instruction session. This session, in turn, led to the opportunity to meet with each of the off-campus groups for instruction. Library instruction is now scheduled regularly for these students.

COLUMNS

Following her one-on-one session, another graduate school administrator expressed interest in helping students in her creative writing program learn about writing and literature related listservs. Seeing another opportunity, the liaison offered to write an article about listservs for writers. She had been exploring ways to reach graduate students with library information and had been considering starting a library newsletter. An offer to write a regular column in the monthly departmental newsletter was enthusiastically accepted. This column on listservs for writers led to a series of columns on Internet protocols. After the first of these columns appeared, the other graduate programs requested similar columns for their newsletters. The library column in each of these graduate program newsletters provides yet another means of reaching students and faculty with library and Internet news, information, and instruction.

MOVING INTO THE COLLEGE OF LIBERAL ARTS

Spurred by the increased demand for bibliographic and Internet instruction in the graduate school, we became convinced that our success could be marketed to our undergraduate campus, the College of Liberal Arts (CLA). A proposal was made to the Library Reference Team to conduct seminars for CLA based on those done for the graduate school. The time-consuming development work was already done; all we needed was a way to "hook" CLA. It was clear that the seminars would be a very effective way to begin to meet the Dean's charge to be leaders in technology and to justify the university's expenditures on the library.

The Reference Team decided that, given the lack of response to our offer for one-on-one faculty Internet instruction, we should host a faculty Internet seminar. Such a seminar would help establish librarians' credibility with faculty in general. A faculty Internet seminar would also give us the opportunity to work toward another goal: that of building on the seminar's modular structure to divide up the work of teaching the Internet among librarians and begin to insert more traditional bibliographic instruction into the mix.

To lend credibility to the library's offering, the Dean's office was asked to sponsor a Faculty Development Workshop featuring our "Getting a Foot in the Internet Door" seminar. This raised the relevance of the workshop in faculty eyes, as well as providing another incentive: free box lunches.

In planning the Faculty Development Seminar, new World Wide Web sites were researched to use as examples of Internet relevance to research and teaching. Otherwise, the content was unchanged from that presented to the graduate school. Utilizing the modular nature of the original design, this seminar was offered as a series of ninety minute sessions, as opposed to a single four hour session. The entire reference staff participated; those who had not been involved in the original workshop served as "lab assistants." This gave them an opportunity to see the work that had already been done and to consider becoming a part of such training in the future.

Response to the announcement was skeptical in some quarters; one faculty member even paid a special visit to express her fear that this would be another jargon-filled lecture and a waste of her time. Library staff worried whether any faculty would return for the second session of the seminar. Instead we found dedicated participation, extremely positive feedback and a sudden increase in the library's relevance on campus. The box lunches provided a wonderful opportunity to strengthen faculty-library communication. Comments on evaluations and those received by the Dean's office were very encouraging. Perhaps most rewarding were two

things: the demand for more workshops and the increased incidence of faculty posting to the campus faculty listserv items from listservs introduced in the seminar. To have faculty who had previously questioned technology begin to embrace its use for scholarly communication was very gratifying indeed. In response to demand, the workshop has been offered repeatedly, in both one day and modular formats.

DIVIDING THE TURF

A rising demand for Internet training on campus combined with a desire to keep the library relevant in the increasingly electronic information world fueled the desire of at least one librarian to see the library become the primary campus Internet trainer. Furthermore, the addition of the title "Internet trainer" seems to have a positive effect on the way "librarians" are perceived.

The reference staff had some reservations about the staff's ability to provide an all-campus program of Internet instruction. The head of Campus Computing was invited to assist us in dividing the instructional turf. As librarians, our goal was to keep training focused on the undergraduate curriculum and our primary clientele, students and faculty. The library should teach the "substance" of the Internet, its use in meeting information needs, rather than the technical details of performing Internet functions. Expecting some resistance on the part of the Computing Center–after all, the World Wide Web is hot and everyone wants to be viewed as an expert–librarians were prepared to defend their instructional role. In fact, the Computing Center was overwhelmed with work without doing any training at all and welcomed library participation; we could have taken over all campus computer training. Instead, it was agreed that the library would focus on teaching the informational use of the Internet to faculty and students, while the Computing Center would focus on non-academic staff and those Internet tools that require some technical instruction, such as e-mail, ftp and html.

The Library and Computing Center staffs also agreed to share more of the instruction and planning processes. Efforts in the past year have helped build a largely cooperative relationship, which seems to be somewhat unusual. Teaching partnerships have evolved; a Computing Center staff member teaches e-mail and a librarian teaches the online catalog and the World Wide Web. The technology librarian's role as liaison to the Computing Center has been strengthened by involvement in Internet teaching. At an off-campus multimedia class attended by members of both departments, she was introduced by Computing Center staff to other class mem-

bers as "our campus World Wide Web expert." While this is an overstatement, it does evidence an unusual level of trust between Campus Computing and the library.

There are still frustrations, though. Librarians are often confronted with technical support questions from unhappy students who have not found answers in the Computer Lab. The library must assert that it is not the help desk for e-mail and SLIP connections. But the relationship has generally continued to thrive; one Friday afternoon a Computing Center staff person voluntarily left his home number in case of network problems during a Saturday library Internet class.

THE MOD SQUAD

The modular nature of the original Internet seminar eventually evolved into a series of stand-alone modules, taught by the Mod Squad. This is both the logical and the desired outcome of the past year's work. It had become obvious that the graduate librarian could not continue to hold one-on-one instructional sessions in either Internet or library resources for all graduate faculty and students. At the same time, there was a growing demand from undergraduates for some formal instruction in the increasing plethora of online sources. The popularity of the Windows-based Pacs, all running Netscape, made clear an increased need for Web based instructional support. Success with the faculty seminars compelled us to find a way to share Internet instruction with the undergraduate community. Finally, we wanted to share the responsibilities and rewards of Internet instruction among all library staff.

A series of modular classes in online information sources, both Internet and library related, was proposed to the library's Administrative Team. They would be offered to the campus community at large, in two formats: the original four-hour seminar, and a series of stand-alone one-hour sessions. Included in the one-hour sessions were the most popular parts of the four-hour seminar, and some new "Mods," such as "CLICnet: basics and beyond" and "Introduction to hyper-research" to meet the increasing demand for instruction in finding useful information on the Internet.

Response to the Mods has been very positive. Some have filled beyond capacity. The concept needs refining; meeting demand while balancing librarians' workloads is a challenge. Currently offered are daytime, evening and weekend sessions, with one librarian teaching one session of each Mod. A well-balanced attendance by undergraduate and graduate students has demonstrated that their respective attention span and "need to know" is quite different. Future plans include refining the "Mod Squad" offerings, perhaps even to the point of a credit course.

In addition to the Mods, our librarians have been overwhelmed with requests for in-class instruction in both traditional online library resources and in the Web as an informational resource. Positive feedback has ranged from the Dean informing the Library Director that he "hears good things about the Library" these days, to individual faculty and graduate program directors informing librarians that they are very excited about the changes and the energy coming from the library.

CRISIS = OPPORTUNITY

A series of opportunities, starting with a staff change in the Computing Center, led to librarians' involvement in Internet instruction. Involvement in Internet instruction, from seminars to one-on-one sessions and columns, provided a "hook" where several other attempts at faculty outreach had not succeeded. Finally, while information on library databases such as CLICnet and FirstSearch was "snuck" in with Internet information, the way a parent might hide a pill in a spoonful of pudding, people listened equally intently to the library instruction. For many, this was what they wanted most: information on using the library and doing research.

It was their curiosity about the Internet, though, that first led them to library staff and gave us the opportunity to establish our credibility on campus. It was likely easier for students and, especially, faculty, to ask librarians about the Internet–new and unfamiliar territory–than to admit to needing help with the OPAC or the Library's online databases. Furthermore, librarians, already experienced teachers of online skills, were readily able to develop effective Internet teaching methods. This expertise has been recognized and affirmed by students, faculty, and administrators; librarians are increasingly involved in the integration of technology into the curriculum on the Hamline campus. Not only are librarians regularly asked to teach Internet skills within the classroom context; they are also involved in campus wide planning and policy initiatives, such as Technology Task Forces. The success of our instructional program recently led to a much-needed upgrade of the hardware in our bibliographic instruction room, which doubles as a Web access lab for students. Most gratifying of all is the increased relevance of the Library in student eyes. Undergraduates crowd the public access terminals; as often to search online bibliographic and fulltext databases as to surf the Web. Graduate students regularly seek out librarians for in-depth consultations on effective searching methods. Far from fading into a virtual electronic realm, Bush Library is busier than ever!

It is hoped that this story will help illustrate how technology's increas-

Promoting a Positive Image: Hints for the New Reference Librarian in Dealing With Faculty

Eric W. Johnson

Beginning reference librarians in an academic library are often in the same situation as a new fish introduced into a fish tank. Not only must they quickly familiarize themselves with their new surroundings and associates but also determine their position in the local hierarchy.

Reference librarians in the academic community are often in a class by themselves. Those librarians whose positions afford them faculty status have the advantage of identification with a particular college group. Those without faculty status are usually included in a diversified professional or administrative body, thus further divorcing the role of the librarian from the educational role exemplified by the faculty.

The new librarian, then, must sometimes fight for professional respect, especially from the faculty. Faculty members come in all types and temperaments, as do librarians. They bring to the library their own attitudes and prejudices, and view reference librarians in different ways. How reference librarians are perceived depends largely on how they perceive themselves. They must develop an image that reflects their abilities and self-worth, and actively impress that image on the academic community.

Although much has been written concerning the status of the academic librarian, very little of it deals with faculty perceptions. Two studies, conducted roughly ten years apart, questioned faculty

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members as to whether librarians should be given faculty rank. The results of these studies shed an interesting sidelight on how the librarians were viewed.

Patricia Knapp directed her questions to the faculty of Knox College, Galesburg, Illinois in the mid-1950s, and determined that the faculty were not in favor of any librarians except the head librarian holding faculty status.[1] Florence Holbrook canvassed the English Department at the University of Kentucky, and reported in 1968 that 5 out of 7 faculty members approved of faculty status as long as the librarian's qualifications and research warranted the ranking.[2] A third study undertaken by M. Kathy Cook at Southern Illinois University in 1981 showed faculty in favor of faculty rank for librarians, again suggesting that the librarians conduct research.[3]

Each of these studies exhibited differing faculty perceptions of the role of the librarian. Knapp's faculty were ready to embrace the head librarian as a brother because he already had faculty status, had taught English, and had served on administrative committees. Holbrook's respondents judged the librarians on the basis of scholarship and professional activities, and ignored the inherent differences between the two groups. Cook's faculty regarded the most important function of the librarians to be service, but added that librarians should also be involved in research.

PERCEPTIONS

The different perceptions of the librarians and their roles by the faculty groups underscore the fact that many faculty members are simply not aware of what the professional reference position entails. Those instructors who do use the library may be aware that an important part of the reference position is the providing of information, but as reference librarians know, this is only one of the tasks they may be called upon to perform. It is the duty of the reference librarians themselves to educate the faculty as to the multifaceted and crucial roles they play in the university environment.

Before discussing what reference librarians can do to foster a better image of themselves, it will be helpful to examine the roles they should avoid, even though these may be the images that the term "librarian" connotes to the faculty member.

1) Faculty servant. The new librarian is often at a loss in dealing with the first request to photocopy an article or check a multi-page

bibliography against the card catalog. Where does one draw the line between providing reference service and doing work that could be performed by a library clerk or, better yet, the professor's secretary? The library should have a policy, preferably in print, setting forth the tasks that librarians are expected to do and those that they can refuse to do. There is a world of difference between service and servitude.

2) Research assistant. Many faculty members (or at least departments) employ a graduate student who is paid to assist in gathering material and performing general research. Those instructors without a research assistant may try unofficially to ensnare the reference librarian into this position. Be wary. If you provide a bibliography on demand for one professor, you must be prepared for a barrage of similar requests. Again, a written policy would be helpful.

3) Baby-sitter. Some instructors have discovered that the library instruction class provides a handy alternative to one or more regular classroom sessions. They can arrange for their students to meet at the library and leave them in the care of the librarian. There is no question that library instruction is a necessary and beneficial part of library service. However, it should be geared toward the needs of the students with the assistance and input of the instructor, and not viewed as merely an hour's respite from the classroom. In addition, students in a one- or two-session orientation tend to take more of an interest in what is being presented when their regular instructor is present. One way to ensure an attentive audience is to require that the instructor attend the orientation. (This is usually to the instructor's benefit, since he or she will invariably learn something new about the library.)

4) Guardian of the books. As antithesis of the three previous roles, this is perhaps the worst manner in which librarians can be perceived, since it calls to mind the stereotype of the librarian that the profession would like to eliminate. Librarians should never present themselves, consciously or unconsciously, as wielding their M.L.S. as a weapon and seeing themselves as being above everyone else in their divinely-chosen role as Gatherers and Retrievers of the World's Knowledge, misanthropes who would undoubtedly be happier if there were no patrons, only books. Librarians must remember that the reason for their existence is to provide service to the public, and that the total concept of the library is incomplete without a public to be served. An attitude of superiority or aloofness does not result in a good faculty-librarian relations.

GOOD IMAGE

A positive image is essential. As professionals, librarians should consider themselves on a par with the faculty, since they share some of the same duties and responsibilities and are working toward similar educational goals. The reference librarian, by assisting students and explaining the use of reference tools, formally or informally, is continually teaching, and may be considered an extension of the professor. Librarians and instructors both perform administrative duties and can be involved in research. There are differences, of course, but the point is that the gap between the two groups is not so wide as many think.

New reference librarians can make their presence known in many ways. They will, of course, be judged by the assistance they provide to both students and faculty. Are the librarians approachable? Are they knowledgable? Are they thorough? If the library does not contain the needed information, do they refer the patron to another library or source of information?

Beyond basic service, however, there are other ways to promote a positive image to the faculty. The following suggestions should help the new librarian in achieving this goal.

1) Make the effort to keep in contact with the faculty. Get to know as many of the instructors as you can. Faculty members who take an interest in the library can be of inestimable assistance in obtaining materials and supplies, and can have a positive effect on the library's budget. One of the best ways to become acquainted with the faculty is to frequent the school dining facility, especially if there is a separate faculty dining area to which librarians have access. Contact with the faculty will make the new librarian's presence and capabilities known, which will in turn spur the faculty into using the library more.

2) Work with the faculty members. Consult with them on their students' assignments. Determine to what extent the instructor expects the librarian to assist his students. If the students seem to be lacking library skills, arrange an orientation session. Show the instructor that you are interested in his coursework.

One beneficial side effect may be the instructor's informing the library of upcoming class assignments. Material can then be put aside before it disappears, and information guides can be created. A quick explanation of pertinent reference tools can be planned, eliminating the unnecessary repetition of individual queries.

3) Instruct the faculty. Few faculty members have the time or means to keep up with the latest reference services and materials. The reference librarian can easily send to interested faculty copies of advertisements and notices of library acquisitions in their areas of specialization. Faculty may not be as familiar as they should with the library's holdings and possibilities. Offer tours or mini-orientation presentations, highlighting subject areas or services provided. Demonstrate database searching. Well-informed instructors will make better use of the library, and will urge their students to do the same.

4) Involve the faculty in library events. A series of cultural gatherings—lectures, films, readings, concerts—can be planned in conjunction with the faculty. Faculty members themselves may perform, or may suggest colleagues and acquaintances. Library displays which feature faculty publications or favorite books can be mounted. If the library publishes a newsletter, faculty might be contacted for articles and ideas.

5) Involve yourself in university affairs. Don't isolate yourself from the rest of the campus. Join committees. Working side-by-side with faculty members on university business will help point out the equal importance of librarians and instructors to the institution, and will also prompt those who are not regular library users to see what they have been missing.

New reference librarians should remember that, as representatives of the library, they have a hand in determining whether that library will be viewed merely as a repository of books or as the vital and intrinsic part of the university that it should be. The reference librarians' active promotion of its use through working with the faculty as closely as possible can only serve to strengthen the library's role on campus and, at the same time, generate the respect that is due them by the faculty as fellow professionals.

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What Do Faculty Want?

Susan Griswold Blandy

SUMMARY. The academic reference librarian needs to know what the college faculty expect from their library. These needs seem often to be idiosyncratic if they do not fit the librarian's conception of the generalized user, but these needs must be identified and met in order to serve the faculty appropriately. Librarians need to be as aware of information acquisition patterns as they are of information sources.

What do faculty members want from the library? Seems a simple enough question with a simple enough solution: find a gregarious faculty member with a flair for writing and ask them to find out. Perform the logically dangerous job of generalizing from the particular, support it with a bibliography and, voilà, we will all be better informed.

Or more confused. The generalities did not hold across disciplines or between schools. Granted the faculty surveyed were from two year schools, four year liberal arts schools, engineering schools and state colleges and universities so there would of course be some diversity in the interview responses, but the variety also shows up in the journal articles that are being written by faculty library users. Some authors bemoan the encroachment of microfilm on their research techniques which call for spreading a serendipitous browsing feast of print materials out on their desks (and floors and chairs). Other authors wonder why we can't do even better with databases and document delivery, why we are so slow to deliver it all through their home modems. Some academics feel it is pointless to put anything in print anymore, and others pretend not to understand copyright laws (maybe they haven't written *their* textbook yet).

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RESOURCES

To: Susan

From: Shelley

Re: Women's Studies

As we have discussed, there are several books which are essential for the library to own in order to provide materials for students. . . .

This is probably the most familiar kind of faculty request to the Reference Librarian/Bibliographer, in effect "I know what libraries do: they collect information for my students; here's what I need." There is a delicate ballet here of communication as we dance around the questions: do you know what we have already? Do I (the librarian) know what you need? what you are teaching? Can I afford to get what you ask for? When? Is your bibliography complete and accurate? Do these books go on reserve? on long term loan to your office? into general circulation? Do we look for out of print titles? How many students? What will the assignments look like and how will they impact the reference librarians? the reference collection? the media and periodicals collections? At least the faculty member is talking to the librarian in an organized, collaborative, advance warning way. It helps to have a policy manual on hand as you develop a closer working relationship so that when requests come in that you can't fill you can explain why. In the current budget crunch many departments are cancelling their professional journals and would like the library to pick up the subscription. It helps if the collection policy clearly states whether the title must be indexed, under a certain price, written at the students' level, curriculum supportive. The policy also works to support joint purchase of expensive but necessary acquisitions such as the new edition of the Oxford English Dictionary.

SERVICES

At the next level faculty are interested in the process and the way students collect information.

Libraries versus Airports

Walking into an unfamiliar library I immediately find that my vision blurs, my mouth becomes dry and my body temperature rises.

I also get this feeling in an airport. Both libraries and airports enable one to get to distant landscapes, but there are rules and languages one must master first. One must know the right questions to ask and the final destination. The procedures in both places are rigid and can be extremely frustrating.

I have been an instructor in the English Department at a community college for three years and have worked with a diverse student population. In all my classes I require library research.

Many of my students who enroll in my Composition One classes have never done research. They have never ventured further into the library than the Xerox machine and water fountain. A few become fascinated by the vistas, by the information, by the imperatives, and by the purity of scholarship. Others find library work to be a chore, and unfortunately, other students get discouraged and drop the class.

A few weeks into the semester I arrange for my Composition One classes to take the library class. This is a two hour session which is designed to acquaint the student with how the library works and how to obtain materials. Again, for some students these two hours of instruction are enough, but others have trouble paying attention and when it is time to complete their library assignment (which basically asks them to locate material) they falter.

As an instructor I am a firm believer in "hands-on learning." For instance, although there are only four CD-ROM index terminals available for student use and it is impractical for the library class to try to squeeze around them, I would like my students to see Xeroxes of the keyboards and screens. Perhaps some imaginative facsimile could be created for classroom use.

I would also like to see specific instruction on using the vertical files and newspaper indexes. I find that although students flock to the *Readers Guide* they shy away from these other two areas. The newspaper indexes are extremely cumbersome.

I was recently looking for a magazine article in the *Readers Guide.* After finding the listing, I took my print-out and went down to the microfilm room to find the tape. Finding the roll of film was relatively simple, but when I sat down at a viewer I realized I had no idea how to use the machine. I would very much like to see instruction in using these machines become part of the library instruction and step-by-step directions available at each machine in addition to the instructions *on* the machine.

After my students complete the two hours of library instruction and the homework sheet, they select a topic for their five page re-

search paper. I then take the entire class to the library so that they can begin their research. Due to the large class sizes (33 students) one or two librarians are never enough. And since it is unlikely class sizes will decrease, I would like to have more librarians and/or student workers also assisting.

A few semesters ago after helping a student select a topic, I advised him to begin his research in the card catalog and began helping other students. Whenever I glanced in his direction, he seemed engaged and was writing down information. Near the end of the class hour I got a chance to sit down next to him to see what he had been finding. He had covered two pages in his notebook with the names and authors of books but had neglected to put down any call numbers. He had attended the library instruction class but had somehow not absorbed this vital piece of information. This may be another area where hands-on work with the catalogs could be incorporated into the library classes.

Later thinking about this student, I began to wonder what else he and other students weren't getting. Teaching is risky business. Perhaps we as teachers need more library training. I would welcome a workshop which would allow instructors the opportunity to learn more about the library. A faculty workshop would also be a place for instructors and librarians to share ideas on how best to help students.

Feeling comfortable in a library (which means knowing how to use it) can be a lifelong adventure. It is a place where learning can go on long after formal classroom instruction ends. Unlike an airport it costs nothing and the destinations one can reach are limitless.

–Susan Hogan,
Kinderhook, NY

FACULTY AS LIBRARY USERS: YES, BUT

These two most simple levels of faculty expectations for the library are probably never articulated until the faculty become library users themselves. Reference librarians need to know who constitutes their community, both the actual users and the potential users. We need to know what faculty are using in the library, how they use it, whether what they are looking for matches what they find, why they use the library and what services/collections the library could drop/should add. The shifted empha-

sis to access to collections rather than acquisition makes it easier for libraries to justify shaping the collection to the particular real user rather than building a general collection for some idealized user.

The Reference Librarian/Bibliographer is expected to understand what is available in what formats. It is just as important to understand information acquisition patterns (cognitive styles, etc.) and information *creation* patterns. What role does interdisciplinary browsing play? retrospective analysis? careful compilation of data? rummaging? serendipity? the faint echo of a long ago heard conference paper? Are your faculty linear thinkers? global thinkers? acting on hunches? tinkerers? documenting suppositions? illustrating lecture points? creating analogies? These are questions that perhaps can be answered with generalizations about academic research but that must be answered, for effective reference service, in the particular for the individuals who use your library. If this is pampering, so be it.

Faculty have quickly bought into the idea of interchangeable formats *except* when the format hinders browsing, hinders stuffing the carrel full of texts to read in the "near future." Faculty have gratefully bought into access rather than ownership and delivery from off-site *except* when they are in a hurry (always). Because going to the library usually means going away from their desks and labs, faculty subscribe to the Principle of Least Effort formulated more than 40 years ago by George Zipf. When library technologies and procedures are cumbersome to use in relation to the desired result faculty will often simply stop asking. The reference librarian researching the complete information for an interlibrary loan request may be annoyed–we do know what the phrase "absent-minded professor" means–and *our* Principle of Least Effort (the requestor should give us complete information) is attacked, but the more rigorous and successful our work the more reason we have to justify the personal rather than the automated touch. Remember this when the computer cannot transform a request for information on the Sistine Chapel into Capella Sistina.

Faculty do want real people in the library. They say, "we need human interaction; we evolved as social animals, interacting with the environment and people. Bringing machinery in between people and their resources can be a problem." The library people may be teaching faculty and staff classes on how to use the automated library (as at the Albany, N.Y. Medical Center College.) These people may be almost invisible, but the new issues of good journals are out on display on time. These people may be the reference librarians one can always send a student to, knowing the librarian will match the faculty enthusiasm for both the subject matter and communicating it. These real people may be the unsung heroes who keep the

lights turned on and the copying machines running, the staff lounge coffee pot hot.

A FOCUS GROUP DISCUSSION

A focus group interview is a technique for eliciting from a group of people their perceptions about a situation. This is not a search for truth but for the perceptions on which people act, for the behaviors with which they deal with, respond to the situation, not what it is but how they see it. The purpose of interviewing people in a group is to illuminate patterns of use, to identify expectations and problem areas, to elicit comments on service problems, to hear misconceptions that can be dealt with later and to uncover ignorance about services, collections and processes. In the process of matching library goals to faculty goals one must first understand the relative importance of faculty library goals within their overall direction. The focus group must be large enough to offer people some protection. It must be large enough that the discussions spark ideas and interaction. It should not include people who in any way supervise other members, and at best it should be led by someone without a vested interest in the results. Detailed descriptions of setting up the focus group and conducting the interviews will be found in both the social sciences and library science literatures.

At a focus group interview of a group of engineering school biologists the following points were made. Even through the filter of the focus group format the idiosyncrasies are evident. Perhaps this is because as reference librarians we prepare for our generalized user and the faculty member is most aware of how s/he doesn't fit that mold. In this group there was a "do as I say, not as I do" pattern at work. The undergraduates did spend time in the library, often because of assignments, but also to explore the journals and develop a sense of current research.

The graduate students were simplifying their lives, wearing LL Bean or Land's End clothes rather than going shopping, expecting the library to be a one-stop service: academic library for fiction, travel guides, and historic documents to support role playing games (how were Welsh coal mines laid out?). They needed to research studies relevant to the courses they were teaching. Said one, "I just sit on the floor to browse in journals, reading the popular science magazine summaries and then looking for the original study." At Cornell he used the library every day simply because it was in the same building; here he uses it once a week. Because the graduate students are so often in a hurry, "housekeeping" bothers

them, from un-reshelved books to overflowing waste baskets and malfunctioning equipment.

The senior faculty said they use the library "to teach students the textbook isn't biblical" and to teach them standards of scholarly publication ("If DNA Polymerase can proofread, so can you"). They feel reading journals on the CRT is awful; the microfilm takes too much time and trouble and the printout is unsatisfactory. They feel less pressure to keep up regularly with professional journals, and recognize that does not help libraries justify the subscriptions. Said one, "Whenever I go away I never read a newspaper and nothing really changes; we don't affect the news; our lives are local." When the senior faculty are preparing a grant application or a conference report or completing a research report they will put in library time researching all relevant leads, but they will also wander the library to ease "researcher's block" and clear the head, procrastinate a little. In Canberra, one recalled with satisfaction, faculty had a card to let them get into the library after closing and a Xerox card to make copies so they could browse at will. For the senior faculty there seem to be several styles of library use, from the targeted search for a particular item to the browsing search for a study to enliven a lecture to the rambling review of current publications to the aimless wander in hope of serendipity or delay. Said one, "How can I work without sprawling, without a cup of coffee, without the telephone?" The established faculty murmured that "publish or perish" was irrelevant and used up a good deal of paper, that attending conferences was the real method, while the graduate students leaned on journals for information and hoped to be published so they would be invited to conferences. Both groups assumed the library would have a core collection of monographs. Both groups lamented the demise of the card catalog and its contextual search style and the resulting exclusive reliance on the linear computer catalog search. In the end the library seemed so tangential to the biologists' work that I asked if the library really mattered at all, and was amazed by a passionate, unanimous "Yes! We just want it to be better!"

CONCLUSION

So how does the reference librarian react, especially when you sometimes feel one step above a French maid serving the morning cafés. We need to look at library services and materials as a means to an end, providing information for student reports, meeting accreditation: standards and providing instructional support. We then need to look at library ser-

vices and materials as an end in themselves for both professional and recreational uses. Faculty will use the library to support their daily academic work but they also expect library information on selecting a used car or a mutual fund and, independent as they may be, they still want it accompanied by the warmth of an interested reference librarian. We would do well to set ourselves typical questions and follow the search through the library maze ourselves so that we are better able to understand how it looks to our users. Public librarians understand, and academic librarians must also, that the informal "unimportant" problem-solving opens opportunities for later significant service and collaboration. Is the 80/20 rule an inviolable ratio or can it be improved by more sympathetic individualized faculty-librarian interaction? Aren't Raganathan's rules still the ones to govern the library?

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Finding Common Ground: An Analysis of Librarians' Expressed Attitudes Towards Faculty

Lisa M. Given
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SUMMARY. Information literacy listservs provide opportunities to discuss a range of instruction-related issues. One common theme is librarian-faculty relationships, including positive interactions and complaints. Content analysis is used to investigate librarians' discussions of faculty in BI-L/ILI-L postings from 1995 to 2002. By isolating and anonymizing postings reflecting librarian-faculty relationships and examining these through the authors' experiences as trained librarians and full-time faculty, the paper explores: (1) how librarians frame faculty relationships; and (2) librarians' perceptions of faculty attitudes. The paper concludes with suggestions for transcending unsatisfactory

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experiences with faculty to forge relationships that benefit those individuals both groups must reach–students. *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <http://www.HaworthPress.com> © 2005 by The Haworth Press, Inc. All rights reserved.]*

KEYWORDS. Information literacy, content analysis, librarians' perceptions, listservs

INTRODUCTION

At universities and colleges, librarians and teaching faculty are increasingly working together to offer students support in building strong academic information literacy (IL) skills. However, forging and maintaining strong working relationships between faculty and librarians is no easy task. Misperceptions about different work roles, as well as misinterpretations of personal motivations related to IL instruction, can hinder the development of productive collaboration. By examining and reassessing beliefs about one another, faculty members and librarians can develop strategies for finding common ground in the instructional environment.

LITERATURE REVIEW

There is an extensive body of literature in library and information studies (LIS) that examines trends in information literacy education. Librarians and LIS scholars have examined professional and theoretical issues involved in guiding individuals in the use of information resources, the design of successful library research projects, and the development of information strategies for lifelong learning. Approaches in the literature address a number of contexts–from public to academic libraries, as well as corporate and other special information centers–and focus on the full range of activities that comprise information literacy instruction (e.g., library tours; database searching sessions; critical evaluations of Web resources). Many of these have been written with the specific goal of sharing IL successes in order to guide others in the development of new programs, in the assessment and revision of existing sessions, in the use of technology, or in the management of other incidental instructional components (e.g., Bodi 1990; Drueke 1992). Many

professional and scholarly articles also explore the importance of having key outsiders "buy-in" to the importance of information literacy instruction as one core component to the success of these endeavors (cf. Julien 2000; Julien and Boon 2002). Many articles that address the academic context, in particular, regularly identify the support of teaching faculty as a vital component of successful IL initiatives. Before examining librarian's expressed attitudes and experiences with faculty, it is important to first understand the practical and theoretical contexts surrounding this issue.

Faculty and Librarians' Roles in Information Literacy– A Clear Divide

One of the most prevalent themes discussed in the IL literature is that of the experiential separation between faculty members and academic librarians. Although both groups are engaged, at one level, in pursuing the shared goal of educating undergraduate and graduate students, there are many points of difference that affect the faculty-librarian relationship. Numerous articles portray reference librarians' professional goals (i.e., aiding and teaching students in the effective use of information resources) as being at odds with faculty members' research, teaching, and service work. In these discussions, librarians are placed in a supporting role on campus, as individuals whose primary purpose is to offer support for learning activities, particularly, undergraduate students' information needs (e.g., Farber 1999; Hanson 1993).

At the same time, faculty members are portrayed as sitting outside–yet connected to–the daily activities of the academic library. Here, faculty are discussed primarily in their roles as teachers who set curricula for their students (and by extension, influence librarians' work in supporting students' needs). Hardesty (1999), for example, identifies faculty as "the most important group, outside of librarians, who need to understand and appreciate the educational role of the academic library" (243). However, he notes that a major point of conflict is a faculty culture that privileges research, content and specialization, while undervaluing teaching, process and undergraduate students (244). Hardesty marks faculty members' resistance to building library instruction into their classes as a natural reaction to living under constant time constraints, spending "most of their day doing something for which they have little formal training–teaching" (244), and having a limited exposure to librarians' skills and expertise due to inadequate library support during their own undergraduate or graduate study. While Hardesty

(1999) makes clear that faculty members' actions (or inactions) concerning the library arise more out of ignorance than malevolence (244), other authors are less forgiving, and judge faculty members' inattention to IL as a competition that must be tamed, turf that must be claimed, or as a battle to be won (e.g., Chiste, Glover, and Westwood 2000; Snavely and Cooper 1997).

Other studies of faculty members' attitudes toward the library (and IL, in particular) provide additional context concerning faculty members' perceptions (e.g., Cannon 1994; Gonzales 2001; Leckie 1996; Leckie and Fullerton 1999). In an opinion piece entitled "What I want in a librarian: One new faculty member's perspective," Stahl (1997) puts a very personal face on the issue, noting that faculty members want: proactive involvement from librarians–tempered with an acute sense of when to back off; clear communication about the limitations of librarian support for research activities; to be asked for input on library collection development; and, information on new and useful resources within the library. In a companion piece to this work (entitled "What I want in a faculty member: A reference librarian's perspective"), Larson (1998) compiles her own list of wants and needs: faculty recognition that librarians are in the same business of serving students' needs; clear communication with librarians about what is going on in a course; a basic familiarity with the literature and research tools in the faculty members' field; and, involvement of librarians in the design of course assignments, so that they match available library resources. These two works show, in a very personal fashion, the complex issues and emotions surrounding faculty-librarian working relationships.

Librarians as Advocates for Collaboration with Faculty

Many authors implore librarians to forge stronger, more effective working relationships with faculty, and collaboration in IL instruction is one of the most prevalent solutions offered in the LIS literature. Carlson and Miller (1984), for example, note that involving faculty members in library instruction not only allows librarians to be active participants in the library (beyond simple caretakers of the collection), but "the nature of the courses themselves may change, with more emphasis placed on independent library investigation as an integral part of the course" (484). Much of the current literature advocates this integrated model of faculty-librarian working relationships, and points to the development of formal IL courses and programs within established academic curric-

ula as ideal ways to meet students' needs with full faculty support (e.g., Eliot 1989; Stein and Lamb 1998).

While there are numerous benefits to be gained from collaborative partnerships, many authors also point to the pitfalls of poor relationships–particularly in light of existing problems that must be overcome in order to build effective IL programs. And, as many authors note, the onus is frequently on the librarian to create collaborative partnerships (e.g., Bruce 2001; Chiste, Glover, and Westwood 2000). Some authors see this role as one of faculty development, of teaching faculty about the importance of building the library into courses or assignments, and seeing beyond the library's collections to what librarians can offer students. Cardwell (2001), for example, notes that faculty members often create "problematic" assignments when partnerships with librarians are limited or non-existent; where faculty members fail to take the institution's resources into account when designing assignments, students are left to flounder as they attempt to complete assigned work (258). By forging relationships with faculty–by connecting with them at the reference desk, or conducting one-on-one consultations regarding IL strategies appropriate to their classroom needs–many authors point to the benefits that can be made in the development of IL programs, and in serving students' needs (e.g., Carlson and Miller 1984; Hardesty 1999; Iannuzzi 1998; Ren 2000; Winner 1998).

METHODS

Cardwell (2001) advises librarians to "Subscribe to BI-L [ILI-L], or search its archives . . . An active listserv, BI-L[ILI-L] hosts informative discussions on all types of instruction issues. You will learn about programs, successful and unsuccessful, that have been implemented at other institutions. It is also a place for posting questions and joining in on current discussions" (262). It is the prominence of this listserv among IL professionals that prompted it to be selected as the primary source of data for this study. With approval from the moderator, the archives of the listserv were analyzed using a qualitative content analysis method, for postings that related to librarians' relationships with university and college-level faculty members. The seven-year period from September 1995 to December 2002 was included in the analysis. During that time, in May 2002, the listserv changed its name to ILI-L (reflecting the "information literacy" terminology), and got a new moderator. All the postings to the listserv for the period in question were

read, those that related to librarian-faculty relationships were separated out, and then these were inductively coded for apparent themes. To ensure trustworthiness, the qualitative analyses were conducted by two research assistants, and the authors. In addition, the number of postings relating to each major theme were summed to identify broad trends in posting patterns. In the sections that follow, the term "librarian" is used to refer to posters of messages on the listserv; these posters self-identified as having active roles in the development of IL programs and/or the implementation of instructional activities within their libraries.

RESULTS AND DISCUSSION

Quantitative Analyses

Prior to completing qualitative analyses of the postings to BI-L/ILI-L, some quantitative analysis was done to assess the relative interest in particular themes over the seven-year period. Postings marked as relevant to the faculty-librarian relationship theme were totaled by yearly quarter (i.e., January to March, April to June, July to September, October to December). Postings relating to perceptions of faculty (including their personalities, competencies, and roles) were by far the most common, with an average of 28.4 postings per quarter. Postings about librarians themselves were the next most prevalent, with 18.9 postings per quarter. Finally, postings that focused on librarians' beliefs about faculties' perceptions of librarians averaged 4.2 per quarter. These trends held for every quarterly period. Figure 1 shows these trends, and demonstrates that postings were greater in number between October and December in all years, possibly reflecting peak periods of instructional activity for librarians subscribed to the list.

Appropriate Roles for Faculty Members–Librarians' Perspectives

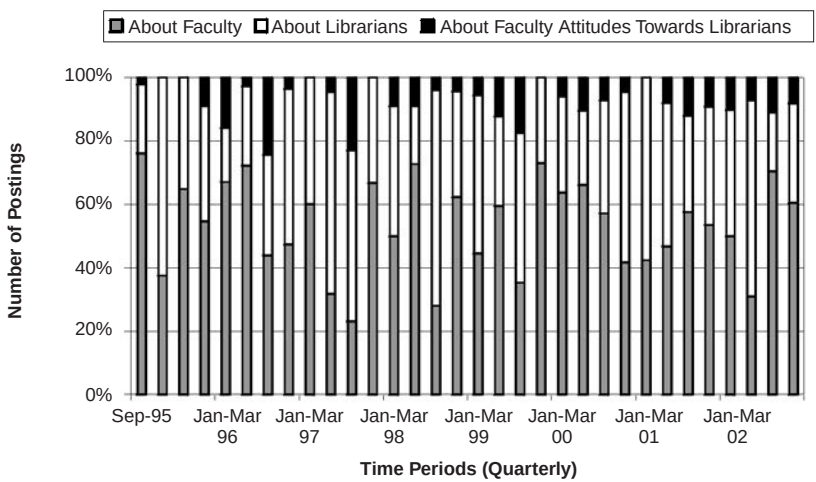
Listserv posters expressed a range of expectations for teaching faculty, from grading library instruction assignments, to dealing with plagiarism, to actively promoting information literacy initiatives. In general, librarians expressed a number of expectations concerning faculty members' roles in information literacy instruction, including:

- Faculty should take on large (even primary) roles in IL instruction;

- Faculty should know library resources, understand the structure of the library and its services, be familiar with library jargon–and be able to teach these things to their students;
- Faculty should prepare feasible assignments that develop basic library skills, foster lifelong learning, provide students with variety, and teach critical thinking; in addition, faculty should teach students such specific skills as: computer literacy; ways to avoid plagiarism; how to distinguish between scholarly and popular journals; and, copyright.

At the same time, several posters recognized that librarians might also learn from the faculty members' wealth of teaching experiences, and apply this knowledge to their own IL instructional strategies; one poster, for example, noted: ". . . we don't get a full sense of what course instructors are up against–the depths of confusion, the short cuts students take, the dynamics of a class as a community. Teaching a course helps us figure those things out and it can really help those students that take it." However, many librarians were adamant in their feelings that within the library, librarians should be in control; for instance, posters seem to agree that library spaces (such as classrooms) should be controlled by the library, not by individual faculty members.

FIGURE 1. Number of Postings Per Category



Librarians' Relationships with Faculty Members

Posters also described a variety of efforts to work with faculty, including developing workshops, and liaising with specific departments. However, as one poster noted, "integration and collaboration [with faculty] are slow, painstaking, and include the slippery terrain of being 'polite.'" Some concern was expressed about how faculty conduct themselves during classroom instructional sessions (e.g., marking papers or reading while librarians were speaking; going away to conferences when instructional sessions are scheduled), articulating a theme of "faculty as delinquent children." For example, one poster stated: "the next year she pulled the same thing," as though faculty are trying to "get away" with some sort of bad behavior when they are absent from or complete other work during instructional sessions. Again, these attitudes are not universal, and some comments indicated that librarians at some institutions have experienced consideration from faculty, who typically give them plenty of notice for instructional sessions.

Faculty Members' Attitudes and Competencies– What Librarians Have to Say

One other significant theme on the listserv focused on posters' understandings of faculty members' personalities. Overall, the image constructed was negative. Teaching faculty were represented as:

- possessive and territorial about their class time, course credits, and "their" students;
- inflexible (i.e., not accepting of any course that is not created or taught by themselves);
- rude, "touchy," and generally uncooperative;
- emotionally detached from the teaching role;
- in a "rut" or needing "renewal" in their approaches to classroom activities.

One frequent complaint expressed on the list was that faculty "lack vision" by not understanding that library instruction may require more than one 50-minute session. Various posters suggested that librarians should expect "trouble" from teaching faculty, that some faculty have "inappropriate" or "bad" attitudes, that librarians should expect their requests to be ignored (or "blown off"), and that some faculty need to be

"frightened" into "compliance" (by pointing out that familiar library resources are changing or being eliminated). Listserv subscribers were warned not to let themselves be "pushed around" by faculty, so as not to drain librarians' "emotional survival bank." Some posters noted that teaching faculty need to be "tricked" into paying attention to the library, by being cajoled with food and a low pressure environment. Although there were some allowances made for younger faculty, who were characterized as being eager to make a good impression and happy for help with instruction, some posters interpreted this enthusiasm as "laziness," or a sure sign of an instructor trying to "get out of teaching" by letting a librarian run the class. Implicit in these examples is the notion that librarians are dedicated, caring individuals, who continually strive to meet students' needs–despite their frustrations with faculty members' questionable attitudes.

While the vast majority of postings were quite negative in their assessments of faculty members' attitudes, some posters were much more generous in their judgments; positive descriptions referred to faculty members as:

- "reasonable" and "understanding" in terms of IL initiatives;
- having useful knowledge–including expertise regarding students' class-based resource choices;
- in need of a "break"–due to time constraints, research demands and institutional obligations;
- "grateful" for instruction;
- working on a consensus model of decision-making (which can be, at times, at odds with librarians' expectations for quick decisions relating to IL instruction).

One poster suggested that faculty ought to be treated with "care" as any colleague deserves. Although the majority of postings provide negative accounts of faculty-librarian interactions, the minority voices that contradict those images provide a hopeful tone to the discussion; that, in better understanding faculty members' work roles and obligations, librarians may be able to push beyond feelings of frustration and outrage, to find a common ground that will fulfill the goals of most IL programs.

Perceptions of Faculty Members' Opinions of Librarians and Their Work

The listserv postings were filled with assertions about the ways that teaching faculty view librarians and their work. While several posters

stated that some teaching faculty are supportive of their library and its goals, most of the perceptions on the part of librarians were less than positive. Many librarians felt that faculty members:

- do not understand librarians' work;
- do not appreciate that librarians often cannot provide instruction on an ad hoc basis, as students need it and wander into the library;
- do not see the intellectual content associated with library instruction;
- view library instruction as only tangential to class content;
- see library use as a set of mechanical skills, requiring only average intelligence to master;
- discount the term "information literacy" as ambiguous, or simply library jargon;
- do not respect librarians.

One poster noted that faculty members view the library as an "obstacle which must be dealt with as quickly and painlessly as possible." Related to this perspective was the point that, "Most faculty seem to view the library as an infrastructural resource and not [as] a learning resource." The bottom line seems to be the perception that faculty do not understand librarians as librarians understand themselves.

How Do Librarians See Themselves?

At the heart of this issue, then, one question remains: How do librarians see themselves in relation to the faculty members on campus? Some posters to the listserv clearly perceived themselves to be full-fledged faculty. Indeed, given the postings that appear on BI-L/ILI-L, it appears that many librarians appreciate being introduced to students as "Professor." By situating themselves as faculty, librarians perceive that they are able to gain credibility in the eyes of students. As one librarian noted: "I NEVER use the word 'serve' when describing what librarians do. I always say 'support' the faculty or the curriculum or student research needs. We facilitate, assist, co-teach, but we do not 'serve' the faculty." While this attitude is clearly empowering for librarians, particularly when trying to connect with students and gain legitimacy in the role of teacher, this approach also (even if unintentionally) places faculty as lesser on the meritorious rungs that define their academic work. Faculty members, for example, typically engage in research and service activities–in addition to their teaching responsibilities–and generally hold

doctorate degrees in their areas of specialty. To be equated with librarians, who may not do any research, and who typically hold master's-level degrees, many faculty may rebel and further strive to define themselves as very different from the librarians on campus. By attempting to gain legitimacy by placing themselves as equals, librarians run the risk of further distancing those faculty with whom they need to connect.

Quite a number of criticisms were leveled at librarians by their own colleagues; the result is a clear indication of the complexity of librarians' feelings concerning their relationships with faculty. Some posters expressed frustration with peers who:

- do not want to expand their instructional activities beyond the "traditional";
- are afraid to say no or offend, preferring instead to stick with their perceived public roles as "nice people";
- are unmotivated (often due to feelings of "overwork and technostress");
- believe that others see them as on the verge of "extinction" or as "second-class citizens."

Although one poster noted: "The real enemy is in our ranks," another was quick to say: "if we constantly cater to faculty, do things on short notice, etc., then we are complicit in devaluing our own time and efforts." Another stated, "We librarians, along with our colleague professors have failed to instill in our students the joy of real research. We've made the whole process look so stuffy and difficult, or else we've provided so little real help in our one-shot sessions."

There were several points of debate, demonstrating a lack of consensus among librarians about some of these issues. For example, some posters were more sanguine about their status on campus: "We reference/instruction librarians are all handmaidens to the research process, and the term is neither offensive nor pejorative. I have no problem in considering myself a handmaid, or handmaiden, to the teaching faculty. We perform a service, a necessary service, for them; but we aren't their peers even though we may have faculty rank or status." Debate was also evident about whether librarians should train faculty to train students, or train students directly. Additional discussion focused on whether librarians ought to be teaching "computing" literacy, especially word processing.

CONCLUSIONS

The berating of faculty for not being intuitively information literate, or for not taking the time to become information literate is a puzzling attitude–particularly given librarians' professed mandate to guide users and provide instruction in the use of information resources. However, this attitude may also hold the key to understanding the limitations–and complexities–of the librarian-faculty relationship debate. Both explicitly, and by implication of the expressed attitudes explored here, many librarians on the BI-L/ILI-L list made clear that they generally do not consider faculty members to be their clients–only those faculty members' students. The images of troublesome, arrogant faculty, who have little understanding of librarians' roles, point to a problem at the core of the relationship issue: that until librarians embrace faculty as clients themselves, deserving of the same level of respect and support afforded undergraduate and graduate students, IL librarians may continue to fight an uphill battle to bring faculty members onside.

By recognizing that faculty members and librarians are masters of their own (separate, but related) spheres, librarians may make strides in forging respectful and productive working relationships. As well, there are a number of concrete changes that librarians can embrace:

- Try not to presume arrogance, bad intentions, or disrespect on the part of faculty–they are people, just like librarians (or students, or other library clients), and all will have very different attitudes towards librarians and the library;
- Try not to presume that faculty are not committed to IL–or willing to open their classrooms to librarians; they may balk, at first–due to other time constraints or worries about competing institutional agendas–but this does not mean that they are not willing to be involved;
- Try to gain faculty members' trust, by expressing an understanding of their busy lives; offer to provide help with their research or service work, as one way to gain access to their classrooms;
- Recognize that many faculty did not have the benefit of formal library instruction during their own education and have learned to access the world of information in ways that may appear inefficient and ineffective; over the years they have designed personal library-searching systems that work for them–so try to be patient in guiding faculty members in their use of resources, and be proactive in terms of instructional outreach;

- Treat faculty as clients of the library–offer to hold instruction sessions for their research assistants, or offer to set up monthly journal alerts.

All of these suggestions attempt to address a core issue, implicit in the postings examined in this study–respect. Librarians clearly desire it, and faculty members are no different. In order for librarians and faculty to work collaboratively in IL programs, both sides need to find a common ground–ways to speak to one another as colleagues, and also as clients-helpers. If librarians can lay the groundwork for building engaging, productive relationships with faculty by first connecting with them in their roles as researchers–the teaching role will soon follow.

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Section III: Reinventing Course Contents and Materials

CHAPTER 11

Adapting Instructional Documents to an Online Course Environment

Jacqueline Cason and Patricia Jenkins

When faculty teach courses online for the first time, they may do so for any number of reasons, ranging from the course having been slotted that way prior to their putting it in their workload, to their wanting more flexibility in their own schedule, to the administration encouraging them to meet the needs of students. And they may be new to teaching a particular course, new to teaching online, or both. Furthermore, their technological comfort zone may range widely depending on their fluency: They may be guided by a strong orientation toward print-based composing, or they may be as technologically fluent as their students. The process we describe below characterizes the experience of teachers who came of age before the emergence of new media and who were encouraged by administration to offer courses that would meet the needs of students and lighten the demand for on-site classroom space. However, our experience may inform younger faculty who have not yet taken the plunge or program administrators who supervise contingent faculty who prefer the flexibility of teaching online. Once faculty have committed to teaching online, many of them most likely begin to familiarize themselves with the campus delivery system available and soon realize that their courses can be ultra-technologically sexy or pretty dang technologically straightforward, depending on the system, their knowledge, available support—and their comfort level. They should also be aware that as online enrollments have increased, so have distance course attrition rates, so they will need strategies for engaging with their students (Carr, 2000).

In the process of moving a course first created for the face-to-face environment to an online interface, they realize that their course documents, in standing alone, lack the supplemental live presentation of the on-site classroom. Imagine walking into a classroom, distributing an assignment sheet, and exiting the classroom to await questions from a remote location. In the on-site classroom, instructors more often *present* their assignment sheets because meaning inheres not in the document itself but in the complex interrelationships among activities, context, participants, and the discursive signs that articulate those relationships. If the instructor does not attend to those relationships, meaning making on the part of the student may be limited.

As composition studies continues down the innovative path of online education, it is worthwhile to listen to voices like Farber's (2008), who describes the on-site classroom as "a technology whose time has come," a place marked by the "purposeful convergence of people in time and space." He describes the qualities of the on-site classroom as "present, immediate, alive"; "complex, multidimensional"; "physically and socially situated"; "a lively and productive interplay between cognition and affect"; a place where connections can be "integrated, . . . memorable, . . . transformative" (p. 217). By contrast, he describes screen time pejoratively and encourages us to infer that the online course might be "a neutralized version of the real time, real space" of the classroom. Furthermore, Farber's depiction of an enriched learning space reminds us that print-based documents are just one element in the communicative process, combined with multiple nonverbal, verbal, and visual resources. What are instructors to do if they can no longer draw upon the full repertoire of communication strategies available to classroom teachers in a space where physical presence, images, words, sounds, and dialogue are integrated during live presentation? To compensate for the inherent multimodality and synchronicity of the on-site classroom, they will seek a way to establish their physical and social presence, even in the most presentational of documents, the assignment sheet. Our analysis suggests that as online teachers continue to innovate, they will need to rely on a different repertoire.

The principles of multimodal authorship described by Winters (2010) echo the description of Farber's on-site classroom and align well with the work of writing teachers who author texts that are often nonlinear, integrated, and layered, using multiple modalities. Borrowing Winters' principles of authorship, we can describe composition teachers as "meaning-makers" who "orchestrate a multiplicity of modes," who "shift among social (inter)actions of design, negotiation, production, and dissemination," and who "create storylines and subject positions" (p. 2). And the resources for doing that vary according to the spaces in which they teach. What does it mean to adapt materials so that they are suitable for an online course, and how does the new space of the online environment change the nature of assignment documents? What should inform teachers as they create *new* materials for the online environment? How do those materials

adapt over time? In other words, what does teaching *online* mean for the materials we create and post?

Understandably, much of the scholarship on online teaching addresses the challenge of developing pedagogically sound, interactive learning environments; it does not, however, address specifically adapting or creating instructional materials. Nonetheless, the instructor concerned about what this means for writing and rewriting materials can glean some useful advice from these broader discussions of course design. For example, in the context of discussing "the problem of designing interactive, collaborative learning online," Grady and Davis (2005) offer criteria for well-designed documents: They point out that "it is important to provide more content and explanation in an online course in order to replace the natural interactions and explanations that occur in a face-to-face class" (p. 109). They also suggest that the syllabus should contain "clearly marked links and connections to other parts of the online course" (p. 109) and that the schedule, too, should contain hyperlinks so students can access places in the online environment as well as documents (p. 110). In the context of examining physical, virtual, and cognitive gaps in the online environment, Carter and Rickly (2005) suggest that you "play with your cards up"; that is, they encourage instructors to provide a detailed syllabus in which they are open about choices made for things like readings and assignments (p. 136). Essentially, much of the advice for adapting course materials emphasizes providing more context for students and implementing the means for documents to be networked with other documents and with relevant areas in the online course. However, adapting course materials to foster an interactive learning environment should not be limited only to replacing through text and networked documents the social and affective dynamics possible in a face-to-face class.

WHY LOOK AT COURSE MATERIALS?

As our chapter will show, a more specific concern for creating and adapting instructional materials will demonstrate that online courses can take more advantage of multimodal resources to situate and supplement print-based documents and navigational links. While Cargile Cook (2005), Rude (2005), and others argue for putting pedagogical choices before choices for materials and technology, they are not suggesting that choices about materials are unimportant or unrelated. Cargile Cook argues that pedagogy rather than technology should shape curricular policies and choices: "Pedagogically driven distance courses, as opposed to boilerplate technology-driven ones, begin with what effective instructors do best—teaching students" (p. 51). Such student-centered teaching has always been fundamentally multimodal. Similarly, Rude argues that "pedagogy is more important to the quality of the course and long-term success of the program than materials and technologies" (p. 69). Both suggest that a pedagogy-driven course calls upon instructors to examine their practice with a

protocol well-defined by the scholarship of teaching and learning (e.g., "backward design"). In light of this concern for putting pedagogical goals, instructor values, and student needs first, when we argue for "informed practice" in online teaching we are arguing for pedagogy-driven practice.

Cargile Cook (2005) also points out that designing a pedagogy-driven course includes choices about instructional delivery models and links two models of delivery to corresponding pedagogical theories (p. 59). She explains two models of delivery—presentational and interactive—and likens the presentational delivery model to lecture-based, on-site courses and the interactive delivery model to the dialogic, on-site courses. Furthermore, she suggests that the presentational model will tend toward an objectivist pedagogy and the interactive toward a constructivist pedagogy. Rude (2005) reminds us that "the assumption of much of the literature in writing instruction is that pedagogy should be constructivist, encouraging students to take an active role in learning and performance and to work in collaboration with peers and the instructor" (p. 70). Speaking realistically, Cargile Cook makes the point that many writing courses will nevertheless contain a combination of presentational and interactive elements: "Given that most classroom activities fall somewhere between the presentational and interactive models, few actual classes will be entirely presentational or interactive in design" (p. 60). In other words, designing a pedagogy-driven course means that instructors work from a particular theory that lends itself to a particular delivery model, but they likely will have aspects of their courses that may seem (or be) more in line with a theory that does not seem to fit with their values. This practical insight frees the instructor to provide preferred approaches to assignments needed to accomplish course goals. With this in mind—that teachers may need to tend to presentational aspects of their online courses even when grounded by a constructivist theory—this chapter considers one particular presentational element of on-site and online teaching, assignment instructions. Instructional documents that guide writing assignments are significant because writing assignments customarily count for as much and sometimes more than 75% of a total grade. Given the importance of writing assignments, we believe that instructors should provide students with a written description of an assignment even if it is open-ended or based on a question in a text. According to White (2007), "many experienced teachers have learned that they must write out, distribute, and discuss their assignments if they are to be taken seriously and if a particular goal is to be made clear" (p. 5).

How to Look at Course Materials

While the advice for adapting documents is a good place to begin—providing more context and creating networked documents—we argue that in order for our course materials to be reflective of informed practice, instructors should interrogate them after they have attempted to adapt them by adding much-needed

context and connectivity. To interrogate course materials, instructors can adapt a methodology from genre analysis developed by Paré and Smart (1994). Paré and Smart define "genre" in terms of patterns of regularity across four dimensions—textual features, composing processes, reading practices, and social roles—in order to "provide a lens through which researchers can examine the influence and acquisition of genres" (p. 153); similarly, instructors could look at the same dimensions of their online documents. Adjusting Paré and Smart's genre definition to suit a different purpose, we suggest that instructors begin their interrogation with the following questions:

- What textual features characterize your course materials?
- What composing practices do you use for your course materials?
- What reading practices are required with your course materials?
- What social roles do you play or need to play in course materials?

Paré and Smart's inquiry helps "researchers explore the full range of social action that constitutes an organization's repeated rhetorical strategies, or 'genres' in order to 'know more about how a genre constrains and enables writers and readers'" (p. 153). The inquiry we propose helps instructors examine course materials by asking them to consider four dimensions of their course materials: textual features, composing practices, reading practices, and social roles. Our application of "social roles" is informed by discussions about instructor roles in the online environment, particularly the work of Coppola (2005). She identifies three roles that are enacted in both on-site and online teaching: cognitive, affective, and managerial. Her research shows that these roles change when the instructor begins teaching in the online environment (pp. 97–98). Through our examination, we invite instructors to think about the ways their course materials may constrain and enable their pedagogical intentions and about ways technological choices, made by themselves or their institutions, may constrain and enable them as well. We are not proposing necessarily that there is a genre called the "online document," but that as we interrogate our courses and concern ourselves with sound pedagogy, this must include interrogating our course materials as well. Otherwise, perhaps all we have done when we teach online is provide a different way for students to access our course's content.

The method of genre analysis, as demonstrated by Paré and Smart (1994), approaches genre as social action. Such a method provides an opportunity to examine presentational documents and to attend to their inherently social qualities. While our analytical results remain conceptual, they point the way to more empirical trials. Through the process of our inquiry, we have discovered that our own assignment documents have evolved through three identifiable phases:

1. **Replacement Practice**: Posting assignment sheets directly online as word-processing documents to be printed, with a brief description that situates

them in a new environment and establishes their place within the course architecture.
2. **Sequential Learning Units**: Adapting assignment sheets to a sequential learning unit as provided by many course management systems and presenting them in a more situationally embedded and modular screen view.
3. **Multimodal Composing**: Re-creating assignment sheets and instructions with multimodal composing tools to take fuller advantage of the webbed interface.

Although we have evolved through these phases and have continued to optimize our courses, we do not intend to frame the changes strictly as a matter of linear progress. As readers will eventually see, we have begun to question the time warranted to master a proprietary course management system and would encourage fellow instructors to be wary of constraints within such systems.

As we analyze each phase of document adaptation, we will be asking a set of four questions: which textual features characterize our documents; which composing practices do we use; what reading practices do our assignment instructions require; and how do those documents serve to define the social roles of and relationships among students and teachers?

PRIOR ACTIVITY: SCAFFOLDING THE ONLINE ENVIRONMENT

Before instructors interrogate the presentational aspect of their online courses, we would like to note one requirement for informed practice when adapting course materials: Grady and Davis (2005) point out that "Simply uploading all the course materials and handouts for a traditional course without a framework that defines how all the pieces of the course are related results in overwhelming confusion for the students" (p. 108). In other words, we must create a blueprint that includes sequenced instructional objectives and the instructional events that set up students to meet these goals, and we must also make the plan—the structure—visible to students (p. 108). According to Grady and Davis, the course syllabus can provide the necessary framework for an online course (p. 109). This instructional strategy of "scaffolding" the online environment, to use their architecture metaphor (p. 102), informs our ideas for adapting course materials to be used for the presentational aspect of our online courses. In short, scaffolding is a necessary prior activity for informed practice. Therefore, even though we consider the individual nature of course materials in this chapter, we encourage instructors to have a framework in place before they apply the method of analysis we provide, a framework that demonstrates the relationship between course goals, activities, and learning units, as presented on syllabi and within the learning units of a course management system, as illustrated in Figures 1–3.

Figure 1 illustrates the first two pages of a print-based document designed originally for an on-site course. The first page foregrounds logistical information like meeting times and places, required textbooks, and prerequisites. The document consequently relies more heavily on instructor presentation for emphasis. Not until page 2 do descriptions of learning goals and activities appear as well as a description of the online learning environment itself; and the overall presentation relies heavily on a default layout of a single column of 12pt type with one-inch margins. Figure 2, by contrast, reveals a more significant redesign that begins to reflect the second phase of adaptation to a course management system.

The page layout now resembles a web page layout. Page one contains a navigation bar to the left and a column of text occupying a more central location, and page two presents a 2-column design with greater differentiation between headings and body text, making the document easier to navigate. The document consequently relies less on instructor presentation for emphasis. The logistical information has been filtered into the bar on the left, and the course goals and activities are foregrounded on the first page. The corresponding learning units are now outlined on page 2, and considerable space is filtered and devoted to a description of the interactive online environment. More substantive descriptions of learning units have been moved up to page 2, descriptions that will correspond directly to the sequential learning units on the course web page, as illustrated in Figure 3.

We have known for a long time that the shape of text on a page differs from text on a screen. Bernhardt (1993) discusses nine key traits of on-screen text, while noting the virtues and drawbacks of both and the way they influence each other. Bernhardt's analysis helps us to recognize that screen text is situationally embedded and increasingly modular. In the first case, the screen text often calls upon readers to perform specific tasks that are part of a larger activity, and the computer is well-suited to scaffold that level of interactivity. Related to that, the higher level of modularity tends to chunk, filter, and queue text in ways that facilitate such tasks, though they may suffer from fragmentation. Print text remains better suited to longer, more complex readings that call for a linear progression.

Figure 3 illustrates the Web-based view of the Assignments area of the course management system where the learning units directly correspond to activities and units listed in the course syllabus. In sum, the redesigned syllabus and course web page depict a more visible framework in which students can observe the relationships between learning goals and individual assignments, and it becomes even more important to foreground such relationships in online courses.

Focus on the Assignment Sheet

Ideally, then, instructors use a backward design to construct the architecture of their courses, a structure focused on long-term goals and that establishes

Writing in the Social and Natural Sciences

Online ENGL 213-801: Course Syllabus—Fall 2007

Professor: Dr. Jacqueline Cason **My Office Phone:** 786-4367 **Office Fax:** 786-4383	***Office:*** Professional Studies Building 208B (formerly "K") **English Dept.:** 786-4355 **Email:** DrJ@uaa.alaska.edu	***Contact:*** e-mail; Blackboard Discussion; appointment; scheduled hours T-Th 12:00-2:00

"Scientific writing, in its broadest sense, is quite likely the most triumphant, the most imitated, the most universal form of human discourse ever developed 'after Babel.' During the past 100 years, it has risen to a glorified preeminence over all other styles of written communication, having become the model of authority and presumed accuracy to which nearly all forms of expression have increasingly turned for 'advice.' As an enormous library of individual tongues that have adopted a single style of truth telling, 'the common language of science' (as Einstein called it) has evolved to a level where it seems as fully absolute, independent, self-justifying, and unassailable as the facts it claims to transmit. Indeed, it would be hard - perhaps impossible - to deny the impression that here lies the grand master narrative of modernism, ideally suited to its content. What sort of faith, then, might we say seems to beat at the heart of this discourse? Simply this: that language can be made a form of technology, a device able to contain and transfer knowledge *without touching it.*

~Scott L. Montgomery, *The Scientific Voice,* pp. 2-3

"[To] train young people in the dialectic between orthodoxy and dissent is the unique contribution which universities make to society."

~Loren Eiseley, "The Illusion of Two Cultures"

Course Description: Instruction in writing based on close analysis of readings in the social and natural sciences. This course serves as an introduction and transition into the communication styles of your chosen profession or discipline. Students will gain knowledge of disciplinary writing practices by engaging in discussion and writing about the social, rhetorical, presentational, and stylistic dimensions of published research within their fields of study.

Text & Materials:

- **Required**: *The Chicago Guide to Communicating Science* (2003), by Scott L. Montgomery.
- **Required**: *A Brief Guide to Writing From Readings* (2004), 3rd edition, by Stephen Wilhoit.
- **Required**: Mountains Beyond Mountains (2004), by Tracy Kidder
- Recommended: *Publication Manual of the American Psychological Association*, 5th ed. [APA] or the publication manual for your particular discipline, e.g. CSE, CMS, etc.

Prerequisite for Course: Prerequisites are designed to encourage student success. I will be checking Wolflink for your eligibility in the course. Methods for demonstrating eligibility include

- a grade of C or better for English 111 (You may not be enrolled in 111 and 213 simultaneously)
- a Verbal SAT score of 620 or higher OR an ACT English score of 30 or higher

1

Figure 1. Phase One: Replacement Practice.
Screen shots of the first two pages of a syllabus originally designed for an onsite course and minimally revised for an online course.

Learning Goals:
Students will learn that

- communication is contextual and occurs at the intersection of writer, reader, and publication;
- genres evolve through practice; therefore, the rules of effective writing are descriptive rather then prescriptive;
- writing styles arise out of a discourse community's particular ways of knowing; and
- citation practices (citing sources) in academic writing are the means of joining an ongoing conversation and a way of contributing something more to that conversation.

Learning Activities:
Students will

- manipulate sentence style, such as active and passive voice, nominalizations, conciseness, etc.
- read some research abstracts in the field of discourse analysis;
- investigate the social context, rhetorical approaches, and writing genres in a specific discipline;
- read and review a book that addresses the social dimensions of scientific research and empirical ways of knowing; and
- compose such documents as syntheses, abstracts, and an experimental analysis of a peer-reviewed academic journal and research articles within.

Blackboard: We will use Blackboard as the platform for the course. Blackboard will be your access to many of the assigned readings and to subsequent writing assignments. I will ask you to use Blackboard in six primary ways in this course: 1) To check announcements at least 3-4x each week; 2) To follow the learning units for each set of assignments in the course; 3) To access readings and submit assignments; 4) To engage in collaborative projects; 5) To contact classmates and to participate in written discussions; and 3) To find links to relevant resources and websites. Occasionally, this platform will go down due to technical difficulties. It usually comes back up within a short amount of time. You will never be penalized due to Blackboard outages. If you are not sure whether it is the system or your computer, you can call the IT Services Helpdesk at (907) 786-4646, email them at callcenter@uaa.alaska.edu or check their webpage: http://technology.uaa.alaska.edu to discover the status of the system.

Virtual Participation Policy—Greater Than the Sum of its Parts

What life have you if you have not life together? There is no life that is not in community.
~ T.S. (Thomas Stearns) Eliot (1888–1965)

Though you may be sitting all alone at your computer right now, you're connected to a larger group just the same as if we were all in the classroom together at this moment. I need your virtual presence in class: I need your energy, your questions, and your insights. Interacting, connecting, and engaging in the activities of a dynamic community will help you understand the course material better and remember it long after the semester is over. Because this is a 3-credit course, I expect you to **log on to the course at least 3 times a week and check your e-mail at least 3 times a week as well.** Many major assignments include specific participation activities that will earn you points. The following table describes the many ways that you can be present in the course:

Figure 1. (Cont'd.)

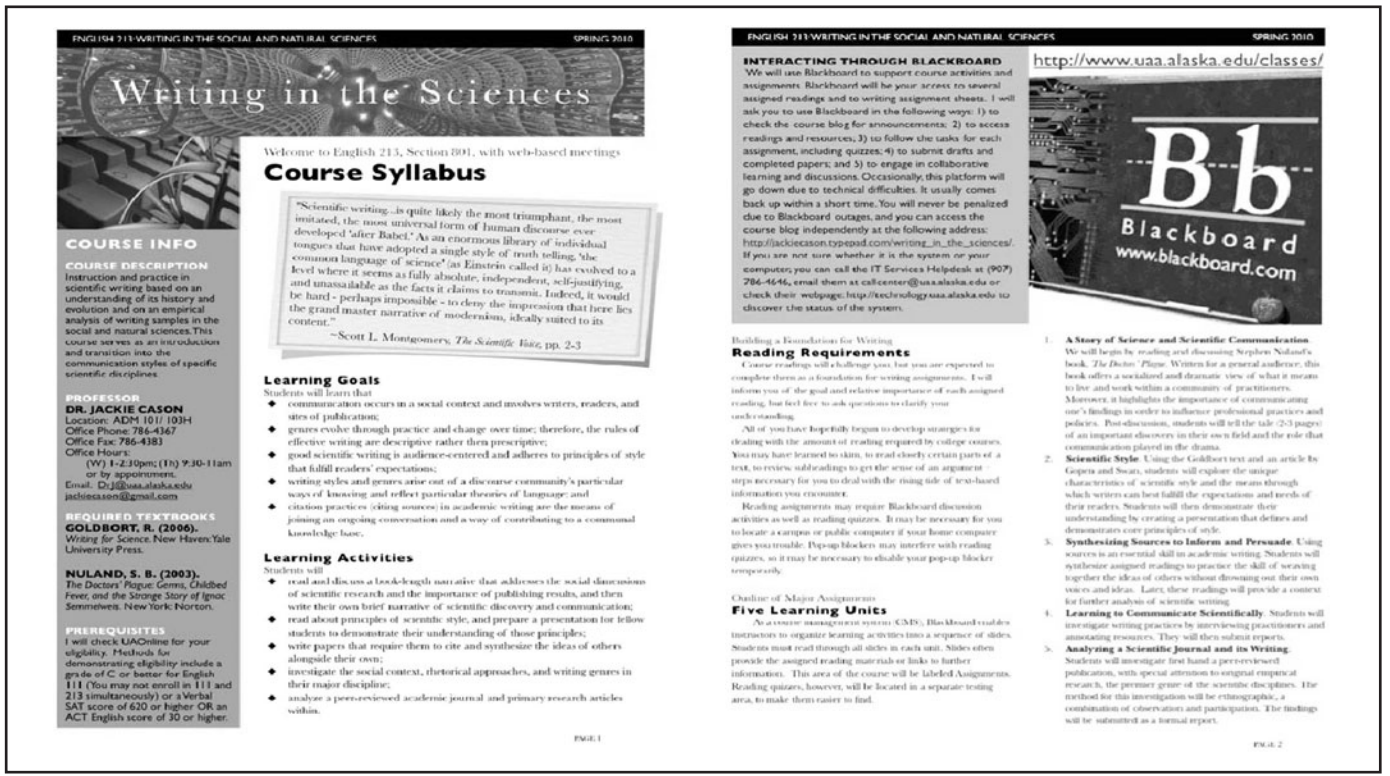

Figure 2. Phase Two: Sequential Learning Unit.
Screen shots of the first two pages of a syllabus significantly redesigned for an online course.

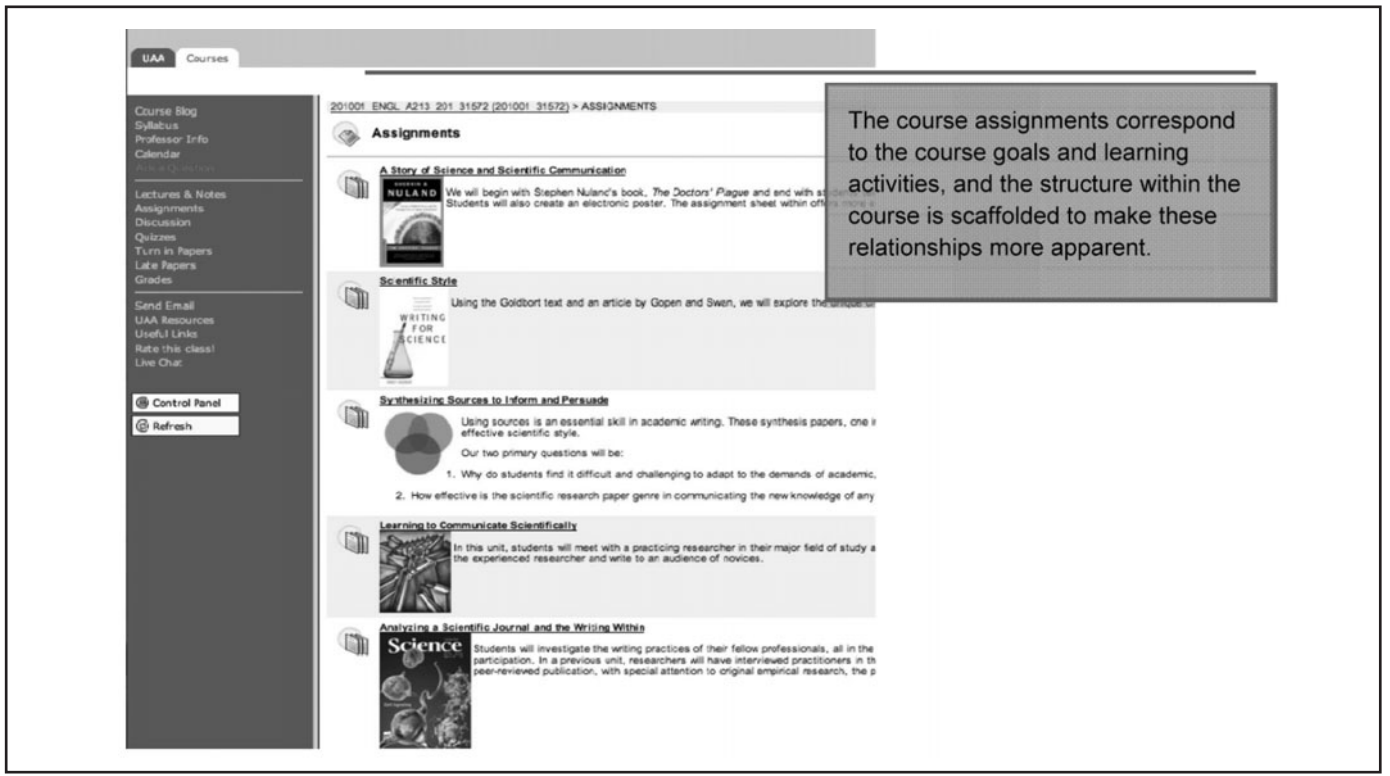

Figure 3. Phase Two: Sequential Learning Unit.
Screen shot of the Assignment Area within a course management system.

incremental activities designed to facilitate those learning goals. In other words, the backward design begins with learning goals, with the understandings that students should remember long after the course has concluded. After establishing long-term goals, instructors devise assessment strategies and learning activities that will lead to the achievement of specific goals. As Fink (2005) clearly explains, we begin first with course design and destination and then work backward from end goals to devise the student-teacher interactions that will get us to our destination. In a forward-designed course, instructors begin with individual assignments and plans for student-teacher interaction and then establish summative assessment strategies to determine whether goals have been achieved. Ideally, instructors create assessment strategies from the outset that are formative as well as summative. To that end, courses will have syllabi, policies, assigned reading documents, assignment sheets, discussion prompts, and evaluative commentary.

One type of document that stands out as pivotal in any course is the assignment sheet, a set of instructions that provide a link between course goals and assessments and that guide student performance. Moreover, the assignments occupy a significant amount of an instructor's time, and they locate instructors at their most presentational moment. Because they occupy a central role in course design, we are examining the instructional documents commonly known as the "assignment sheet" and the ways these evolve over time as instructors continually adapt them to online environments. We plan to examine textual features, composing and reading practices, and the social roles embedded within them.

The course materials we examine are from a general education course called English 213: Writing in the Social and Natural Sciences. This course uses an inquiry-based approach for teaching students to read and to write an original research report, as demonstrated in the primary scientific literature of their chosen discipline. Rather than telling students how to write a report step-by-step, the course guides students through the process of discovering empirically the way that such reports are written. In sum, students study scientific writing socially and scientifically by reading stories of discovery and by investigating and collecting data on publication contexts, article structure and design, sentence style, and citation practices. On our campus, the student cohort for the course draws heavily on the biomedical sciences, with several pre-nursing majors. Moreover, both the fields of nursing and social work have changed in the last couple of decades from a focus on clinical practice wisdom to a stronger emphasis on scholarly research and evidence-based practice, and our colleagues in other departments expect students to be familiar with the primary scientific literature, though many students have never encountered scholarly databases and journals prior to enrollment in this course.

Analysis Phase One: Replacement Practice

In phase one, we found ourselves scrambling on short notice to replace the classroom setting with an online learning space or course management system

(CMS) in which instructional assignment sheets could be posted as word-processing documents, much as they had once appeared in the on-site classroom environment as printed handouts. In other words, we began by doing some of what Grady and Davis (2005) warned against by uploading face-to-face handouts without fully enriching the online context in which they would appear to compensate sufficiently for the performance opportunities that face-to-face classrooms naturally provide. In fact, many on-site classroom instructors already post rather than print their documents (guided by formal departmental policies established to save the cost of paper copies), so these course documents may already be online at the time when instructors decide to teach online. Hence, the quickest step toward online teaching may be simply to copy course content from one CMS shell to another. This tendency toward replacement practice is often shaped by the *absence* of faculty development opportunities, workloads that acknowledge the need for time to develop online courses, and realistic timelines for going online.

Textual Features of Replacement Practice Course Materials

The textual features of online and on-site assignment sheets—margins, spacing, text size, headings, fonts—were very similar in this early phase of adaptation. Most of our documents included three levels of heading with sections on assignment overview, assignment goals in relation to course goals, and enumerated step-by-step instructions for completing the required learning activities designed to meet those goals. In other words, both on-site and online assignment sheets were designed for usability with information in discrete chunks and queued according to a deliberate hierarchy of information, each based on the conventions of printed textual communications. Moreover, the written components now included ancillary documents and online announcements that functioned to replace the synchronous oral explanation common in the on-site classroom. That is, written components had become longer and more numerous, and our assignment sheets were now accompanied by annotated models and examples for illustration, which once had been offered more dialogically during guided classroom practice. Essentially, we replaced oral communication modes with textual modes only. Additionally, our documents were distributed in multiple formats (.doc, .rtf, .pdf) to increase the ease of access.

Composing Practices for Replacement Practice Course Materials

Composing practices in the Replacement Practice phase were similar to those used for composing assignment sheets in face-to-face classes, relying heavily on word-processing technologies. However, as suggested above, a concern for document usability guided the composing process in a way that it may not have in

a face-to-face classroom, and we spent more time annotating models to contextualize the documents. Usability concerns itself with the ease with which a user (student) can achieve a particular goal as a result of using a particular tool or document. Therefore, the instructor engages in the art of information design. The instructor is potentially constrained by lack of knowledge of his/her users though enabled through user and task analysis.

Reading Practices of Replacement Practice Course Materials

Reading practices required of students in Replacement Practice courses were similar to those in face-to-face courses except that interactions between instructor and student about assignments did not take place in the same way. Students needed to take the initiative as readers because the practice of posting assignment sheets online built an expectation that students would download and save those documents on their own storage device, print and annotate them as part of the critical reading process, and ask electronic questions when the written words did not suffice. They were expected to respond to instructions and models in imitative ways to produce their own technical documents offline and then upload their documents to the CMS, much as they would submit assignments in class. In fact, online and on-site classes functioned similarly in their emphasis on print-based documents composed and read from an 8.5 × 11 inch page view with a 3:4 vertical aspect ratio. To read a page-view document on the screen requires scrolling, so many readers opt to print out documents for reading offline. By contrast, screen-view documents generally offer a 4:3 horizontal aspect ratio. Content in the screen view is chunked to fit within the dimensions of a typical computer monitor (either 800 × 600 pixels or 1024 × 768 pixels), without the same need for scrolling. However, screen-view documents may require a lot more paper for printing. In replacement practice courses, both faculty and students worked primarily with word-processing documents while transferring those documents though the CMS. The CMS in this way functioned more as a site of transfer than as a site of interaction, with each party working on documents from a vertical page view and transferring them via access and submission points on the screens of their computers.

Social Roles of Instructor and Student in Replacement Practice Courses

Although both student and instructor were accessing and posting documents from the screen environment of their computers or mobile devices, with visual navigational cues, the communication and social roles remained heavily mediated by a view of the printed page. Little to no oral speech existed. When posted electronic assignment sheets were not being performed orally in a classroom setting, and when nonverbal cues that customarily invite dialogue were absent,

both students and instructors relied on typed alphabetic text to achieve clarity and purpose. The social roles of instructors and students therefore tended to be somewhat fragmented in Replacement Practice courses. While print-based assignment sheets composed and read in a page view enabled a cognitive value similar in both online and on-site settings, the instructor's cognitive role in guiding learning activities was severed from the instructor's affective and performative roles. Social roles were thus constrained by our assignment sheets when mediated strictly through printed alphabetic text, a situation that restricted opportunities for instructors and students to integrate cognitive, affective, and performative roles.

Analysis Phase Two: Sequential Learning Unit

In the second phase of adaptation, as we grew more comfortable and familiar with our course management system and the visual perspective of the online screen view, we began to adapt word-processing to a Sequential Learning Unit in the CMS.

Textual Features of Sequential Learning Unit Course Materials

A Sequential Learning Unit, like the one provided by Blackboard's CMS, may contain any number of items and operates as a series of slides through which readers navigate one by one. Textual features of a sequential learning unit—levels of headings, spacing, text size, fonts—resembled the documents in the Replacement Practice phase. However, the slides of the Sequential Learning Unit were chunked to fill the screen with minimal scrolling. The content was oriented to a horizontal 4:3 aspect ratio and framed on the left by the course's navigational menu. As with hyperlinks in a text-based document, learning unit slides also contained links to resources outside the web page. Unlike text-based documents, however, the learning unit slides now contained embedded ancillary documents and models that popped up into a new window, offering a set of layers not available in Replacement Practice documents. Assignment sheets were situationally embedded in slides and more closely connected to online task performance. To avoid discrepancies between slides and documents, assignment instructions no longer included due dates; instead, that type of information was found only in the course calendar. The slides, then, were designed more for onscreen readability rather than usability as in the Replacement Practice phase. The result was a continued proliferation of alphabetic text, with page-view assignment sheets now embedded within the screen-view documents in an online environment.

Composing Practices for Sequential Learning Unit Course Materials

The composing processes in the Sequential Learning Unit phase were similar to those used in the Replacement Practice phase because we began with an existing print document, but we copy/pasted chunks of text directly from the document onto the CMS learning unit and gradually began to revise the text style, color, font, size, and graphics to accommodate the layout differences in the screen view. In other words, we found ourselves continuing to post word-processing assignment sheets as they already existed in the previous phase for the sake of offline reference while simultaneously chunking information slide-by-slide and adapting it visually for a screen rather than page view. The WYSIWYG (what you see is what you get) editor works with some browsers and not others, so it became almost necessary to learn html code when composing in the text boxes provided by the CMS. Our experience was that the technology was driving many of our choices in creating assignment sheets. A couple of consequences of revising directly in the CMS was that our assignment sheets no longer existed fully independent of the CMS environment, rendering them susceptible to loss or corruption unless we were sure to archive all of our courses from semester to semester. Just last semester one of our courses disappeared as our campus upgraded our CMS, and all of the revisions for that semester were lost. As we continued to revise learning units, we had to be careful to revise print-based assignment sheets to correspond accurately if we were to continue embedding them within learning unit slides. The experience of composing directly in the CMS environment was that we found ourselves constrained by its rigidity and challenged by the proliferation and redundancy of slides and documents.

Reading Practices of Sequential Learning Unit Course Materials

With Sequential Learning Unit assignments, students were expected to read things online rather than from a printed page. The sequential access slowed down the process and encouraged students to pause as long as they needed to read the words. When reading on the screen rather than from a page, it is much more difficult for students to print their assignments. In fact, the CMS we used has no printer-friendly option for learning units, though some students reported that they preferred to read offline and therefore printed a series of screen views one slide at a time and thereby converted the Sequential Learning Unit into a printed text-based version of the assignment. However, because instructors can choose to either force sequential reading or allow students to navigate through chunks of materials in nonlinear ways by viewing all contents at a glance and navigating to any slide in the learning unit, students' reading practices may vary considerably. Thus, student reading practices for assignments within learning units were enabled by the opportunity to read assignment directions in discrete

chunks of text with enhanced color and graphics and displayed on a screen rather than page. On the other hand, their reading practices were constrained by the fact that they may not have recognized the need to click past the overview description to enter the unit and proceed slide-by-slide with the specific instructions. Our particular courses enabled students to access a content view and read in nonlinear ways, but with that freedom came the responsibility for reading comprehensively. At a minimum, students were three clicks from the entry page of the course to the learning unit contents and had to click several times more to work through the sequence of slides. These constraints encouraged or required students to do more of their reading online. As with hyperlinks in a text document, the screen views from within the learning unit also have the capacity to link to locations within and outside the online course.

Social Roles of Instructor and Student in Sequential Learning Units Courses

The instructor's cognitive and performative roles remained distinct from one another in this phase of adaptation, not yet integrated, though we began to shift our time more toward the online screen interface rather than the printed document, and our assignment instructions were less accessible when the technology was down for repairs. The relationship and social roles of both the instructor and students were now mediated through the CMS, though students could still work with print-based documents offline, and the roles relied more on the integrity of the system to perform as promised. The instructor necessarily became more managerial in monitoring the system and had to work to help solve technological problems or direct students to the proper technology support systems in the event that they could not access items.

Analysis Phase Three: Multimodal Turn

The first two phases of adapting assignment sheets from on-site to online learning environments either relied on or began with print-based documents. However, the next phase marked a more significant shift from print-based documents to multimedia documents, from a page view to a screen view that was composed and could be accessed independently of the institutional CMS. In the process of adapting to online environments, we began turning aside from word-processing software as we provided assignment instructions to our students. The multimodal text integrated words, sounds, and images, and allowed us to merge alphabetic text with the sound of our voice and a view of ourselves and the screen that now defined our interaction. The multimodal instructions were no longer foregrounding alphabetic representations, though words clearly continued to play a role as spoken or written on the screen.

Textual Features of Multimodal Course Materials

The textual features of assignment instructions in a multimodal class included words, sounds, and images in a time-based medium. We no longer limited ourselves to documents in the traditional sense; that is, they were not limited to static, word-processed items that could be printed. Instead, they now included an integration of communication modalities. Because of this integration of modalities, "textual features" became a problematic category because it no longer referred to alphanumeric text alone but also to oral and visual modalities whose temporal sequence was not simply imposed as with a learning unit but inherent in the message modality itself. For example, a QuickTime movie created with the Screenflow authoring program will simultaneously capture screen shots of alphabetic text or web pages as well as the image and voice of the computer user guiding the screen capture. Similarly, a QuickTime movie created with a presentation program like Keynote may simultaneously include printed slides interspersed with video and voiceover. In both cases, the linear flow of information derives from the more dramatic voice and presence of the instructor rather than an imposed sequence of words on page or screen. That is, multimodal authoring tools now offered a stronger performative platform that was inclined toward narrative, where we could better establish storylines and subject positions. Redundancy remained in the sense that print-based assignment sheets still existed alongside the multimodal texts, but the multimodal texts now functioned more like a classroom performance.

Composing Practices for Multimodal Course Materials

The composing process in this phase called for a variety of practices, ranging from assembling multimodal assets (images, sounds, words) to mapping a storyboard and script, to recording, editing, and exporting the performance. Composing was guided less by usability and readability in a traditional sense and more by our sense of performing for a remote audience. Therefore, this was by far the more difficult transition for us because it required us to move outside our comfort zones and familiar composing environments and closer to a screen-based medium with which many students are already familiar. Composing in multimedia was like learning to do everything over again, opposite-handed. It was very different to work with voice-overs, music, still images, and video and to learn to layer it onto a timeline.

Multimodal composing was much less likely to serve as a form of replacement practice for text-based communications, and it was more in accord with students' use of technology in their personal lives. It is worth noting that both of us came to teaching with a strong orientation toward print-based composing. Our status was linked to the primacy of alphabetic print-based literacies. We were

familiar with words—how to generate them, organize them, and present them to an audience in a specific context for a specific purpose. In spite of the challenges that rapid change in communication technologies has presented, we were able to watch our composing practices adapt to the new medium. It has been a gradual process of letting go and learning new strategies. Some of the skills of sequencing and transition transferred to an extent, as do notions of coherence, but it truly was a new experience in juxtaposition. Alphabetic texts have long had an audiovisual aspect, but even a term like "transition" became more complex than a sentence or two between paragraphs when we thought about moving between frames.

The composing process for multimedia texts was transformed from the print-based page-view environment to a timeline screen-view environment that was more compatible with online learning. Instead of working exclusively from a page-oriented view, we began to work within a screen view and timeline. Figure 4 illustrates the multimedia composing environment as distinct from the multimedia viewing environment for the presentation program Keynote and the screen-capture program Screenflow. The viewing environment appeared the same for both because each was exported as a QuickTime movie. But the composing environment was quite different: Keynote looks more like the slides of a PowerPoint program, while Screenflow has a more apparent timeline that allows authors to edit vertical layers as well as horizontal sequencing.

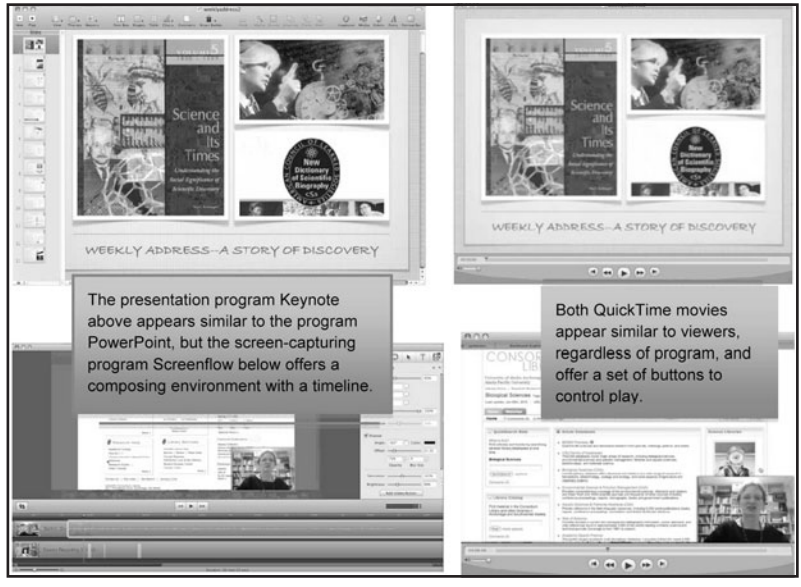

Figure 4. Screen shots of composing environments in contrast with viewing perspectives.

Both sets of images depict an assignment demonstration: the top level a narrative of scientific discovery and the bottom level a method for researching library databases and periodical literature. The top images show the slide presentation program Keynote, and the bottom images show the screen-capturing program Screenflow, capable of simultaneously capturing the screen and the computer user in the frame. From the viewers' QuickTime perspective, the movies play the same, but from the composers' view, the authoring experience is quite different.

Consequently, we were now more conscious of time elapsing for our students because we could quantify the duration of each movie and even more conscious of the time it took to compose effectively because we had to script our oral presentations, compose them, and then spend further time editing before posting to our courses.

Reading Practices of Multimodal Course Materials

Students were able to view assignment instructions online, perhaps from a laptop or even from a mobile computing device on a small screen. They could access our multimedia documents through a free movie player like QuickTime or Windows Media Player, which could be embedded in the CMS, posted on a course blog, or distributed through a designated YouTube channel. They were not able to navigate as easily through different parts of the document, so it became necessary for us to chunk our information into clips of shorter duration that could easily be viewed several times.

Students were able not only to view us speaking to them but to view the assignment instructions or web pages that became part of the assignment. As the Screenflow images in Figure 4 above demonstrate, students could witness directly what it was like to visit and conduct research within the electronic library as they worked on their assignments instead of relying exclusively on written alphabetic instructions, which they had then to imagine as an image of the screen. At the same time, they could see our face and listen to our voice as we guided them through the process of completing an assignment.

It is also worth noting at this point that as we analyzed the textual, composing, and reading practices through each phase of our own online teaching development, it became apparent that the phases were not exclusive. As Figure 5 demonstrates, all three types of documents coexisted within a course—print-based documents, Sequential Learning Units, and multimodal texts. We therefore wish to underscore the co-presence of all three phases; a co-presence analogous to the enriched environment of an on-site classroom where instructors observe and listen to students and engage in dialogue, where they perform their assignment instructions and guide students through incremental practice that leads to increasing independence. The print-based document at the top of the figure is

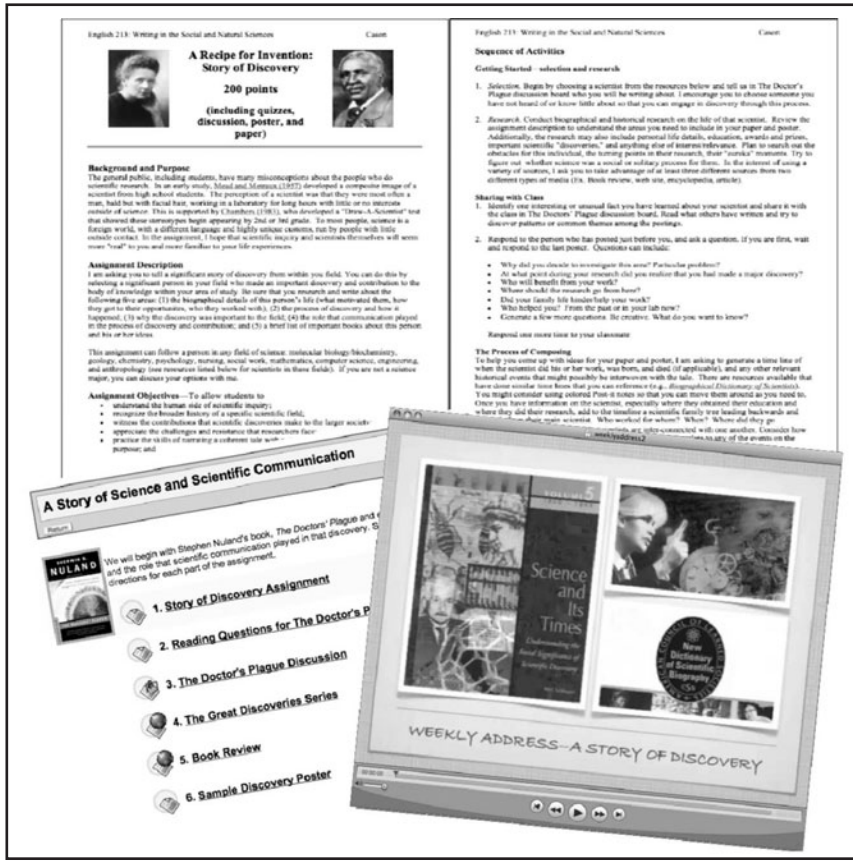

Figure 5. Screen shots demonstrating a progression and layering of print-based documents, learning units, and multimedia texts for a single assignment.

designed for printing or physical distribution. The Sequential Learning Unit in the bottom left serves to distribute documents, chunk instructions, and provide supplemental resources. The multimodal text performs and demonstrates the assignment. This level of integration shaped the variety of roles that we as instructors were playing as we discuss in the next section.

Social Roles of Instructor and Student in Multimodal Courses

This third phase we have identified—the turn toward multimodal texts—is still in process in our courses, but we began to see that it offered us the possibility

of integrating our roles as we instructed students on the steps for completing learning activities and producing their own documents. While alphabetic text lends itself to the development of complex rational arguments, it does not do full justice to nonverbal modes of thought. The more abstract nature of print privileges the cognitive and rational over the affective and emotional, and this is likely the reason we experienced a fragmentation of our cognitive, affective, and performative roles. In a multimedia environment, our cognitive and performative roles were reunited when we composed our assignment instructions. We became a voice and an actor upon the screen, where we could unite our managerial and facilitator roles with our cognitive and performative roles. The next step for us is to provide students with similar authoring tools and to incorporate more interactive programs (VOIP, Voice Over Internet Protocol) like Skype or iChat. To date, our CMS software, Elluminate Live, has presented too many barriers across operating systems and browsers to be fully functional for real-time interaction.

CONCLUSION

The method of genre analysis of Paré and Smart (1994) has provided a heuristic that helped us answer the questions with which we began and to identify three distinct phases of adaptation that could inform further faculty development. It is important to answer these questions because they will enable instructors to make choices informed by pedagogy and to be less constrained by institutional decisions about technology. These questions lead instructors to become more conscious of the textual properties of not only their assignment instructions but also their other course documents, their composing practices, and the way these shape student reading practices; they make it more likely that instructors can integrate their various roles within the classroom instead of being fragmented persons forever trying to put the pieces back together in a coherent fashion.

So what does it mean to adapt materials so that they are suitable for an online course, and how do instructors adapt these materials over time? One thing our examination has revealed is that we are going to continue to exist in a world of alphabetic text, building on that familiar terrain while venturing into new territory. Skills we have developed over the course of our teaching careers will remain vital and will transfer as we develop new skills for communicating in an online environment. It will take patience to adapt our materials incrementally, beginning with what we know and building upon that foundation. Many of our skills will transfer, yet inevitably we will spend time in both worlds, working to make old documents fit the new environment. As we continue to inhabit an emerging online environment and to compose from within that context, we have begun to see that online spaces present a multimodal environment in which alphabetic texts remain a meaningful part, and we can glimpse the possibilities that other modalities afford. Though our institutions may invest heavily

in training us to use a centralized course management system to recapitulate what we do in the on-site classroom, adapting our documents to the online environment does not necessarily mean that we must subscribe to such a system. The time spent learning a complex CMS might be better spent learning to aggregate and organize our materials in other ways and to select the software programs appropriate to our disciplines, those that enable us to merge word, sound, and image in a time-based medium. The choices we make should ultimately be guided by our course goals and content and not by centralized decisions, and we can use these arguments to persuade our institutions to invest in training that is more discipline specific.

When teaching online and creating instructional materials for an online environment, instructors should be informed by the notion that we have the composing tools to integrate our roles, even in the online classroom. The online classroom need not be "a neutralized version of the real time, real space" of the on-site classroom (Farber, 2008, p. 217). We can instead reinvent our classroom persona in ways that allow us to create documents rich with our presence, our voice, and our passion. Multimedia composing is both performative and affective. Moreover, we should be informed by an awareness of the reading and composing practices of students themselves. We must be tuned into their developing literacies as we develop our own. The multimedia language of the screen has become the current vernacular; and it can communicate thoughts and complex meanings that are different from and independent of alphabetic text. In sum, to teach online, or in the classroom, is to inhabit the multimedia spaces our students take for granted and to grow familiar and more comfortable with the means and tools for accessing and creating content in that environment.

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