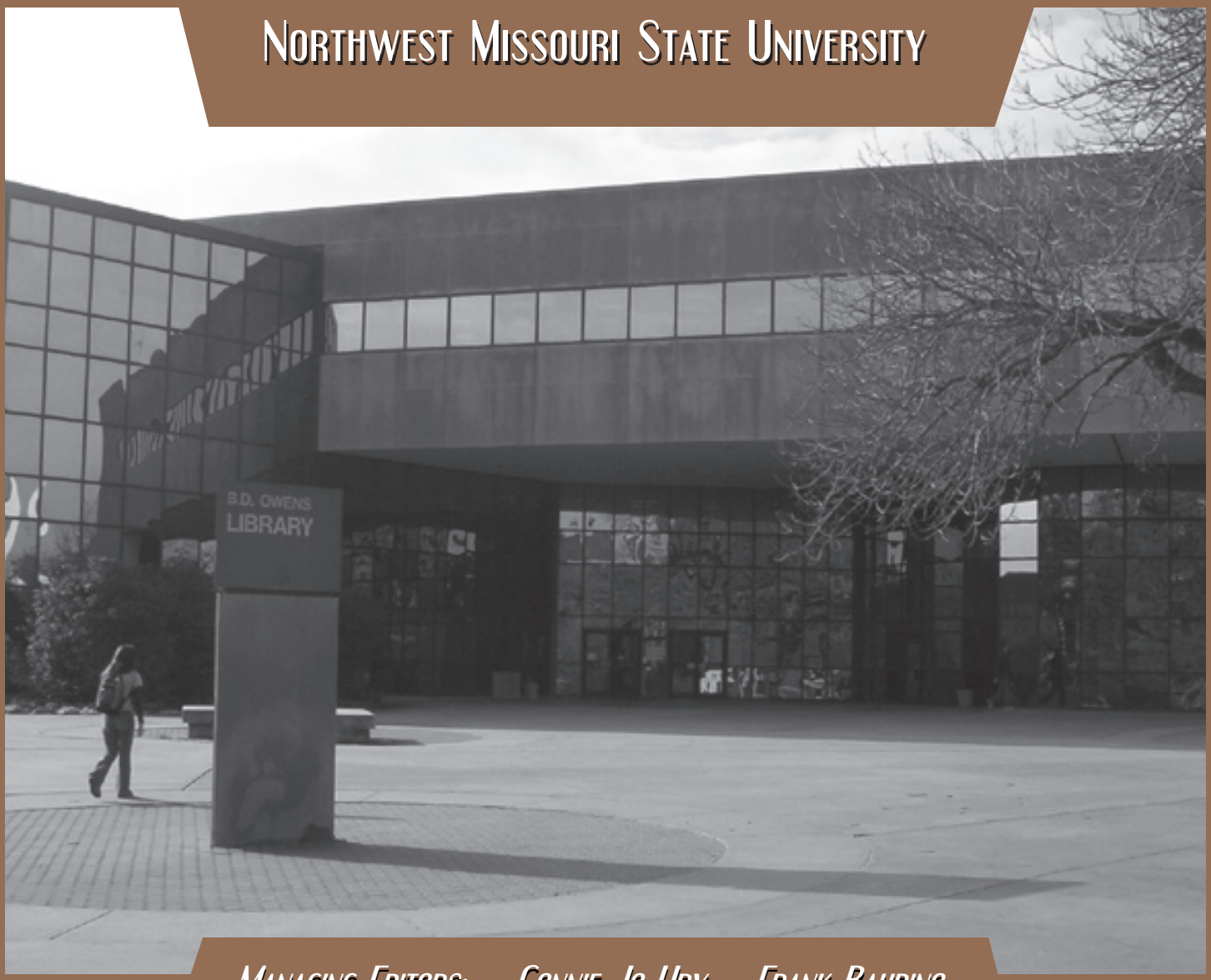
Brick and Click Libraries:

Proceedings of an Academic Library Symposium

Northwest Missouri State University

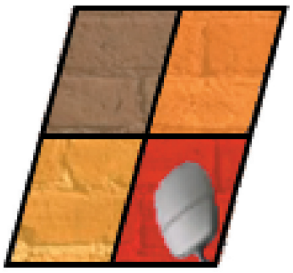


Managing Editors: Connie Jo Ury Frank Baudino

October 14, 2005 Maryville, Missouri

Brick and Click Libraries
An Academic Library Symposium

Northwest Missouri State University



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Did We Say Brick or Click? Did We Say Both?

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Setting the Stage

As we prepare for our fifth Brick and Click Libraries Symposium, it's hard to believe that the term "Brick and Click" was a catchy phrase when we began planning the first event in the year 2001. In fact, our initial question was Brick and Click Libraries: How Do We Support Both? In that first year, we were just beginning to explore the tension created by the demands for service in two different venues—on-ground and online.

By the fall of 2002, we realized that we were living on shifting sand, with the brick and click environment in constant evolution. We aptly titled the symposium Brick and Click Libraries: Changes and Challenges. We hoped that the presenters would help us find the "yellow brick road" to successfully delivering service in multiple mediums and locations.

We celebrated the fact that libraries are amorphous creatures with ever shifting dimensions and boundary breaking services when in 2003 we chose the moniker Brick and Click Libraries: The Shape of Tomorrow. In that year, we joined with the presenters to begin charting the new territory for brick and click products and services.

Beginning in 2004, we made some eye-opening discoveries. First, our symposium no longer needed a subtitle. "Brick and Click" was no longer a catchy phrase that needed explanation, but a part of library vernacular. A symposium centered on the theme needed no further explanation. Second, the challenges were exploding faster than we could have imagined in 2001 when we first launched the symposium.

To mark the evolutionary journey of the Brick and Click Libraries during the past five years, as well as the progression of the brick and click concept, this introduction explores the impact of electronic access for products and services upon books, libraries, and librarians.

Posing the Questions

The 2005 symposium presenters are a group of knowledgeable 'brick and click' practitioners. Consequently, we sent them e-mail asking them to respond to three questions:

1. Do you think there will be both brick and click libraries in the future? Why or why not?

2. Do you think electronic books will replace print books for pleasure reading? For research, textbook, and classroom purposes? Why or why not?
3. Do you think librarians will be replaced by Internet search systems and aggregated databases? Why or why not? (Ury)

The following paragraphs contain a summary of their responses.

Books

Do you think electronic books will replace print books for pleasure reading? For research, textbook, and classroom purposes? Why or why not?

Most of the respondents agree that the primary format of pleasure reading materials will continue to be print for quite a while. They note that the print medium is portable and inexpensive. Several mention that pleasure books in electronic format may become the preferred medium in the future when the right technological conditions are available. Warner summarizes this view:

> We may see an explosion of e-book reading as soon as the technology complies with some simple criteria. An electronic book reader should be lighter than an average Grisham novel; it should have a screen that does not cause eyestrain; it should be silent and not radiate much heat; it should have memory capacity for a shelf full of books; it should have long battery life but have a reasonably-sized screen; it should have open-source or ubiquitous software standards; it should render graphics and even animation easily. If these standards are met and exceeded, and if e-books have value-added content such as search capabilities, interviews with the author, critiques and book reviews, and recommendations for other titles, customers may prefer e-books to print books. (Warner)

Contrasting with the view that most readers will continue to prefer the printed medium for pleasure reading, a wider range of respondents envision a need for electronic reference and textbooks. Zlatos gives voice to this rationale: “Electronic formats are readily accessible, very interactive, and easily updated.” Emanuel agrees: “I can, however, see increasing need for electronic research and textbooks because of accessibility, cost, and currency.”

Libraries

Do you think there will be both brick and click libraries in the future? Why or why not?

Most of the presenters responding to this question believe that the library as a physical place will persist because the library is more than the format of the materials it houses, procures, and catalogs. Click (online or digitized) libraries will continue to satisfy public expectations for convenience of accessing and searching for materials at any time, from any location. Brick (physical) libraries will persist, especially in learning communities such as colleges and

universities, because an academic library is “an intellectual center for the campus, a place where students interact with content rather than a place where content is housed” (Cox). Bullington concurs that “there is still the human, social drive to be around others, to have places to gather, to congregate and commune; and libraries can do that as well as almost any other institution we have.”

A second idea emerging from responses to this question is the belief that not all archival material can be appropriately transferred to digital format, thus requiring that “brick” locations be preserved. The length and format of many print materials prohibits their transference to online mediums in the foreseeable future.

> “While we all increasingly want information in a networked, anytime, anywhere world, the truth is that that reality for ALL information to be accessible in that environment is some time in the future; there is still lots of information bound in 'print on ink' that will take quite some time to migrate into the digital environment.” (Bullington).

A third strand of answers emerging from this question relates to service—the human element attached to libraries. “[P]hysical libraries provide hands-on help, which cannot be replicated by a machine” (Del Bosque). Others, agreeing that the central role of libraries is and will be the service component, offer glimpses of what that service looks like:

> Libraries can light the path to information by “finding effective ways to aid users in making use of it, to make it compelling, interesting, and worthwhile, in a way that clearly helps users achieve their objectives” (Bullington).

Libraries will still be staffed, but people will visit us in online venues. “[W]e may become clickable icons rather than face-to-face service personnel” (Warner). Cox describes some of the online services libraries provide in response to user demand as “guides, tutorials, reference assistance.” Carolyn Johnson, one of the coordinators of Brick and Click since its inception, answered this question with an overview that encompassed both the academic environment and the online issue:

> “As long as there are residential students, there will be physical academic library buildings. Academic libraries are used for so many purposes: for group work, computing, studying, and yes, reading and writing! As far as ‘click’ libraries, I don't think the popularity of flexible scheduling and self-paced learning will decrease for online learners, so online library service will continue. In addition, as online degree programs grow, more online interaction between librarians, faculty and students will be required” (Johnson).

Librarians

Do you think librarians will be replaced by Internet search systems and aggregated databases?

The respondents offered a resounding "No!" to this query. They drew upon the rationale that computers lack the human reason, creativity, and problem solving expertise that is the hallmark of the library profession. Some of their comments are reproduced below:

> A strong comfort level with technology does not equate to a strong knowledge of how to properly use it. Students will continue to need instruction and hands-on help to be able effectively find and evaluate research resources (Del Bosque).
>
> To create new connections through imagination and creativity is still (as of yet) a quality of consciousness and not programming. If we end up creating programs that can do the same, then we have creating new human consciousness and not just a computer program or search algorithm (Bullington).
>
> By Internet search systems and aggregated databases, no. That is tantamount to, in earlier years, saying librarians will be replaced by indexed books and journals. But, declining funding (in a society where community resources are no longer valued) combined with more techno-Internet savvy professors might really hurt us (Zlatos).
>
> Truly intelligent, federated search systems that allow for differences between search conventions will have far-reaching consequences. Librarians are sure-footed Sherpa guides on the slippery mountains of information, and will continue in this role. We will not be replaced (Warner).
>
> The more information that is available electronically, the more users will need assistance deciding what to search, how to search, and more importantly, how to evaluate the results they have retrieved. Only librarians are currently able to help users wend their way through this sophisticated information universe (Cox).

Clearly, asking if an intelligent search system can replace the mind and personal service of a librarian hit a nerve with those in the profession. It will be interesting to see how we continue to provide personal service in a world where we increasingly meet distantly located patrons in multiple mediums.

The Lessons Go On and On and On…..

As we prepare for this fifth symposium, we agree with our presenters that brick and click is no longer a possibility or a liability—but an opportunity to reach patrons in a multitude of venues, at a place and time where each is most comfortable. The flexibility of brick and click offers libraries the opportunity to become places where communication and personal interaction are constantly influenced by developing technology and new sources of information. Digitization and demand for online access may have stretched our budgets and changed the complexion of our collections, but they have also allowed us to make our materials and services available to a wider range of people for extended hours.

The challenge now lies not in whether or how to support both mediums so much as how to efficiently accomplish the work of maintaining "two faces"—the brick façade and the click "icon" (Warner). This challenge calls us to look at ways to design service and products that will serve our patrons better and add value to the institutions we help sustain.

Even as the digital transformation of information brings fresh challenges to the roles librarians have traditionally played, the digital environment provides new tools for growth and fresh opportunities for librarians to establish new identities. Even as librarians enthusiastically embrace new professional dimensions afforded by technology, they will assume greater responsibilities and engage more vitally with the patrons and institutions they serve.

And that's who you are--- the resourceful and enterprising librarians of the brick and click world. Enjoy the Fifth Annual Brick and Click Libraries Symposium.

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Demystifying Documents in the New "Born Digital" Government: A "Heads Up" for Reference

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Abstract

In the last three years, government documents depositories have been profoundly impacted by a massive project aimed at putting all government documents on the web and ending print deposits. The majority of government agency reports are now born digital. Many partial depositories are thinking of shutting down, and it has become evident to documents librarians that for our democracy to remain healthy, reference librarians must become documents-savvy and make a major effort to help raise public awareness about changes in documents availability and publishing policies.

Although these events are being vigorously discussed and analyzed in all of the Government Documents Round Table meetings, there is virtually nothing being said in other library settings about these changes. This forum is part of an interstate effort to bring awareness of documents to all librarians. Even if you are not a federal depository, your library could begin to act like one, if you know what resources to use. Please bring your enthusiasm and your questions. If you are a depository, here is an opportunity to share your own experience with the changing face of documents.

This forum offers an overview of the current challenges inherent in such a vast transformation of services. We will share documents cross-training strategies that we have found to be effective. But this is a do-it-yourself opportunity. If you have stories to tell of successful documents integration in our own reference service, please bring your own stories as well and share the benefit of your experiences with us and with the audience.

Introduction

A saying that is often used in our information environment is, "The more things change, the more they remain the same." Nowhere is this phrase more evident than in the world of federal and state government information. Every type of library – academic, school, public, and special – theoretically enjoys more electronic access to government information via the Internet than ever before. Yet, the same challenges that our patrons have always faced in using print government

resources apply to that same information in HTML, PDF, and other electronic formats yet to be discovered.

The philosophy of the United States Government Printing Office has been traditionally to offer free access to federal government information for United States citizens. As stated by Bruce James, the Public Printer of GPO:

> The U.S. Government Printing Office's core mission, Keeping America Informed, dates to 1813 when Congress determined the need to make information regarding the work of the three branches of government available to all Americans. This is the inherent function of government which GPO carries out for Federal agencies on behalf of the public.

And, equally following with tradition, tangible Federal government information has been freely distributed since 1813 with the establishment of Federal depository libraries. According to the Federal Depository Library Program, the primary purpose of depository libraries is "to provide local, no-fee access to Government information in an impartial environment with professional assistance" (GPO Access).

Of special consideration in the preceding quote are the phrases "impartial environment" and "professional assistance". These goals are essential in all public services transactions, and the special information needs of patrons at a distance are particularly significant. The American Library Association Reference and User Services Association outlines the librarian's responsibility to demonstrate approachability, interest, listening/inquiring, searching for information, and follow-up of the patron's question.

Patrons with questions about government agencies, regulations, forms, and related items must be treated with this same consideration. However, we must also acknowledge some additional factors that affect reference service for government information:

- Staffing and budgetary restrictions in depository libraries, resulting in mergers of general and specialized reference service points and cross-training of reference and government documents librarians
- Increasing direct access via the Internet to electronic government resources
- The commitment of the Government Printing Office to continued digital government information, such as the stability of Web sites, hosted servers, future "obsolescence" of current digital formats, and other concerns

Challenges (and Opportunities) for Public Services and Government Information

In the August 2005 issue of American Libraries, Charles Seavey notes, "The government documents depository library system long administered by the U.S. Government Printing Office is dead. Long live the age of the New Depository" (42). Statistics appear to verify his point. "Since 1992, the number of libraries participating in the federal depository library program dropped from around 1700 to 1248 in 2004." (Shuler 147-48). Taking into consideration GPO's

recent declaration in limiting 50 essential titles to paper distribution, Seavey's statement seems valid on the surface.

However, Seavey adds that the age of the New Depository "is also the good news if looked at from a certain angle." (42) The Internet has enabled libraries to integrate access and services points. We are combining reference and information desks, merging government documents with the main collections, and gathering documents librarians along with subject experts to offer instruction and reference services.

To reach a remote clientele, a variety of libraries now cooperate in offering virtual reference services on a state-wide basis. "Ask a librarian" is a common service feature nowadays, and government information is included. An excellent example of this specific virtual service is Government Information Online at http://govtinfo.org. Sponsored by the Illinois State Library, OCLC, and the University of Illinois at Chicago, it is a national project specializing in queries about government information and is represented by public, academic, state, archival participants from official depository libraries.

The digital world has redefined the performance of our traditional roles. Documents librarians have been responsible for selecting, acquiring, organizing, preserving, and providing access to and services for government information. The duties remain the same, but the distribution of government information is different. Abundance of "born digitally" documents on various agency websites that escape GPO's channel of distribution creates many challenges for librarians in terms of selection, organization and preservation.

The primary obligation of documents librarians has always been the provision of access and services for government information. The digital world provides many opportunities for documents librarians to increase their value. "The ability to provide instant, full text access to materials simultaneously to a distributed user community only serves to enhance the significance of libraries and librarians" (Shuler 149).

The Internet has brought about collaboration in a variety of modes and approaches. For instance, Maggie Farrell suggests partnering with Google to improve access to government information. She compares the two missions of depository libraries program and Google and finds a major similarity in them, which is striving to provide access to information (145). Farrell believes that the partnership with Google will ensure free availability of online government information to all citizens regardless of location (144). Even with this availability, though, documents librarians will be needed even more. We have the expertise to guide users though the plethora of intermingled paper and digital government information.

Seavey believes there is a huge potential for each library to become a government information depository while drawing upon the expertise of existing depository libraries. "Without that in-depth knowledge, libraries are going to simply put up a link to www.census.gov or www.usgs.gov and call the job done. Knowing what is in the Deep Web – where most of the real government information lies- how to access that material, and, most importantly, how all those government websites fit together is what all those new depositories need" (44). Established government depository libraries and their newly born equivalents will benefit from such

collaboration, and the sharing environment will create endless opportunities for getting documents to the people. Through collaboration and interdisciplinary approaches, we can blend all our practices to achieve a common goal on a bigger scale, which is to educate responsible citizens who will do their best to support and sustain a democratic society.

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Listservs Gone Wild at KU Libraries!
Using RSS Feeds and Blogs to Tame Information Chaos

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Abstract

"Listservs gone wild" aptly describes the ways in which information is being disseminated at KU Libraries. Some people get too much information, some get too little and some only want certain pieces of information at particular times. Presently, the KU Libraries are exploring ways in which RSS feeds and blogs can deliver pertinent information to library staff and members of the KU community at large. In order to fully understand the information needs beyond the libraries, the libraries are collaborating with Information Technology and service organizations within Student Success to explore open source software (Drupal), policy issues, training, implementation, and best practices. Teamwork of this sort will allow for a more holistic understanding and coordinated effort towards creating a forward thinking and sustainable future for blogs and RSS feeds at KU Libraries and the KU community at large. The first project will involve a small scale internal technology blog, designed to inform front line students and staff about technology issues and critical problems (e.g., print servers crashing, scanning tips and database outages). By introducing library staff to blogs and RSS feed as a source of quick relevant information we can begin to create a new foundation that will allow people to obtain what they need when they need it, thus eliminating the frustration of being inundated with too much irrelevant email. By setting blogs and RSS feeds in motion at KU, the libraries with collaborating partners will lead the campus towards enhancing and meeting the information needs of the KU community.

Online Customer Care: Making the Case for a Knowledge Base

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Abstract

Given the increasing number of online learners, there is an urgent need to provide support and assistance for their needs – both technical and instructional. To address issues of customer support for our online learners, Buena Vista University has recently implemented knowledge base software that allows us to track and manage incidents, respond quickly to frequently asked questions, and to allow users to submit trouble tickets and get answers 24/7 via online self-service.

The presentation will describe what led us to embark on this effort and how this project fostered new working alliances throughout campus, all working toward the goal of providing seamless assistance from any and all departments at the University. Key elements of a knowledge base will be outlined, along with a discussion of the advantages of self-service knowledge bases compared to E-mail, VR, or text chat. Most importantly, attention will focus on how a knowledge base can improve the student's experience in providing to them a responsive, knowledgeable, flexible means to get solutions to their problems.

Join the Google World: Market Your Collections Using Google Scholar

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Carolyn Johnson
Information Librarian
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Abstract

User studies of research habits in the United States (Electronic Publishing Initiative at Columbia) and the United Kingdom (Griffiths and Brophy) have shown that students heavily rely on electronic resources, and many search Google first when looking for information. Carol Tenopir predicts “Google Scholar will be wildly popular with students” and that it “seemingly answers…teachers’ and librarians’ main objections to the web that the material isn’t of high enough quality.” Google Scholar includes journal articles, theses, books, preprints, abstracts and technical reports from all subject areas.

Given this understanding, libraries can utilize Google Scholar to market subscription-based periodical collections to the “Google Generation.” Rather than being viewed as an “Old Search Engine” (Hafner), libraries can provide the Google Scholar search box on their library’s homepage, leading students to their periodical holdings linked within Scholar. Google Scholar recognizes users via two methods, (1) originating IP and (2) configurable preferences.

When configuring Serials Solutions’ Article Linker using the originating IP method, participating libraries enter the IP address range of their institution. When a search is run in Google Scholar from a computer within this IP range, Google populates the results with links to Article Linker for their institution.

For remote patrons who are not using a proxy server, (so that their searches are routed through the institution’s IP addressing,) Google provides a “manual” way to see the correct Article Linker links. By selecting the "Scholar Preferences" link on the Google Scholar home page, the patron can search for their home institution, select, and save it as the preferred institution. Setting this will allow the patron to both see the Article Linker links for their institution and the Article Linker results page when selecting one of those links. This will NOT, however, provide the remote user access to their library’s subscription databases without the standard authentication requirements now in place at their institution.

Participating libraries can prevent manual configuration in the Google Scholar Preferences page by configuring Article Linker to Restrict Access to their Article Linker results page to only those

patrons within their IP range. This will make their institution non-selectable on the Scholar Preferences page.

For Northwest Missouri State University, implementation of Google Scholar consisted of contacting Serials Solutions to announce interest in participation. Next, Owens Library gave Serials Solutions permission to share Northwest's profile with Google. Finally, a librarian used Google Scholar Setup in the Serials Solutions Client Center to register and adjust configurations. The librarians will discuss why restricting access to Northwest's IP range was an option that Northwest chose not to implement.

The presenters will share marketing ideas for promoting Google scholar in an academic library environment and a survey of BETA test libraries assessing experiences using Google Scholar and whether this has achieved the aim of expanding access to periodical collections. They will also entertain suggestions from their audience about future enhancements to current Google Scholar search capabilities.

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Slipping Into Approval Plans:
A View of Collection Development Collection Management

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Abstract

Approval and notification slip plan services from monograph vendors have existed for over 40 years. Approval plans, specifically notification slip plans, can be an enormous aid in library collection development. The presentation includes an overview and history of slip approval plans, emphasizing the features most commonly offered by approval plan vendors. Librarians from two academic libraries and a vendor representative will focus on YBP Library Services to illustrate the process of building a library profile, the uses of a vendor database, and the advantages of using slips for collection development. For a community college librarian who collects materials in a variety of industrial technology fields, the slip plan provides an early notice for materials inadequately evaluated in traditional selection sources. For a humanities librarian who develops the literature collections at a large state university, the slips serve as an efficient way to consider specialized materials to supplement the approval plan. The discussion will also cover a recent advance in approval plan services--the faculty alert--which serves to improve feedback from faculty on recommendations for purchases.

What is an Approval Plan?

As stated by Robert Nardini, “An approval plan is an acquisitions method under which a library receives regular shipments of new titles selected by a dealer, based on a profile of library collection interests, with the right to return what it decides not to buy” (133). Libraries can establish criteria of lesser importance for notification slip coverage instead of book treatment, or a library can opt for slip notification only. The notification slip, sent instead of the book itself, is usually a 3” x 5” multipart form with full bibliographic information that represents a title fitting a library’s established profile.

Approval plans are most common in academic libraries. However, large public libraries have plans and special libraries such as art museum libraries, seminaries, law libraries and medical libraries use approval plans.

History of Approval Plans

Although there were various programs after World War II that included blanket plans and coordination of gathering plans for foreign materials, the major impetus of approval plans came from Richard Abel. Abel was the manager of the Reed College Bookstore in the early 1960s and suggested that gathering titles and automatic shipment of titles once published would be a more efficient way to build collections than traditional firm ordering. He devised a system of profiling the subjects of interest to a library and a system whereby titles could be sent "on approval," subject to be returned if not acceptable to the library. It was an appropriate time to use computing to coordinate relationships among subjects, the non-subject aspects of books and presses. This was a time of great expansion of higher education, both in physical plant and in programs. Computing enabled Richard Abel to fine-tune the approval coverage to subject interests of libraries - including subjects such as geographical area studies and interdisciplinary studies, which were taking hold at the time. Buying books in bulk also allowed approval accounts to carry a discount significantly higher than that for firm order accounts. (Nardini 133-134)

Approval plans quickly proliferated around North America. However, the Abel Company overextended and folded in 1974. Another book vendor acquired the remains of the Abel Company. By this time, the approval plan idea had taken hold amongst academic libraries and approval services continued to grow. (Nardini 133)

YBP Library Services mirrors some of the above-mentioned history. John Secor established the company in the early 1970's as Yankee Book. By the mid 1970's Yankee Book Peddler had established an approval plan system and ancillary services such as a children's awards plan and key reviews services. In 1998, the company changed its name to YBP Library Services and acquired a subsidiary company to provide services from the United Kingdom. In 1999, Baker and Taylor acquired YBP, along with its UK subsidiary. YBP assumed the approval services that Baker & Taylor were providing to academic libraries. Currently, YBP is managing approximately 300 profiled book plans and there are well over 1,000 notification slip plans in service.

Basic Client Plan Example:
"450 Books per year for the Billington Library at JCCC"

Johnson County Community College is a comprehensive community college offering Associate of Arts degree programs as well as more than 40 career and certificate programs. Located in the suburban Kansas City metro area, JCCC has a credit enrollment of over 10,000 FTE students.

Billington Library divides collection responsibilities among six librarians. Each of us uses different collection development approaches. YBP is willing to work with me as the only participant from my institution. Most of my collection responsibilities focus on supporting industrial technology fields - automotive, metal fabrication, railroad, power plant, etc. I am also responsible for fire science administration, cosmetology, interpreter training and paralegal programs. This mix proved difficult to manage. I read reviews, looked at publishers' catalogs, and browsed Bowker's *Books in Print*. This time-consuming scouting of new materials frequently resulted in failure. At the end of the day, many of the materials were not available -

already out of print, never released, or promised for a later date. At one point, more than 25% of the materials I had laboriously selected never arrived.

Using a slip plan has helped enormously with collecting in these areas for a community college patron group. Once I developed a profile, the slips began coming weekly - also one of my profile choices. I select the slips that represent titles I want to purchase and pass these slips to the acquisitions department. The slips are easy to work with. They offer accurate, complete bibliographic information, which makes it easy and efficient for acquisitions staff to place, track and receive orders.

I like the variety of publishers represented and the range of target audiences included. Most of all, I like the fact that the timely notice of available resources means that almost every title arrives. From the library budget perspective, the titles arrive not only quickly, but also with a discounted price and no shipping costs. I continue to look at review sources, but I am pleased with the slip plan, especially for the sometimes difficult-to-acquire materials in the industrial technology areas.

Extended Client Plan Example:
"The Academic Library Approval Plan Goes Electronic: Using GOBI at MU"

Electronic Advantages

The MU Libraries have used approval plans from various vendors for many years. Approval book shipments, based on the Libraries' profile, help to streamline core acquisitions, freeing selectors and staff to spend more time on discrete selection of more specialized materials. With the development of YBP's GOBI database, and similar products from other vendors, we have been able to further streamline our acquisitions process, analyze our collecting patterns, and offer new electronic services to our users.

Communication with Faculty

Those of us who involve faculty in the book selection process are especially pleased with the electronic communication features of GOBI. In the paper environment we spent hours sorting selection slips according to faculty interests, packaging them, and sending them to faculty, where they might languish on a desk for some time. Duplicating slips that were of interest to multiple faculty members was time consuming and confusing. In the electronic environment, we set up a GOBIAlert for each faculty member, reflecting his or her specific areas of interest. This individual profile is automatically run against the database of slips and the results are sent to the faculty member by email on a regular schedule determined by the faculty member. Faculty review the electronic slips and indicate purchase requests by marking the desired records and returning them electronically to the librarian's review file for a final purchase decision. Freed from laborious sorting and packaging of paper slips, we have more flexibility in alerting faculty to materials in their areas of interest and enjoy efficient communication among faculty and librarians.

In addition to sending GOBIAlerts to faculty, I've created a "virtual approval room" that gives faculty in my areas a sneak preview of the books that are automatically shipped on a weekly

basis. Using GOBI, I'm able to capture a list of the books that have been shipped, sort this in call number order, and post this list to departmental electronic distribution lists. Faculty and graduate students can review this list online and then visit our physical approval room once the books have arrived to examine items of particular interest and flag materials for priority cataloging.

Obviously these electronic services are available anywhere users have Internet access, an added benefit for those who are traveling, on leave, or working from home or distant sites. Although some faculty members still prefer to work from paper records, most have responded enthusiastically to these electronic services.

Communication with Acquisitions Staff

These electronic features have also improved communication among library staff. In the paper environment, we divided slips among all the selectors. Selectors returned paper orders to acquisitions to be sorted, filed, and entered into the acquisitions system. In the electronic environment, each selector has access to all the electronic slips, enabling us to better respond to interdisciplinary interests. For example, the women studies librarian and the literature librarian may both consider the same material. Since the current order status displays in the online record, each selector can see if the other has already placed an order for the item. (GOBI also displays this information across institutions within a consortium in order to facilitate cooperative collection development title by title.) We can select materials online and route the electronic orders directly to the acquisitions staff. We can collect electronic orders in folders, which automatically display the total cost of the contents.

Autonomy and Flexibility

The GOBI system allows librarians a fair amount of autonomy in using the system. In the MU Libraries, each liaison librarian or selector can administer the GOBIAlerts in his or her areas of responsibility. This allows a great amount of flexibility in responding to patrons' needs or desires, adjusting search parameters, scheduling, and format of the alerts on a moment's notice. We can run searches and create a variety of files and reports independently rather than relying on a designated administrator or on YBP staff. Although we have had occasional glitches, usually involving faculty who are using nonstandard email programs or older web browsers, we have been able to resolve most problems ourselves without too much trouble.

Analysis of Collection Patterns and Potential for Cooperation

In addition to the electronic notification and ordering features we have highlighted in our presentation, GOBI also facilitates the creation of a variety of reports, ranging from not-bought lists, to the analysis of spending by call number classification. These reports are used to analyze the collection patterns of a single library, or for comparison within a user-determined peer group or consortium. These reports could be useful in justifying budget requests or adjustments, or for facilitating cooperative collection development. The OhioLINK consortium worked closely with YBP in developing GOBI and is leading the way in using these features to facilitate planning and reduce duplication of materials within the consortium (Gammon and Zeoli 86-88; Diedrichs 21-23, 38-41). In Missouri, the MOBIUS Collection Management Advisory Committee (MCMAC)

has been exploring the potential for statewide "smart buying" using GOBI or a similar database developed by Blackwell's.

Vendor Plan Example:
"How the Plan Works at YBP"

The Library Writes a Plan

The appropriate library staff works with the YBP field representative to establish the scope of the plan.

- The library staff writes a document which codifies the subject profile and the non-subject parameters - format, reference type, non-book formats and interdisciplinary emphasis.
- YBP requests series lists from the library. The series lists indicate monograph series excluded from the plan. The lists also indicate series to be included in the plan, either for slip or for book coverage.
- They choose a press list from a list of approximately 1600 publishers-all major trade, university and association and society presses.

Once written the library sends the instructions to YBP. YBP enters the plan into the online system and the plan becomes one of over 1,000 such plans examined when each newly received approval title is processed.

Materials are Gathered and Matched to Library Plans

YBP buyers begin the gathering process. YBP buyers work with the publishing community -- those 1600 presses who have made agreements to work with YBP in the approval service -- to ensure that notifications of forthcoming titles are sent to them in a timely fashion. The buyer determines the number of titles to order, estimating the number of titles that would be sent on approval and the number sold immediately from slip orders.

After the titles have been received, one copy is immediately cataloged (many libraries have set up cataloging and shelf-ready services in addition to the approval services) and then profiled. The profiling process enables YBP to match the title accurately against the instructions of all the slip and approval plans that are in the system. The profiler examines the title and adds additional data to what exists already in the database from the order and cataloging processes. For instance, type of series, reprint type, type of reference title –these are all noted. For those subjects and parameters that cannot be automatically computed, YBP asks "questions" of the profiler, in such a way that a simple "yes" or "no" answer must be given.

Upon receipt of all the data, the system then determines which plans will receive profiled books and which will receive notification slips.

Future Directions

Electronic Books

Of immediate interest among libraries and vendors alike is the incorporation of services for the provision of electronic books into approval plans. Book vendors are now selling electronic books; academic library vendors have begun to incorporate electronic book coverage into slip and profiled books plans.

Consortia Plans

Vendors active in approval business are also involved in new approaches by consortia. As described in the University of Missouri, Columbia example above, there is interest in the library community in coordinated approval plans, usually with each institution taking a portion of subjects or formats covered by the plan.

The convergence of improved automated systems, rapid delivery mechanisms, and financially challenging times gives impetus to a variety of endeavors to reduce unnecessary duplication (Armstrong and Nardini 92-98) and coordinate the collection of "not-bought" materials. (Gammon and Zeoli 78-81).

Conclusion

Many libraries have found electronic and traditional paper slip approval plans to be helpful services. Plans are an efficient collection development tool and free selectors to devote more time to specialized collecting. Early notification of available titles ensures that there is a steady flow throughout the year of new titles on subjects important to the institution and that the library receives titles despite short print runs. Additionally, libraries achieve a significant time reduction from making the title request to shelf availability with slip approval plans. Approval services can reduce the work of the library compared to traditional selection and firm ordering functions by reducing the number of orders to prepare as well as the number of invoices to process. The extension of the approval plan to include all the options inherent in a sophisticated vendor database such as GOBI opens immense opportunity for effective and efficient collection development.

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Building Skills F2F - Using Chat Reference Techniques!

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Abstract

The UTSA Library, like many organizations, has been experiencing a period of rapid growth and change. Even positive change can cause stress in departments, and one way to help employees deal with change, while still providing customer-oriented service, is to establish a regular forum for discussion that encourages departmental communication.

Training is an important aspect of employee development; however, the literature indicates that, in many organizations, training is often given little attention and relegated to the sidelines due to other demands on staff. With the hiring of new personnel, including a new Head of Reference and a Training Coordinator, the UTSA Library's weekly meetings model was expanded to include more systematic training, including special events such as summer workshops.

UTSA librarians provided training in-house, worked with vendors, and collaborated with librarians at other institutions to provide a variety of training sessions to Reference staff. This paper illustrates the training process by providing an overview of training offered to the UTSA Library Reference staff. To compare their training program with those at other libraries, UTSA librarians surveyed other academic libraries in the San Antonio area to determine what types of ongoing training were incorporated into their Reference departments. This paper concludes with recommendations for the future of the UTSA Library's Reference training program.

Introduction

The University of Texas at San Antonio (UTSA), founded in 1969, is the second largest academic component in the University of Texas System. UTSA has an enrollment of over 26,000 students, and offers 109 degree programs. The university has the goal of becoming a doctoral/research intensive institution (http://www.utsa.edu/About/). The University is experiencing rapid growth, moving from 19,330 FTE (Fall 2003) to 22,626 FTE (Fall 2004), as indicated by enrollment statistics at http://utsa.edu/registrar/enrollment.cfm. While the final enrollment numbers are not yet available, all indicators point to significant increases in student enrollment for the Fall 2005 semester.

The UTSA Library consists of three locations: the John Peace Library at the 1604 (Main) Campus, the Downtown Library, and the Archives at the Institute of Texan Cultures. The library's collection includes over 650,000 books, 2,500 periodical subscriptions, and over 30,000 electronic periodical subscriptions (http://lib.utsa.edu/About).

The UTSA Library Reference Department is distributed among two locations about fifteen miles apart: the John Peace Library (JPL) and the Downtown Library. The Reference Department is comprised of twelve professional librarians, nine paraprofessionals, one administrative assistant and a part-time work-study student. In addition to averaging 25-30% of their time on the Reference Desk, Reference librarians are bibliographers, and also teach library skills classes in their subject areas, as well as general information literacy classes.

Reference services are provided at physical reference desks at both the JPL and Downtown Libraries, as well as over the phone and via email. Additionally, the UTSA Library participates in the collaborative Ask a UT System Librarian chat service, which is staffed five hours a week by UTSA librarians.

The UTSA Library, like the rest of the university, has been affected by the rapid growth of the exploding student population. As the student body expanded, staff had to adjust to the increased demands for additional hours, materials, and assistance. Changes in library administration, and changes in services, policies, and available resources, have an impact on library staff, as have an increased need for additional space and staff. While the Reference department is now fully staffed, the Library is experiencing significant changes at the administrative level; for example, two Department Head positions are vacant, two Assistant Dean positions are vacant, and the Dean of Libraries was recently reassigned as the Special Advisor to the Provost for Library Affairs, leaving a university administrator as Interim Dean of Libraries. While some of these changes were expected more than others, even positive change can cause stress in departments. During this time of transition, one goal of the Reference Department has been to help employees deal with change, while still providing good customer service.

The UTSA Library Reference Department has a long-standing tradition of weekly meetings that incorporate staff discussion of policies, procedures, and other relevant issues, and offer a training component when possible. In recent times, this forum has been used to encourage departmental communication and work through resistance to change.

With the hiring of new personnel, including a new Head of Reference and a Training Coordinator, the Reference Department's weekly meetings model was expanded to include more systematic training opportunities.

Reference Department Training: An Overview

This paper focuses on a particular training example, using chat reference techniques, to build F2F (face-to-face) reference skills. While this paper will describe this training example, it is useful to understand this training activity in the context of the UTSA Library Reference department's overall training program.

Reference department training activities are divided into broad areas such as Policy and Procedures, Database Skills, Customer Service, and Safety/Staff Development. The Reference department has regularly scheduled weekly meetings. Training activities are included in these meetings two to three times per month.

Table 1
Sample of Training Activities since January 2005

Anti-Spam Training	Using Webmail
Reference Performance Standards Review	Reference Interview Skills Review
Academic Search Premier Review	ProQuest Review
News Databases at the Library	CPR Training
CCH Database	Academic Universe: Lexis for Paralegals

Source: Chapman, Kimberly. Training Activities 2005. U of Texas at San Antonio Library Reference Department. Unpublished training files, 2005.

In summer 2005, the Reference department offered an experimental Summer Training Workshop Program to staff over a seven-week period in July and August. There were two main goals of the workshops: to provide training sessions to refresh reference skills and learn new skills, and to provide opportunities for Reference staff from both campuses to interact with each other. To ensure that different staff had opportunities to interact, we offered workshops at both campuses, and required that all staff had to attend at least one session at each campus. All employees were also required to attend a certain number of sessions – the number required varied depending on whether or not the employee had been with the department less than six months, was a librarian, or was a paraprofessional. Additionally, staff members who taught workshops were given "credit" towards their attendance totals.

UTSA librarians provided training in-house, worked with vendors, used other University resources and collaborated with librarians at other institutions to provide a variety of training sessions to Reference staff. Librarians took advantage of one another's expertise, and incorporated ideas from other training models into reference training sessions.

A total of 25 sessions were offered to staff. Reference staff members were required to attend four mandatory sessions, and then were allowed to select from 21 remaining sessions to meet their attendance requirements. While most of the summer workshops were database/resource – oriented, a few workshops dealt with policies, procedures, and staff development. Additionally, other departments were invited to attend training sessions.

Table 2
Summer Training Workshops (Mandatory Sessions Indicated with an Asterisk)

Policy & Procedures Review*	Back to School Refresher*
General Statistics Training*	Human Resources Workshops On Dealing with Change*
Building Architecture Search Skills	E-Journal Locator
Mergent Online	Back to Basics: Catalogs Review
Introduction to Health & Medicine Resources	Investext Plus
Acquisitions Process	Chat & Email Reference
Map Center 411	Library Tours (2)
Who's Afraid of CIS?	Google It!
Statistical Universe	Engineering Workshop
Thomson-Gale TexShare Databases	Compustat
Business & Company Resource Center	Literary Criticism
Spanish Resources	All About E-books

Source: Chapman, Kimberly. Training Activities 2005. U of Texas at San Antonio Library Reference Department. Unpublished training files, 2005.

Reference Department Training: The Role of Chat

The UTSA Library Reference department has participated in the Ask a UT System Librarian collaborative chat reference service since the Fall 2003 semester (Chapman and Del Bosque 55-56). The UTSA Library is responsible for staffing the service five hours per week, with Reference librarians volunteering to participate. Currently, four librarians staff the service on a regular schedule, with three experienced staff as back-ups if there are scheduling conflicts. Reference librarians have undergone periodic training on chat reference policies, procedures, and chat techniques.

Although librarians are capable of providing chat reference, the service is underused. During a time period from February 1st, 2005 to May 10th, 2005, the Ask a UT System Librarian service had 178 transactions, with UTSA librarians handling 39 of those transactions (Dobbs). However, chat provides a unique resource for training because transactions are logged and can be reviewed at a later date. These transactions can be used as source material to provide learning opportunities for both chat and other types of reference service.

The idea to review chat transcripts and apply them to broader reference training was inspired by a presentation at the 6th Annual VRD Conference in Cincinnati, Ohio. During the presentation *Show Me Yours and I'll Show You Mine! Implementing Peer Review,* Nancy Foley, Rita Kaiser, Jennifer Reichert, and Matthew Saxton demonstrated a process for participants to analyze chat transcripts for appropriate pieces of the reference interview, as a method to train employees on techniques for providing effective chat reference. This training model involves groups of about eight to ten participants who review chat transcripts together, with the assistance of a facilitator. Participants evaluate the transcripts looking for typical reference interview practices, such as

greetings, acknowledgment and clarification of the question, citing sources and providing instruction, and closing (Foley et al. 3-4).

There are significant differences between providing chat and F2F reference services, one of the most obvious being lack of nonverbal cues such as body language. However, despite these differences we decided to explore the possibilities of adapting this technique to F2F reference training at the UTSA Library. This technique can be used to help train new employees, and to provide refresher customer service skills to experienced reference staff. This year, we had a group of both new employees, and a regular training cohort, in which to "experiment" with these new training techniques.

First Things First: Getting Chat on the Reference Department Radar

UTSA librarians staff the collaborative chat service five hours per week, from their offices. Staffing chat is very much a "behind-the-scenes" activity compared to regular Reference desk staffing, where colleagues can see what you are doing. Even though chat reference has been marketed to students, and is mentioned periodically during departmental meetings, the adage "out of sight, out of mind" seemed to hold true – chat reference seemed peripheral to reference duties rather than being fully integrated. One of the workshops offered during the summer was a panel on *Visible and Invisible Reference Services*. This panel consisted of library staff who provided chat reference, and library staff who monitored the library's email and comment services. The panel provided an opportunity for these staff members to share their strategies for assisting patrons in a virtual environment, showing how they bring their in-person reference skills to their chat and email responses. It also reminded Reference staff of the different kinds of library assistance provided to patrons, and laid the foundations for further training integrating both virtual and in-person reference skills.

Using Chat Transcripts with New Employees

The reference interview is a fundamental reference concept. Teaching the reference interview process and developing an employee's active listening skills are an important part of the new employee training process. Typically, new reference department employees are assigned several activities to help them understand the reference interview:

- The employee must complete the Reference Interview module of the Ohio Reference Excellence (ORE) website at http://www.olc.org/Ore/2intro.htm. *ORE on the Web,* while public-library oriented, still provides a useful introduction to the reference interview process.
- The employee reviews the department's Reference Performance Standards, which are based on RUSA guidelines.
- The Standards are discussed with the new employee, usually by the Training Coordinator, the Head of Reference, or the employee's immediate supervisor.
- The Standards are periodically reinforced with PowerPoint presentations that emphasize key aspects of our standards of customer service.
- The new employee and the trainer role-play situations to practice the reference interview.

- The new employee watches experienced staff at the reference desk and is expected to learn through observation.

While these training processes have been successful in the past, primarily because the department has often hired employees with previous reference experience, this training can be inadequate for new employees who have little, if any, reference experience. Using chat transcripts to train new employees about the reference interview provides a risk-free environment for the employee to ask questions about the process and learn appropriate customer service skills, without having the pressure of a customer waiting for an answer. Additionally, some employees learn well through observing others interact, but events may happen so quickly at the Reference desk that it is difficult to analyze the details of the reference interview process. Chat transcripts can be used alone, or as a stepping-stone in the role-playing process.

Table 3
New Employee Training: Reference Interview with Transcripts

1	Provide employee with Reference Interview standards. This includes information about the Reference Interview process, including *Greeting, Paraphrasing/Active Listening, Asking Open Questions, Clarifying/Verifying, Getting Needed Information, Following Up,* and *Ending.*
2	Provide employee context comparing in-person and chat reference. This includes discussion of nonverbal cues in F2F transactions as compared with tone or word choice in chat reference transactions.
3	Provide pre-selected chat transcripts to the employee (having removed confidential patron information). Provide employee with a "reference interview" checklist to use with the transcripts.
4	Allow the employee to work independently and review the transcripts, looking for the "reference interview" elements. Allow the employee to decide if the transactions were good, or could use improvement, and to describe why.
5	The trainer, or a training team, reviews the transcripts with the employee, and provides feedback. The training team may emphasize points the employee may have missed, provide a different perspective for the employee, or may clarify points for the employee.
6	After the employee feels comfortable, the chat transcripts can be adapted into role-playing activities. For example, the trainer can ask, "How would you answer this in-person at the Reference Desk?" The trainer can address the issues of nonverbal cues, body language, and helping, approachable behavior.

Source: Chapman, Kimberly and Darcy Del Bosque. New Employee Training Activity: Exploring the Reference Interview. U of Texas at San Antonio Library Reference Department. Unpublished training files, 2005.

Other tools that can be incorporated into this training include librarians' responses to email questions, as well as responses used on the library comment boards. Using transcripts, emails, or comments that already exist is a time-saver; additionally these materials have credibility because they are real-life examples that actually happened. While role-playing usually occurs from real-life examples, it can be time-consuming to document these scenarios. The transcripts allow a

new employee to work through the reference process at an individual pace, looking at each piece of the reference interview process, and teaches them appropriate models of customer service. It provides context and a supportive environment to learn necessary skills, prior to "jumping in" at the Reference Desk. The Reference Department is currently incorporating this training method into new employee training, and will be evaluating the effectiveness of the training.

Using Chat Transcripts in Refresher Training Sessions

Reference interview skills are periodically reviewed with all staff as part of refresher training sessions. The role-playing technique is often used during staff training sessions, and the reference interview lends itself to this method of training. One of the drawbacks of role-playing is that it is a group activity, and sometimes employees need an opportunity to review materials on their own. Additionally, similar to real transactions at the Reference Desk, there can be so much happening during the role-playing session that analyzing all the pieces of the reference interview can be a challenge. (e.g. Did the staff member use appropriate body language? Did the staff member ask open or closed questions?)

Incorporating chat transcripts into reference skills review provides an opportunity for employees to either review material independently, or work together in groups, depending on the situation. This helps accommodate different learning styles: some staff are visual and can connect with the role-playing process, while others like to have everything "written down" and have time to think about it. Reviewing chat transcripts can be a separate activity, or be incorporated with a role-playing activity, depending on training objectives. As with training for new employees, the steps in the process are the same. Asking employees to analyze transcripts allows them to take advantage of their expertise and experience, which can lead to productive staff discussions. The trainer may facilitate the discussion, while keeping the focus on staff participation. We have just begun implementing these training methods with our staff, and are optimistic about their effectiveness. We plan to obtain feedback from staff about the process, and will share that information when it is available.

Evaluating Training - How Are We Doing?

The Reference department needs to evaluate training for two reasons: we want to know if our training is similar to training at other institutions, to learn how we can improve, and we want to know if our training is actually effective for our employees – is the training meeting objectives? Are employees applying what they've learned? To compare our training program with those at other libraries, librarians at UTSA are in the process of surveying other academic libraries in the San Antonio area to determine what types of ongoing training are incorporated into their Reference departments. In addition, the Reference Training Coordinator is surveying UTSA library reference staff to learn their attitudes about training opportunities they currently receive. Data is still being gathered regarding the Summer Training Workshops that were offered; this feedback will be important in determining if training is meeting the needs of the department and in fostering better communication among Reference staff. UTSA Library's experiments with training will provide us with recommendations for the future of our Reference training program that could be useful in many library situations.

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With a Little Help from My Friends: Library, Faculty and Instructional Technology Collaboration

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Abstract

The idea for an information literacy tutorial for the School of Education came one day as the Manager of Instructional Technology, a professor who is also the Director of Educational Technology for the School of Education, and the new Off-Campus Services librarian had a meeting in the fall semester of 2003. It was a crucial and a positive discovery as we talked over the project, that from our first meeting we all felt that we could work easily together. This was the foundation of the success of this project.

The School of Education needed an Information Literacy component for their teacher credential program. The Manager of Instructional Technology was willing to assist with the project. And the Off-Campus Services librarian, who is the librarian who works with the School of Education and School of Business, was a natural choice as the person to present the tutorial to the students. We worked throughout the fall semester designing the information literacy tutorial and creating it in the Blackboard site. Fortunately, the Manager of Instructional Services is the person who supervises all of the content in the Blackboard site. We were able to begin using the information literacy tutorial in Spring 2004 and have continued to use it for each session. One of our first developments was to separate the tutorial into two parts: beginning and advanced. The completion of both tutorials is required for the teacher credential.

When the School of Business saw the success of the School of Education information literacy tutorial, the professor in charge of the new MBA student orientation asked the Manager of Instructional Technology and the Off-Campus Services Librarian if we would enter into another collaboration. Last Fall we developed the Business Information Literacy Module, also in Blackboard, which is used in the MBA orientation twice a year.

It has been an excellent experience working closely with faculty in both professional schools and with the Manager of Instructional Technology. In fact we meet monthly to revise and update the tutorials. It has also been a rewarding experience for a librarian who is new to the University of Redlands.

Working with Your Whole Campus to Create an Institutional Repository

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Abstract

Some large universities have devoted much time and money over the last few years to developing electronic archives for their students' theses and dissertations. Without the resources to spend on such a project, smaller schools and libraries have been unable to consider making theses and dissertations accessible to a much broader audience via the Web. With the advent of relatively affordable out-of-the-box products such as D-Space, CONTENTdm, and Digital Commons, even smaller institutions can implement electronic archiving of theses and dissertations, thereby eliminating the need to print, bind, and shelve their students' work. A digital archive gives a distinct advantage to students whose creations go beyond the printed word to include computer programming, visual arts, music, dance, hypertext compositions, or spoken works, for example.

This paper details the various uses we have made of two products, CONTENTdm and Digital Commons, covering the strengths and weaknesses of each for various types of materials. In addition, it describes the adjustments we made in the responsibilities of paraprofessional staff, both as a way to take advantage of the opportunities offered by a digital repository and in response to the requirements of such products. Finally, this paper explores the topic of the campus-wide communication and collaboration that is needed to achieve success in bringing organization and access to materials that may otherwise be hidden or difficult to access.

Introduction

If we know anything, we know that digital is here to stay, that is, at least as long as we have energy to power the technology and until an as yet unimagined invention bursts forth to replace digital formats. An equally solid fact is that most institutions, but especially small ones, have neither the budget nor the staff to develop the means to digitize and store their students' theses and dissertations. For years, large universities with their greater resources led the way on these projects, but now, with the advent of more affordable commercial products such as Digital Commons and CONTENTdm or open source ones such as DSpace, even a smaller university, guided by its library, can implement electronic archiving of theses and dissertations, thereby not only eliminating the need to print, bind, and shelve student work but also extending access to their content beyond the library's walls. A digital archive gives a distinct advantage to students whose creations go beyond the printed word to include computer programming, visual arts, music, dance, hypertext compositions, or spoken works, for example.

Yet an institutional repository (IR) can, with creativity and flexibility, serve a myriad of additional purposes: archiving images from student theatrical productions, scanning and archiving the student newspaper and yearbook, digitizing collections of historical photographs depicting the university's past, making available the lesson plans of teachers-in-training, showcasing faculty research, housing library working papers, providing campus-wide access to the university's handbooks and policies, and even increasing the usefulness of the college's board of trustees minutes by providing secure, anytime access to searchable files.

Still, inadequate staffing may seem to be an obstacle to developing a digital repository. Because librarians like to organize and be systematic, we tend to think that such projects must proceed from a detailed, comprehensive, long-term plan. Wouldn't that be nice? However, that requires professional staff time, and what library's professional staff members are not already overwhelmed with responsibilities? But instead of trying to implement a grand plan, why not simply begin with what you can do now with the resources you have, then gradually broaden and deepen the scope? Yes, you must be thoughtful about the choices you make, with regard both to policy and to products: you don't want to end up somewhere down the road always having to tinker with a jerrybuilt contraption. But you can begin with a relatively inexpensive or free software application, your campus relationships, and your existing staff to start building your repository now.

One final introductory word: The nature of your library's relationships and reputation with others on campus can make or break a "from-the-ground-up" project. If your librarians and your director don't enjoy positive work relationships and a reputation as trustworthy and competent campus partners, you might want to start working on those, too, as you think about a building a repository.

Creative Collaboration is the Key

Creative campus collaboration is the key. Both the library director and the librarians who serve as departmental liaisons are in a perfect position to spot ways an institutional repository can solve someone's problem or enhance their work. The challenge is to always listen for needs and opportunities. All sorts of resources in various departments and units on campus can benefit from organization, description, provision of electronic access, and preservation. Next, suggest solutions to the responsible person—department chair, faculty member, administrator, student sponsor, the president's administrative assistant, and so forth. Finally, once you agree to a plan, move forward with it, but be careful to maintain a bridge between the department, the unit, or the individual and the library.

"Out of scope" or "not the library's responsibility" should rarely be the description assigned to a given resource. If libraries stick to monographs, serials, and databases, they are missing much that can rightly fall under their purview. Poorly organized and inaccessible campus information resources, transformed by our organizational skill, can demonstrate the relevance of librarians and libraries.

Some Candidates for Institutional Repositories

First, start where you are. Working or published papers written by the librarians are completely under the library's control and can be some of the first additions to a repository. Next, because the campus archive is often closely linked with the library both administratively and in its purpose, collaboration on a project to digitize historical photos and slides, collections of letters or postcards, or other physically archived images can be easy and successful. Theses and dissertations are obvious candidates, too. The library is probably already responsible for binding and cataloging them; digitization is a small step away and an easy sell to the administration. Collaboration centers on getting approval from the academic affairs administrator and establishing a workflow that will ensure the inclusion of all theses in the repository.

Moving outward from the library, liaisons to academic departments often hear what their faculty are thinking about and planning. Those plans sometimes involve digitizing their own or departmental materials and making them accessible; but the requisite skills are not professorial skills, so the project is often put off or done badly. The alert librarian can offer to collaborate on such projects as creating a digital archive of theater arts images from the drama department or one of lesson plans created by education students in a graduate program. The professor is engaged in content, the librarian in organization, description, access, and preservation: a classic collaboration is the result. The professor or chair provides the material, the librarian advises on selection, gathers preferences for treatment, demonstrates the resulting collection, and collects and acts on feedback. Be aware, though, that convincing faculty to add their scholarly publications—as opposed to departmental collections--to an institutional repository is a harder sell and may have to be one of the later additions to the growing repository.

For collaboration at higher administrative levels, the library director can use her network of campus relationships to uncover needs or problems the liaison librarians would not normally encounter. As an example, perhaps administrators complain that the various handbooks, manuals, policies, and procedures of different units are hard to find and use, even when they are somewhere on the campus website. The director is in a position to work with appropriate administrators to see that staff members who report to them make their materials available to the library for consistent organization and improved access. In another realm, while faculty may be reluctant to deposit their scholarly works in an IR, students might be eager to contribute their work to a personal e-portfolio that a prospective employer or graduate school admissions officer could consult. Upper-level collaboration between the library director, the academic affairs office, and the registrar to establish policy and broad responsibilities can open the way for the library to provide space for student e-portfolios within the IR. Interestingly, almost any campus unit other than the library--ranging from the English department to career services--seems at present to be the party responsible for e-portfolios. If the school is willing to forego purchase of a specialized e-portfolio software product and use the resources and skills already at hand, the library could quickly and inexpensively establish and maintain such a collection. As a last example, maybe the president wants the print minutes of the board of trustees meetings indexed, and he asks the library to do it. The director, whose thinking is obviously less traditional than the president's, suggests that minutes that are born digital can be added to the repository, where they will be accessible and searchable only by board members and anyone else the president approves. So

long as security can be assured, the increased access and decreased cost (indexing the print copies is quite expensive) should easily convince the president of the benefits of the IR solution.

In all of these instances, flexible thinking--a willingness to recast one's notion of what campus information bundles are appropriate for an IR--and creative collaboration with other campus units can result in a rich, useful repository. For ultimate success, however, there is another crucial element: the actual workings of the IR, from the selection of the software application to cataloging issues and all points in between.

The Real Work Happens Here (And We Already Know How to Do It!)

The knowledge, skills, and organizational structure needed to implement and maintain an IR already exist in the technical service departments of most libraries, even fairly small ones. Likewise, technical support is probably already in place in the library or the campus information technology unit on campus. The skills are there, but what are the questions to think about when you decide to take the plunge?

The Choice of Software

Once informed of budgetary limits, your head of cataloging and your technical support staff member can assess the various options and recommend an IR product based on localized needs and resources. Some of the most familiar products are Digital Commons, CONTENTdm, and DSpace, but many others, both commercial and open source, are available. Among the questions your cataloger and technical support person will ask are: What formats can it support? How secure is the data? Is the staff-side interface easy to learn and use? Is the public interface customizable? Is the cataloging (metadata) function robust and flexible? Is there technical support? If so, how responsive is it? (Remember that not all open source products have technical support available.)

Staffing

In addition to system selection, staffing issues must be addressed. In many libraries, not only do the existing staff already have the foundational skills needed to manage an IR, but they may also be concerned about their future in the organization. With decreased purchasing power for monographs and individual subscriptions and with increased reliance on shelf-ready processing of materials, staff members may find themselves spending less time on traditional library tasks and as a result, they may worry about their job security. They are well positioned to shift their skills from full-time copy cataloging, for example, to a combination of copy-cataloging and working with the institutional repository. Depending on their skill and experience, they may create simple or sophisticated metadata, load text files, or scan and load images.

At the managerial level, a head cataloger or cataloging supervisor may take on the tasks of product evaluation, template creation, choice of metadata standards and controlled vocabularies to use with the collections (based on such factors as user needs, intended use, or subject matter) training, and coordination and oversight of the cataloging of various collections. The head of

technical or public services or perhaps even the library director may be responsible for overall coordination of IR activities.

Collaboration within the Library

Because existing staff in technical services and technical support are well equipped and well positioned to take the lead, the heart of the IR operation may well be in technical services. Yet there are important roles for all the liaison librarians whose departments contribute in one way or another to the repository and for department heads or library directors who serve as liaisons to participating non-academic campus units.

First, liaison librarians and the project supervisor in technical services can collaborate on project evaluation and reporting. These reports may respond to grant or general campus accountability requirements. More complex is the intermediary role that the departmental liaison librarian may need to take on between his or her department and the project supervisor in technical services. The liaison librarian will need to work with both parties to explain and communicate needs and requirements—although when this becomes too complicated, the project supervisor may step in to work directly with the academic department. Issues that might need to be taken up include selection of materials based on their condition and the number of items in a given collection, choice of metadata for the department's access needs, or decisions about the appropriate degree of granularity, i.e., collection-level metadata versus item-level metadata. Together, the project supervisor and the liaison librarian for each collection or project may want to consider developing policies and procedures for each collection, taking into account feedback and suggestions from the department and from users.

Internal collaboration is certainly called for in developing the broader policies and procedures that apply to the IR as a whole. Everyone involved - the head cataloger or other project supervisor, the liaison librarians, and the library director - will need to collaborate to establish balanced policies and procedures. These may include a collection development policy, submission procedures (e.g., who can submit content, who approves the submission), naming procedures for submissions, copyright policies (e.g., traditional copyright or Creative Commons), access policies, archiving policies, withdrawal policies, and policies and procedures for eventual data migration. In addition to overall policies, there may be a need for any or all of these policies to govern separate collections. This work, while exacting, could play a vital part of developing a coherent, orderly, and manageable institutional repository that over the long term will offer important benefits to the campus while taking as little staff time and effort as possible.

Conclusion

The library exists to collect, organize, describe, provide access to, and preserve the products of the mind. The way in which those intellectual products are expressed is changing, as digital objects increasingly displace printed ones. At the same time, the digital medium itself is extending the scope of what the library might consider to be within its realm of responsibility—policy manuals and working papers and university board minutes and multimedia presentations, to name but a few. Furthermore, IR software and hardware are now affordable enough that the library can, if it has the necessary vision, use its existing experience, skills, staff, and campus

relationships to begin building the institutional repository that will serve its campus—and those beyond the campus—in their quest for knowledge.

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Federated Search: How Will It Change the Way We Teach?

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Abstract

Federated search software is becoming more and more prevalent in libraries, enabling users to search more than one resource simultaneously. Behind the Google-like interface lie a host of instructional issues which librarians, either in person or in print, have barely begun to address. Federated search interfaces de-emphasize the searching process, including the choice of a specific resource in exchange for the instant gratification of search results. Unfortunately, the multitudinous results retrieved, coupled with the varied sources included in the search may further confuse the user and require more sophisticated evaluation on their part. This article will explore these and other implications of federated search and its effect on information literacy education. The issues generated from the move from individual database searching to federated search will be examined in light of the Information Literacy Competency Standards for Higher Education, with proper emphasis given to those goals and outcomes faculty will need to highlight. The author will also offer lesson ideas for integrating federated search into existing information literacy curricula.

Introduction

A debate is raging over whether federated searching portals will positively or negatively impact student information literacy. While the software offers students Google-like access to our collections, it may also make them more accepting of "good enough" search results and less apt to perform more sophisticated searches. One way or the other, federated searching is here to stay, and instruction librarians need to adapt their lesson plans to compensate. How do we introduce federated search? Where does it fit into an already crowded curriculum? In order to gauge the impact federated search could have, this article will examine it in light of the Information Literacy Competency Standards. Based on this analysis, example lessons will be suggested.

What is Federated Searching?

Federated searching allows users to simultaneously search multiple library databases, catalogs and collections via one common interface. There are a variety of products on the market, including Ex Libris' MetaLib, which the University of Wisconsin – Eau Claire is implementing. MetaLib is typical of most federated search software packages. It can be configured so users see one search box that defaults to a designated group of databases or a list of databases grouped into subjects that the user can select from (Luther, 37). When search terms are entered, the software "transforms the query into appropriate syntax which can be understood by members of the group of resources and broadcasts it, merging the collected results and presenting them in a succinct and unified format devoid of duplication" (Jacso, 17). The software also lets libraries create searchable resource and e-journal lists. Users can log in and save their search histories, create personal resource lists, set up search alerts and save citations for later viewing.

Student Research and Libraries

The allure of federated search lies in its recognition of the way students actually conduct research. As Baer points out, students want to minimize the time they spend doing it (518). They want full text, and they want it now. They've been raised on Google, whose simple interface and relevancy-ranked results provide "good enough" answers to any query they may have. Their approach to online searching is keyword based, "with little interest or knowledge of advanced searching techniques" (Tallent, 70). Federated search would meet students' search expectations while ensuring that our carefully chosen resources get adequate use. One might ask if we are justified in catering to what some believe to be an inferior research method. How might this effect students' information literacy development?

Literature Review

The literature is quite scant on this point. Frost expresses concern regarding the negative impact he sees federated search having on student learning. Selecting appropriate research tools, taking advantage of Boolean operators and thesauri are not possible with federated search. Thus, federated search is "a step backward, a way of avoiding the learning process" (Frost, 68). Zimmerman disagrees, praising federated search as a basic alternative, compelling us to recognize and create "teaching moments" to help students advance beyond the basics (54).

Only Terrell, in a paper based on his 2004 Australian Lifelong Learning Conference presentation, directly addresses the impact federated searching will have on student information literacy and lifelong learning. Terrell examines the federated search process through the lens of Australia's Information Literacy Framework. Following is an examination of the federated search process in light of ACRL's Information Literacy Competency Standards (2000), inspired by Terrell.

Standard One

Standard One states: "The information literate student determines the nature and extent of the information needed." Key performance indicators include the ability to define and articulate the need for information and to identify a variety of types and formats of potentials sources of information. Following the Google model with its emphasis on results, federated searching could cause students to skip over many pre-search steps such as formulating a research question, focusing a topic or identifying key concepts and terms. The lack of focus that results brings with it the risk of returning too many results, especially when one considers how many resources are being searched. Librarians must urge students to slow down, emphasizing the time savings resulting from thinking further about their research topics and brainstorming unique search terms.

Students will also need to think about the types of sources they may encounter and which might include information about their topics. Determining source types in a results list becomes even more difficult when you are searching across a variety of different databases, each indexing different sources. How can one determine what type of source a particular citation is coming from? For example, in order to share the breadth and depth of our collection with our students, the default category in UW-Eau Claire's simple search includes four databases: EBSCO

Academic Search Elite, which indexes scholarly journals on a variety of topics; OmniFile Full Text Mega, a conflagration of a dozen Wilson bibliographic databases; and our library catalog. A search of this category could garner results from magazines, scholarly journals, books, even newspapers. Identification of sources is a particular problem if a professor has required students to limit their searches to scholarly journals, for example. Federated search engines do not offer the "Peer-reviewed" checkboxes that some native interfaces do.

It would be preferable if federated search software noted the source type for each citation, like ProQuest and EBSCO do via source tabs. In fact, depending on the results view you choose in MetaLib, you may not even be able to determine the publication title or view an abstract. Students will have to be taught to recognize clues, alerting them to the presence of a particular type of source. For example, continuous pagination and low issue numbers are distinguishing characteristics of a scholarly journal. They could be pointed out as part of a citation exercise. Learning the parts of a citation will also assist students in documenting sources in their bibliographies.

Standard Two

Standard Two concerns the ability to access needed information effectively and efficiently. The selection of the most appropriate investigative methods or information retrieval systems, construction and implementation of effectively-designed search strategies, retrieval of information and refinement of searches are all indicators of achievement. The majority of these involve decisions made on the part of the student. "Federated search removes, or at least reduces, the number of decisions [students] need to make…" (Baer, 518). This disconnect can result in all kinds of errors and misconceptions on the part of the student.

When students are directed to conduct federated searches to begin their research, they have no need to select an information retrieval system – federated search is it. Depending on interface customization, they may not even need to choose specific databases to search. UW-Eau Claire's simple search not only has a default category of general resources but also a number of database subject groupings which students can choose from. The upside of this is that students who don't know the most appropriate databases to search for their topics can now rely on librarians' choices. Left to their own devices, most students would probably avoid asking a librarian for advice, choosing instead to ask their friends or rely on a database which, while not necessarily appropriate to their current information need, offered satisfactory results in the past. The downside involves the lack of understanding of the databases students are searching. In order to find out what databases are in a subject grouping in MetaLib, students need to click on the group's title and then on the info icon for each database. How many students are going to do that?

The other option is to bring students directly into CustomSearch, where they can choose a number of individual databases from subject lists to simultaneously search. This assumes students have some knowledge of what databases the library subscribes to, an ability lower-level undergraduates probably do not have. It also moves libraries away from one of the big selling points of federated search – the Google-like search box. Regardless of the entry-point, instruction will be necessary.

Of additional concern is the inability of some databases to be searched simultaneously. These resources can be included in the federated search database, but only as links. Students will believe that a federated search will include all resources relevant to their topics. Librarians will need to inform students that those databases which are not cross-searchable are equally valuable. Librarians will also need to pay close attention to how they construct and name the subject groupings and to what databases are included in each. Federated search makes students more reliant than ever on us for resource selection and decision-making.

Students who seek to gain competency in Standard Two must also learn to construct and implement effectively-designed search strategies, something federated searching does not encourage them to develop. Federated search software offers relatively limited search capabilities. MetaLib's Advanced search does allow students to connect words using Boolean operators and offers limited field searching by subject, title, ISBN, ISSN and year. However, this pales in comparison to the choices presented by some native interfaces. MetaLib also does not include any limiting capabilities. A student using the native interface of a database is able to utilize field searches and limits specific to that particular field.

Even if students use federated search's Advanced features, they'll never be sure what the result will be. Each database interprets the federated search engine's request differently. For example, a search for "genetic forestry" may be interpreted as a phrase in one database, and as "genetic AND forestry" in another. Similar problems exist with field searching. Students should be made aware of this peculiarity.

Search construction is also a problem. Students conducting a federated search will not be able to use controlled vocabulary. There is no thesaurus available when you are searching databases across various disciplines.

Retrieving the needed information is easier than ever thanks to link resolvers. Link resolvers let students locate the full text or actual item noted in a bibliographic citation, the results list of a database or federated search. UW-Eau Claire has purchased SFX. With SFX enabled, an icon appears at the end of each bibliographic citation. Clicking on it initiates a search across various library collections, the result of which is a list of possible options for acquiring the item. These might include a link to the full text of an article from a periodical database, to a library catalog record, or to our interlibrary loan form.

Owing to the ease in which a search can be conducted and the large of number of results that may be retrieved, evaluation becomes all the more important. Evaluation takes on two facets: evaluation of results, discussed in outcome II.4.a, and evaluation of the information and sources, addressed in Standard Three.

Outcome II.4.a states that the information literate student will "assess the quantity, quality and relevance of search results to determine whether alternative retrieval systems or investigative methods should be utilized." Without the benefit of advanced limits and an inability to immediately determine what source a citation comes from, evaluation of results is a challenge.

Unfamiliar with the quality or subject coverage of most databases, students will be hard pressed to decide which results are worth clicking on.

Relevance ranking offers one possible solution. In MetaLib, results can be sorted by rank, displayed as a green bar on the left hand side of each result. The more the green bar is filled in, the more relevant the result should be. Students may expect that, since federated search looks like Google, it should work like Google. However, the relevancy ranking in MetaLib is not as sophisticated as Google's PageRank algorithm. Results, returned in batches, are reliant on which database's results are retrieved first and the rank a database receives, not necessarily by the placement of keywords in specific fields. Librarians can dictate rank by assigning higher or lower ranking to specific databases or resources. Students should be alerted to these issues.

Standard Three

This brings us to Standard Three: "The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system." In the past, librarians have been content to concentrate on teaching searching primarily, with the discussion of evaluation focused on the bibliographic item's reliability, accuracy, authority, etc. Terrell suggests that it might be time to start evaluating content, based on such criteria as logic, strength of argument and point of view (5). This would involve more collaboration with teaching faculty to create exercises and assignments on content evaluation. The synergy between searching and using content that would result has often been missing from traditional information literacy curricula.

Standards Four and Five

Standard Four and Five are unaffected by the advent of federated search. Students may find the personalization tools of federated search, such as the ability to save citations, to be useful in citing sources and creating bibliographies, an outcome of Standard Five, Performance Indicator 2.

Example Lessons

Now that we've learned more about federated searching's impact on the research process and its effect on student's information literacy development, what can we do to compensate? What do we teach students and how do we integrate federated searching into our curricula? Below are ideas for exercises which will assist in doing just that. The goal of each is to stimulate conversation among students concerning the research process and federated searching's place within it.

- Ask students to create a search log where they list the search terms they used for each federated search and the results they received.
- Have students compare the number of results per database in a federated search with the number of results they feel were relevant to their topics. Are they the same?
- Begin a discussion of source types by offering a list on the board and asking students to put them in order from oldest to most recent. Then apply the criteria used to evaluate the sources to the results list from a federated search.

- Create a worksheet of questions comparing a search on a particular topic in the native interface of a database and in a federated search engine. What are the similarities, differences in the search process and in the results retrieved?
- Ask students to compile a list of the title of peer-reviewed journals cited in a particular federated search. Point out the important ones in the discipline and note what database(s) they came from.
- Work with teaching faculty to develop a reading assignment coupled with a search on the same topic in a federated search engine. Were any of the references cited in the article noted in the search results?

Conclusion

You can't conform the people to the system. You have to conform the system to the people. While it may reinforce students' current research habits, federated search technology offers students an entrance into the often complex world of library research. It's up to us to ensure that students gain adequate information literacy skills. Federated search's appeal to students can be harnessed to introduce them to research concepts that encourage lifelong learning.

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The Fox is in the Chicken Coop: Refocusing Reference for All Users

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Abstract

In the 21st century, we live in a digital, online environment. Reference services need to keep changing to satisfy the diverse information needs of our users. Librarians are keenly aware of the importance of ensuring that all users have access to the materials in our collections. Academic reference departments are used by patrons to do one of two things: to ask a question (approaching library staff members) or to find an answer (consulting reference publications). Distance learners have had relatively easy access to the former (through telephone, email and chat reference services), but have lacked the latter. Recognizing the need to provide more online resources, the reference collection bibliographer was asked to begin moving the traditional reference collections of the libraries from their customary reliance on physical resources to a virtual environment. Once this goal is accomplished, distance learners will have the same access to reference resources that on-campus students have taken for granted. This change will create a digital reference collection accessible to all at the point of need.

As an added benefit, it will also create high quality digital reference resources for use by staff members in answering online questions. Reference staff are either doing chat from their office or, in the evenings from their home, where they do not have access to print reference collections. Moving more traditional reference resources online will greatly support the libraries' collaborative chat service and increase the opportunity for instructing users in finding and using resources available through the library's web pages.

This presentation will detail the rationale for moving the print reference collection online and outline the benefits of such a change. It will also explore unexpected applications of online reference resources for chat and other research services. To better serve our users, today's reference collections must include electronic resources, and services must be designed to reach patrons who are outside of the physical library walls.

Introduction

Access to library collections has been an ongoing concern for those providing information services to distant learners. As electronic resources have continued to grow at a rapid rate, collection development choices have become more numerous and difficult. Budgets once used almost exclusively to purchase print materials must now fund both formats.

In recent years, we have been able to provide access to electronic indexing and abstracting services in most disciplines. Electronic journals have followed. Electronic reserves are common, and many institutions now offer desktop document delivery services. As a result, both on-campus and distant learners have now more information resource choices than ever before. The ACRL *Guidelines for Distance Learning Library Services* (ALA 2005) advocate services to distant learners that are equal to those offered on campus. Increasingly, the collections and services provided to one group are the same as those offered to the other.

Technological advances have provided Web-based courses in growing numbers. The definition of distant learners and their preferred choice of format (electronic) to fill their information needs now apply to any student. Today's students value independence, self-reliance, individualism, customization, convenience, and self-fulfillment. This is why an online environment appeals to them (Fritch and Mandernack 2001, p. 287 and 291). Patrons expect immediate gratification. They may tolerate print, if the information is important and is not available any other way (Webster 2003).

Increasingly, reference service is not tied to a physical object or place (Jackson 2002, p. 213). Today, librarians serving distance learners spend more time providing access to information and helping students choose and use electronic resources than they do in providing search and copy services for them. But the reference collection has by and large relied on print and therefore is not available to the distant learner. Libraries spend large sums on developing their print reference collections. The expense is justified by the importance of the information the materials contain and the frequency of their use. The materials are segregated and kept at hand (i.e., they do not circulate) for use by the reference staff. But the nature of how reference service is provided is changing.

Staffing, too, is changing. Limited budgets for staff require that we place greater reliance on student assistants and support staff to work at public service desks. What impact do these changes to the environment have on the way reference service is provided today?

Literature Review

A review of the literature since the early 1990's indicates a trend to provide access to more and more online full-text resources to library users. Library Journal and Trendwatch Graphic Arts survey academic libraries annually about reference publication patterns and librarian preferences. The 2003 results show that academic libraries spent over 25% more on electronic reference materials than they did three years earlier, but they also spent more on print reference materials over the same period. The survey also found that librarians want flexibility and value in the reference sources they buy (Roncevic 2004, p. 5). The 2004 survey found that Association of Research Libraries (ARL) members reported that they spent nearly 61% of their reference budgets on electronic resources, while their spending on paper resources declined just 1.5% over the three previous years. Librarians also reported that using print copies of reference resources to backup electronic versions was too expensive to sustain. The 2004 survey also indicated that "users prefer the convenience and added features of electronic reference products…" (Albanese 2004).

As early as 1991, a survey by Biggs showed that academic libraries estimated that over 25% of the items in reference collections had not been used in the last five years and that half were not used in the last year (Nolan 1991, p. 81). Another survey of reference librarians at Stetson University during two two-month periods in 2002-2003 found that “reference books” were used to answer fewer than 10% of the questions asked. Furthermore, the reference books that were used constituted just 2% of the reference collection. Clearly, the reference model is changing.

In the past decade, librarians have seen a vast change in their working environments and in what is expected of them professionally. Although innumerable changes have taken place in the provision of library services, the basic role of the reference librarians to help people find the information they need has not changed (Cardina and Wicks 2004). Librarians have adapted and learned new skills and new ways of teaching to emphasize critical thinking for lifelong learning. Academic librarians are using outreach services to increase the visibility of the library to teaching faculty and students (Kuchi, Bowering, and Tama-Bartels 2004). These services often include reference and research assistance to remote or distant users.

The Nature of Reference Services Today

In today’s digital age, the nature of reference services has definitely changed. Although the number of in-person reference transactions is decreasing, most librarians agree that the complexity of questions is increasing (Murray and Tschernitz 2004 and ARL 2004). Library users have also changed. Most university and college students have grown up using the internet. They demand customer service - their needs are immediate and they have a low tolerance for delays. In general, library users expect reference resources to be easy to use and available in a variety of formats (print and electronic). They appear to be more sophisticated in searching, but want only what they can get quickly and conveniently.

The traditional role of the reference librarian has been expanded with the introduction of the computer and the internet. We now have online access to a Web-based catalog, hundreds of commercial databases and information portals to a variety of resources. In addition to providing research assistance in person, by telephone and email, librarians are also able to help patrons access information synchronously in a virtual environment with the use of chat or instant messaging. Chat isn't the only way to get research assistance, but it fills an important niche for those users who are unable to come into the library or even for those patrons who are reluctant to give up the computer that they using in the library.

Librarians who are doing chat generally do not have print reference sources at hand, since many do their shifts from their offices (away from the reference desk) or from their homes in the evenings. Digital or web-based resources are their preferred choice, since these resources are easier to access and share with the users online. Even librarians working at the reference desk tend to use digital reference resources to answer and instruct users on the aspects of the research process and rely less and less on the print reference collection in the library (Zanin-Yost 2004).

Changes to the Academy Benefit Distant Learners

Electronic resources have grown as rapidly as technological advances have allowed, making it increasingly easy to access information without regard to the user's location. This has forced librarians who serve distance learners to be familiar with these electronic products and services as well as their technical requirements in order to advocate for their purchase. But as long as distant learners were considered to be a marginal group and their electronic resources were more expensive and difficult to provide than traditional print books, indexes, and journals, librarians made only sporadic progress in gaining access to them. However, as institutions have expanded the number of online and Web-enhanced courses offered, the distinction between a distant learner and the rest of the student body has blurred (Smith 2001, p. 378). Today, increasing numbers of students are global and they expect to have access to information online (Simpson 1997, p. 51).

When the University of Kansas (KU) Libraries embraced a vision for a reference collection that included heavy reliance on electronic resources, it was not surprising that the administration asked the distance learning librarian who had long advocated for more electronic access to make the new vision a reality. She knew the products available, but more importantly she had embraced this vision of access to reference resources regardless of location. The "fox" no longer circles the chicken coop looking for a way to acquire a few resources for her distant learners; the door is wide open and she is charged with bringing access to electronic resources to all! It is hoped that changes to the reference collections at Watson Library, Anschutz Library, and the Regents Center Library will facilitate research activities for all students, regardless of location.

Changes in KU Reference Collections

In an effort to make the reference collections more useful and to free space for users, the reference collection bibliographer was asked to weed the collections. Work on reviewing reference collections will include Watson Library, Anschutz Library, and the Regents Center Library. After that, the collections will be reviewed "on a regular, systematic, and aggressive basis…[because] the leaner, trimmer collection will become more functional…" (Nolan 1991, p. 90).

At KU, library space remains static while the demand for user space increases. We are introducing collaborative learning spaces where faculty and students can work together on projects. The reference collections occupy valuable space that may be better used in providing user space. At the same time, the number of reference resources published each year continues to climb and we have traditionally bought them in print to the extent that our budget allows. For example, the size of the Watson reference collection now includes more than 9,700 monographic titles and nearly 1,000 continuations. A collection of this size does not promote an efficient use of resources or permit quick fact- finding.

With the proliferation of electronic information sources, there is "more redundant stuff clogging shelves" (Simpson 1997, p. 59). Consequently, there must be a growing emphasis on content rather than delivery mechanism to sort through a confusing array of options (Tenopir 1998).

Patrons need help in sifting through the massive information overload (Subramanian 1998, p. 136).

The first step in the process of re-vamping the reference collections was to develop a strategic plan (see Majka 1995 and Nolan 1991 for good discussions about the importance of having a process and guidelines). The basis for the plan is a clarification of the purpose of having a separate, segregated collection that is always available. Nolan and Van Epps have clear descriptions of what constitutes a reference source: it is something that is consulted instead of being read consecutively; most are files or records that have a logical structure to facilitate consultation; it is used to find facts or pointers to facts; it is an efficient guide and a rapid finding aid; and it maximizes user efficiency (Nolan 1991, p. 82-84 and Van Epps 2005, p. 291).

Discussions were held with the Assistant Dean for Scholarly Communication and the Head of Collection Development to determine general guidelines for the kinds of materials to be included in the reference collections. It was decided that, with an emphasis on providing collections for staff to use to find quick answers to questions, we are moving from separate collections of specialized reference tools to integrating most of those tools with their related research collections. To that end, only the most recent edition of a work will be located in reference; earlier editions will be moved to the regular stacks or to a storage facility. Entire runs of print indexes that are now available online will be moved to storage. A very few titles will be de-selected because the information they contain is no longer accurate, or can be found elsewhere, or they are no longer consulted. The collection needs to be "live." If a title is used less than once a year, it does not need to be in the reference collection (Nolan 1991, p. 86). After basic guidelines for selecting reference materials were in place, titles were identified for removal from the collection and decisions were tracked using an Access database.

At the same time as placement decisions were being made, the reference collection bibliographer began examining the print continuation titles to determine which could be cancelled because the online counterpart could be used without losing functionality. Any print title that was also available online at no charge was a likely target. Often these were directories published by learned societies or government publications (for example the *Directory of History Departments* is available at no charge at http://www.historians.org/pubs/directory/index.cfm and the *Occupational Outlook Handbook* is available free at http://www.bls.gov/oco). Commercial publishers occasionally offer expanded versions (i.e., with live links to additional information) of print reference titles online at no charge (see *Peterson's Guides* available free with live links http://www.petersons.com/). Members of four subject councils who work closely with faculty reviewed proposed transitions from print to electronic format to provide guidance to the reference collection bibliographer.

A third aspect of the project was to manage electronic resources already purchased to make them more visible and therefore more useful. With a growing number of electronic resources, there is more overlap in the information they contain. Titles within packages often are invisible to users because they are listed only by the name of the entire database. For these titles, the goal is for them to be represented in the online catalog. This presents several challenges for catalogers because no standards for cataloging them exist.

We have recently added a tool that will give added visibility to many of our subject encyclopedias and specialized reference materials, both in print and online. Paratext has produced an online index to more than 28,000 reference titles that were published from 1988 on by leading reference publishers. *Reference Universe* allows a patron to ask a question and, based on the institution's online catalog, to receive a list of sources where to find answers to the question asked. This tool will help patrons because they do not need to know the title of the resource; they just ask a question as they do with many search engines. *Reference Universe* can also help librarians with collection development by identifying which titles that are not owned by their libraries can answer real questions asked by their students.

What This Means for the Future

With the advance of technology, it is clear that the nature of reference work is constantly changing and expanding. In the future, there will be increased efforts towards digitizing library collections and information to further satisfy the growing needs of all users. There may be many users who will never set foot in a physical library. We can expect there to be hybrid, multi-purpose libraries, with multiple access and dissemination processes, prepackaging of information that group web resources, databases or other digital resources together in clusters by subject area or user preference (Fenner and Fenner 2004). As costs of storage rise and space diminishes, resource-sharing and consortia building will recapture the interest of librarians. There will be a growing trend to form global or local consortia to utilize expertise around the work on a 24/7 basis – an example of this is QuestionPoint 24/7 led by the Library of Congress and OCLC (Murray and Tschernitz 2004).

Digital reference services are a natural extension of our growing digital collections and emphasis on access to libraries "anytime, anywhere" (Tenopir 2004). Librarians will rely more and more on networked digital resources to answer questions, whether received in person, by telephone, email or chat. Print and electronic resources will continue to co-exist, but the print reference collection will become a smaller, more focused and specialized resource within the library.

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U Rock: Informality in Chat Reference

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Abstract

The reference staff of the University of Texas Libraries developed a digital reference service in 2003. After two semesters of staff training and service growth, the regular traffic became substantial enough to warrant in-depth study. This project analyzes over 500 chat transcripts from the third and fourth semesters of this popular service. By focusing on communication concerns this study seeks to enhance patron satisfaction with the interview process, to improve the quality of digital reference service in general, and to enhance staff training/professional development. In light of those goals, this research examines the impact of conversational formality on user satisfaction as indicated by expression of information need, specification of relevance criteria, and feedback to reference staff on the transaction. The completely textual basis for chat reference work makes a focus on the application of modern text-centric message analysis communication theory in the digital environment essential to service development.

Interpersonal communication theory has long been applied in the reference transaction with a focus on interpersonal communication, the affective impact on cognitive processing, and cross-cultural communication. Issues of message interpretation, information-integration, and the social construction of communication norms are involved in these interactions. Since the advent of email and, more recently, chat reference, the techniques of digital communication are under constant review. The social construction of normative behaviors in the text-centric world of chat communication is essential to effective online reference work.

Detailed transcript analysis indicates a range of communication concerns in areas such as formality levels, trust indicators, message signifiers, and feedback loop supports. Formality levels, for example, can be adjusted through the use of slang and humor to indicate interest and increase rapport. Trust indicators may be sent by patrons in the use of acronyms and emoticons that are intended to reveal the self (e.g., emotions). The informality of this format may not, however, be meant to indicate disrespect for the interview process or the librarian but may be taken as a negative by staff who are unaware of this communication concern. Each of these findings is explained and exemplified in this presentation.

This exploration of interpersonal communication as an analytic lens helps practicing librarians move towards development of more predictive theory on the interactions between individuals and information. Analysis of the actual communication barriers and supports employed throughout a large number of interviews strengthens both practice and the national guidelines that support practice. This study is a small step down that long road but, like all first steps, essential to progress. The practical outcomes of this work, from behavioral guidelines to self-analysis techniques, inform daily practice by building on useful theory.

Promoting Electronic Resources

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Abstract

As academic libraries continue to incorporate a growing variety of electronic resources into their collections, a solid commitment to promoting and providing efficient access to these research tools is essential. Subscriptions to electronic resources do not guarantee their use by library patrons, and as costs for electronic resources continue to rise, libraries must validate these expenditures.

In recent years, there has been a concerted effort to improve the marketing or promotion of library services to address the changing needs of library patrons. The explosive growth in patron usage of electronic resources has dramatically changed the manner in which students and faculty conduct research, and redefined the role of academic libraries. The transition to electronic access has created multiple issues for libraries - the need to keep users informed about the availability of new resources, provide easy access, and offer training.

In developing promotional campaigns for library services, it is important to create messages that are clear, concise, and create a desire to use the services. Furthermore, libraries must undertake campaigns to promote products to patrons who are increasingly accessing services remotely, rather than in the physical library. Innovative outreach methods are necessary to market to this largely invisible group of patrons using electronic resources. Promotional techniques that can effectively reach these remote users must be employed, in addition to the traditional in-library promotions, such as brochures and flyers. A multi-faceted approach to delivering promotional messages is most effective. A combination of promotional techniques such as web page announcements, targeted e-mail, on-line tutorials, and print promotions should be incorporated into the library's approach to marketing.

Broad, general promotions of multi-disciplinary resources can be highlighted on library web pages. However, targeted e-mail with discipline-specific messages that directly address the needs of a specific user group can be more effective in stimulating usage for disciplinary databases. For example, business databases should be marketed to business faculty and majors. Promotional messages with examples of searches on topics in the discipline can be used to create an interest in the database to complete class assignments. Timing of messages to coincide with research projects can also increase the likelihood that students will use the resources soon after they are made aware of them. These promotional techniques allow libraries to reach out to patrons to improve their research and increase usage of the library's electronic resources.

How Small Academic Libraries Can Develop Database-Driven Web Applications Using Macromedia's ColdFusion MX Software.

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Systems Librarian
Our Lady of the Lake University

Abstract

Our Lady of the Lake University Library is a small liberal arts university library in San Antonio, TX serving a minority population of roughly 3,000 students mostly female. It, like other small university libraries, had been facing the dilemma of students growing demand for online access to library resources such as reserve materials and interlibrary loan materials but unfortunately due to a stagnant fiscal budget and no programmer on the library staff, was not able to provide these services. Many third party vendors were contacted regarding the pricing involved in implementing some of these services; needless to say, the cost was not something the library could afford. A "home-grown" solution was needed. The "home-grown" solution came from Macromedia's ColdFusion MX Web application software and Microsoft's SQL Server 2000 relational database management system. OLLU library was introduced to these technologies in early 2004 at a workshop in Washington D.C. titled, "Computers in Libraries". After purchasing the software ($700), the library implemented a full E-Reserves system, a delivery method for interlibrary loan articles, an online reference statistical reporting tool which allows the library to keep more accurate statistics on reference desk use, and an indexing system (Verity) used to search a database of Tests and Measurement Websites complied by one of our subject specialists. By implementing these technologies, the library was not only able to meet students' expectations for online services but exceeded them. The low cost for implementation not only benefited the library but to the entire university as well.

Engaging Library Staff Through Dynamic Training

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Abstract

In light of new technologies, a focus on customer service, information literacy, and restructuring of libraries, staff training has become an area of concern. With funding restrictions and cuts, affording training and giving staff time away from their jobs to attend training have been a few of the challenges library management have been struggling with for several years. There are many delivery modes for training: outsourcing training, vendor training, video teleconferencing, desk drops (giving staff manuals to learn from), in-house training, etc. While all of these methods have their strengths, it is my contention as a trainee, former-corporate trainer, and now reference and instruction librarian that in house-training provides personal, individualized, and affordable results.

An in-house trainer will have the insight into the staff priorities and work responsibilities. Understanding the staff and their daily concerns will be useful in knowing how to motivate them. With vendor training, follow-up training is not always an option, but with in-house training it can be easier to schedule and more affordable. Video-conferencing helps cut out travel expense and can bring experts to staff but does little to engage participants. Desk-drops are the cheapest form of training but do not address staff questions about what they are learning. Outsourcing training can be an affordable option, but the training tends to be more generic and not as individualized. This presentation will demonstrate how to do in-house training which can be a dynamic and affordable solution that can be applied to any training need. On the ALA website promoting the book, Constancy and Change in the Work Life of Research University Librarians, the author, Rebecca Watson-Boone, speaks of the importance of understanding the person being trained and not just training to the job.

> Previously, many studies in the sociology of work have emphasized its structural aspects. However, centering a study on job content or design can lead to ignoring the people performing the work. Work cannot be understood apart from organizational, group, and individual cultural and values; nor can workers be understood apart from the tasks and jobs they undertake (Watson-Boone).

Some of the topics that will be discussed and demonstrated will be: how to create a needs assessments and why it's the first step in developing training; developing curriculum based on desired outcomes of the training; crucial strategies for training complex content, and definitions; and examples of activities for different parts of training delivery (icebreakers, review activities, closers, etc.). The different levels of evaluating training will also be explored.

Introduction

In light of new technologies, a focus on customer service, information literacy, and restructuring of libraries, staff training has become an area of concern. According to the American Library

Association 3rd Congress on Professional Education's "Focus on Library Support Staff", the top three concerns out of 2000 responses from library support staff in the United States and Canada were career ladders, compensation for education, experience and responsibility, continuing education and training opportunities. With funding restrictions and cuts, affording training and giving staff time away from their jobs to attend training have been a few of the challenges library management have been struggling with for several years. Kathleen Low warns what can happen if libraries do not invest in training:

> The cost of not providing training, however, far outweighs the actual training costs. Without training, existing hardware and software may be underutilized, countless staff hours may be devoted to cleaning up errors caused by lack of proper training, staff may become unproductive, or they may feel uneasy and under stress due to lack of sufficient training, leading the library to a high turnover rate (290).

There are many delivery modes for training including outsourcing training, vendor training, video teleconferencing, desk drops (giving staff manuals to learn from), and in-house training. While all of these methods have their strengths, it is my contention as a trainee, former-corporate trainer, and now reference and instruction librarian that in house-training provides personal, individualized, and affordable results.

An in-house trainer will have the insight into the staff priorities and work. Understanding the staff and their daily concerns will be useful in knowing how to motivate them. With vendor training, follow-up training is not always an option, but with in-house training it can be easier to schedule and more affordable. Video-conferencing helps cut out travel expense and can bring experts to staff but does little to engage participants. Desk-drops are the cheapest form of training but are not as good when staff have questions about what they are learning. Outsourcing training can be an affordable option but the training tends to be more generic and not as individualized. This article will demonstrate how to do in-house training which can be a dynamic and affordable solution that can be applied to any training need. On the ALA website promoting the book, Constancy and Change in the Worklife of Research University Librarians, the author, Rebecca Watson-Boone, speaks of the importance of understanding the individual being trained and not just training to the job:

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Some of the topics that will be discussed and demonstrated include how to create a needs assessments and why it's the first step in developing training; developing curriculum based on desired outcomes of the training; crucial strategies for training complex content and definitions; and examples of activities for different parts of training delivery (icebreakers, review activities, closers, etc.). The different levels of evaluating training will also be explored.

Needs Assessments

Needs assessments are a vital starting place for a training program. When a needs assessment is conducted the right way, it will determine the learning outcomes of the training, how the training

will be supported, and how the success of the training will be measured. Wagonhurst states that, "If you do not know what you need, you will not get it." A needs assessment should be done every time training is requested to avoid assumption on the trainer's part that they know what the learning goals are. Ideally the trainer, manager, supervisor, and one of the trainees should participate in the needs assessment. The needs assessment doesn't have to take that long to complete and it will save time and money when expectations are not met because of miscommunication. Some of the questions that should be asked are:

- What is the reason for the training? (e.g. new hire training, review, new process)
- What are the learning outcomes for the training?
- Regarding what is being trained, what are the different skill levels the staff will bring to the training? (e.g. If the training is for a database or software, have the staff attending the training used the database or software and in what capacity? Will they have access to the database or software immediately after training?)
- How will the training be supported?
- Will the supervisor prepare the staff for the training and underline its importance?
- How will the success of the training be evaluated?
- Will follow-up training be needed?

Developing Curriculum

Now that a needs assessment has been completed and the learning outcomes of the training have been identified the curriculum can be developed. It is crucial that the curriculum be straight forward, easy to understand, and broken into easy-to understand pieces of information. Once the curriculum has been developed, it should be reviewed by others who are knowledgeable in the area being taught and by those who are not. Those that are knowledgeable in the area being trained can make corrections or suggestions to the content. Unknowledgeable reviewers can judge whether the information is easy to follow or whether additional information needs to provided. In every section of the curriculum, several activities and exercises should be incorporated to reinforce learning and evaluate understanding.

Delivering Participant Centered Training

There are many variables that should be included while delivering successful "Participant Centered Training." These steps include:

A. Icebreakers- Icebreakers help the instructor and trainees to get to know each other better and therefore work together better in class. Icebreakers also help get trainees involved in the training and to temporarily forget the things going on outside the training.

B. Housekeeping and Agenda- If you think that telling trainees a thing like where the bathrooms are is unimportant information you are wrong. Trivial information like that can be important to some and can be very distracting if not dealt with upfront. Giving the trainees a general agenda for the training will also eliminate distractions and questions about breaks or lunch times (Jolles, 70). Agendas posted where trainees can see them will reassure those who like to know details and those who want to see the big picture. They will also keep the trainer on track.

C. Introduction to Training Objectives-Many trainers will inform trainees of the objectives for a class, which is a good way to make clear what is expected of the training and the trainees. Another effective technique taught in the Bob Pike Creative Training Techniques Seminars is to ask first what the trainees' objectives or perceived objectives are. This demonstrates that trainees' needs are important. This also further engages participants in the training. At the end of the training, the objectives should be revisited as a class to see if all objectives were met. If the objectives were not met, a follow-up session can be arranged.

D. Review activities-Reviews of material learned should be done constantly and consistently throughout the training to reinforce what is being learned. Review techniques should also be varied to engage trainees and make learning fun. One technique taught in Bob Pike Seminars is to tell students that everyone has to name one thing they have learned. Participants should be reminded that they cannot repeat what someone else has said.

E. Breaks-If trainees do not get enough breaks during training session, their attention will wander and they will not be able to absorb new information.

F. Closers-At the end of training there should be a review of what has been learned. The presenter should check to make sure objectives have been met, ask if there are any final questions, and check to make sure session evaluations have been completed.

G. Evaluation-Evaluation is the final step to making sure that the training is effective. Evaluation feedback can also be used to enhance future training sessions. There are three objectives to the training:

- What did the trainees find successful about the training and what do they think needs to be improved?
- Did the trainees achieve the training objectives?
- Were the trainees able to apply what they learned to their work successfully?

James Cory Tucker gives two examples of how he evaluated a training program he developed at the University of Nevada to teach Reference Librarians to provide help to business students:

> First, after each session, library staff was assigned homework questions that mirrored research assignments in business classes. For each session, library staff was provided five questions to answer using various print, electronic and Internet resources discussed during the workshop. Staffs were given two weeks to answer each set of questions. Homework assignments were placed on the UNLV Libraries network shared drive for easy access. In addition, the library staff received homework assignments throughout the semester to keep their knowledge-base up to date. Second, library staffs were provided with a vehicle to further assess the workshops and to provide staff with a vehicle to provide feedback on ways to improve the training program …

H. Training Tools-There are tools that trainers use in the classroom to inform and spice up training. Some of these tools include parking lots, and motivational activities. Parking lots can be a large sheet of paper posted on the wall with questions that the trainer has not been able to answer in class but will be researched to locate answers that will be provided at a later date. Robert Jolles also uses parking lots for questions that will be answered later in the training (202). Motivational activities are good to include throughout training to keep the training exciting and to keep trainees motivated.

Conclusion

In conclusion, "Participant Centered Training" is needed and desired for staff education. In times of dramatic changes and limited resources for libraries, training can still be affordable and effective by investing personnel and resources on in-house training. By carefully planning out and effectively communicating what is desired from the training, the session can be very successful and cost-effective. Making the training sessions engaging and fun can yield better participation and motivate staff.

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WebQuest as Information Literacy Strategy

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Abstract

According to the Pew Foundation (Douglas and Arafeh), an alarming percentage of incoming college freshman primarily use Web search engines and directories such as Google or Yahoo! to conduct academic research. TAMU-CC students are no different. Freshman Core Curriculum classes are the best point-of-contact to impart the critical information literacy skills to help them succeed in academia, as well as throughout their lives. In order to determine if an information literacy session should indeed focus on Internet-related research, two UCCP 1102 classes were surveyed. Forty-eight out of 52 possible students filled out the questionnaire (attached, with results). While a preliminary focus rested on Internet use among freshman, other information literacy competencies were also addressed in order to offer a balanced perspective and to alert us to other problems.

We decided that an excellent way to draw together the needed information literacy skills was through the WebQuest method. The WebQuest is a web-based inquiry project that integrates research-supported comprehension instructional techniques (such as questioning, comparing, critically evaluating) with embedded links to current online resources (Dodge 1995). Well-designed WebQuests include explicit learning goals and a recommended process of inquiry. Student responses are guided by an open-ended rubric that leaves room for personal interpretation and growth.

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RefPole: Reference Data Collection and Analysis Application

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Abstract

RefPole is a network connected Windows application developed for reference data collection and statistical analysis at Owens Library, Northwest Missouri State University.

Reference librarians at Owens Library have extensively collected and analyzed reference data and used them in decision making about library services and marketing. The collection methods evolved from printed tally sheets to an Excel spreadsheet that recorded more details. However, the Excel spreadsheet's statistical analysis required a laborious manual form. In response to the emerging demands for automating library services from inside as well as encouragement of process improvements from university administrators, members of the information services team endeavored to design and develop an application to streamline this process and named it RefPole. With RefPole, librarians at Owens Library are more easily able to share reference knowledge among librarians and achieve tailored statistical analysis for library marketing.

Presenters will demonstrate the application of RefPole, then discuss the original workflow analysis, the development process, software architecture, interface design, and proceed to review reference improvements made by using this application at Owens Library. Handouts will be available, including system requirements and future contact information. The software will also be available for downloading from the Owens Library web site.

F2F Library Instruction with Remote and Online Students: Using VOIP Technology

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Abstract

In July 2004, National University replaced their current video conferencing technology used in conjunction with distance education classes with a new state-of-the-art voice & video over IP communication system, iLinc. This move allows students to join from any academic center computer with headset or from home. The distance education program is no longer tied to expensive video conferencing rooms that limit the number of distance education classes that can be taught at any one time. Online students can now interact with their faculty in real time. This presentation highlights the University's transition to the new VOIP communication technology and the Library's development of new library instruction opportunities.

The Library was instrumental in designing the training curriculum and in training distance education faculty to teach with iLinc. One of the things that we discovered early on was that the pedagogy for teaching in an online synchronous environment is nothing like anything else we taught at National University. The highly interactive system requires multi-tasking with new teaching prompts and new visual prompts to keep the students involved in the instruction. Documents and content can now be shared 2-way between students and faculty. With the beginning of the physical year, July 2005, the training program has been turned over to the faculty, and the library has begun to use iLinc for regional staff meetings and for library instruction with the distance education and online students.

The second part of the presentation models a live library instruction session using the iLinc software with NU regional librarians joining from their academic learning centers. Session participants will be able to join the class session and share in the interactive nature of the synchronous learning technology.

Providing Effective Instructional Resources in Library Environments

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Abstract

Whether we are addressing best potential outcomes for instructional facilities, resources, or processes to be utilized in our library, we should have a good way to define our needs based upon the campus culture. From this we can then set out to determine appropriate "goals & objectives" and describe an "effective & efficient process." To arrive at the best results we need to ask the right questions to acquire the best answers and apply the best insight. In this session, we will see how technology resources were planned for, installed, utilized, and supported in a University setting. We will also identify why libraries should base its approach within the context of the academic environment that it serves.

In this poster presentation we will:

1. Review the considerations, issues, and processes that were developed and utilized for MSU's Meyer Library project.
2. Show the facilities, labs, and resources that were installed in the library. This includes three technology classrooms, viewing stations, multimedia lab, computer lab, faculty media development lab, and instructional classroom lab.
3. Present how funding sources were obtained, how the facilities are utilized and complement the University's needs, how these resources are supported, and how administrative decisions were made.

Introduction

Missouri State University, like many universities, faces the challenge of keeping up with the rapid developments and expanding demands for instructional technology. As with most institutions this challenge not only involves identifying the funding and resources for the acquisitions and installations of technology, but also for the support required in the utilization, maintenance, and upgrades for this technology. At Missouri State we try to implement a systematic approach to determine the needs, prioritize the solutions, and carefully allocate the funding. Effective interactions and collaborations must occur between the departments that are responsible and appropriate responses must be provided for end-users. Planning, installation and implementation, and support are the three components that are addressed in the process developed at Missouri State University.

The Educational Technology Center (ETC) operates in a unique capacity residing and collaborating from the library while reporting directly to the Office of Academic Affairs. Sharing a mission to support the academic programs at the university, the ETC provides services and resources for media and instructional technology across the campus while the library provides services, access and expertise for informational resources. Although the priority for

ETC responsibilities is designated for the teaching and learning activities, it also includes support for other university related activities. The focus of this article will address the facilities, technology, and processes involved with the instructional resources associated with Meyer Library and the ETC.

Facilities

The resources for instructional technology were included in the design for a number of the facilities located throughout the library with the intention to provide presentation capabilities, as well as teaching and learning opportunities. The multimedia lab, academic computer lab, and the instructional lab were all new resources included in the new wing of the library. These facilities are operated and supported by the ETC, with collaborative hardware and software support provided by the library's systems personnel for the academic computer lab. These resources were put in place to supplement the instruction delivered across the university and to provide students with tools for creating materials to fulfill their assignments. The instructional lab was implemented to provide the faculty an opportunity to explore new methodologies and applications of technology in a classroom setting. It is also used to deliver faculty development sessions for instructional technology from the Center for Continuing and Professional Education.

The Library Information Science (LIS) classroom lab, the Bibliographic Instruction (B.I.) classroom, and library classroom are three facilities that include presentation technology to be used for providing instruction. The LIS classroom lab includes over 20 student computers and is used for a number of LIS courses. The B.I. classroom is another computer lab used specifically for teaching bibliographic instruction, or the "one-Shot B.I." sessions and includes specialized instructor software with the intention of meeting ACRL standards for information literacy.

Two other specialized facilities include the library conference/seminar room and the faculty media develop lab. The conference/seminar room is used by the library to hold their meetings and for special events or presentations. The faculty media develop lab is part of the ETC and is available for faculty to receive technology training and to use for developing and producing their projects involving multimedia applications, digital editing, and other media production activities.

Technology

The ETC provides various media resources that are available in the library, which includes media workstations and a wide range of media equipment. In the vicinity of the media collections area, there are TV/VCR and TV/DVD viewing stations in place to permit the capabilities for patrons to view the media materials available to them from the library collections. Various kinds of media equipment including computers, overhead projectors, data projectors, cameras, sound systems, portable presentation carts, TV carts, and more are available from the ETC's equipment lending service. Some equipment is picked up and returned by patrons and some equipment is delivered to classrooms and to special events across the campus.

All the technology that has been identified and installed in the library's facilities is supported by the ETC. In the library's classroom settings, this includes presentation technology. In the multimedia lab and faculty media development lab, an array of workstations including digital

editing on two different platforms, flatbed scanning, slide scanning, videotape international standards conversion, tape format conversion, multimedia production stations, tape to DVD conversion, and CD duplication are provided.

Process

Various processes have been developed, pursued, and continue to evolve as the ETC grows in its response to the institution's needs and demands. This has included processes for project planning and development for the various media programs produced by the ETC.

It also occurred as the university's process for classroom upgrades was authored, developed, and implemented through the ETC. This newly established process determines the major impact across the campus by allocating nearly a million dollars of annual funding that directly affects the institution's ability for meeting its primary mission of teaching and learning. These allocations involve both technology solutions as well as infrastructure upgrades.

Several ETC policies are actuated in practice and have direct impact on the university's mission for delivering instruction and information. This is particularly realized through the ETC's equipment lending service, which provides equipment to the faculty, students, administrators, and staff. Delivering equipment on an "as needed", "on-time" basis to supplement the available technology in the classrooms is essential for meeting the growing demands and expectations on the campus. The process for troubleshooting response, maintenance, and support of technology, currently being defined and implemented, will also be a critical role that the ETC will provide and originate from the library building.

Impact

An instructional design approach has been the response employed by the ETC. Whether we are developing a media project, strategizing for technology standards, specs, or solutions, or designing facilities we like to utilize a systemic approach. A dedicated effort is first made to identify what the needs are. From this we form our goal and purpose statement, which becomes the reference for defining the specific objectives for the task we're engaged in. We then formulate our proposed solutions based upon the foundation of our stated goal(s) and objectives. To specifically outline the processes employed by the library and ETC across all the initiatives taken for meeting the identified instructional resources would quickly go beyond the scope of this article. Instead we will summarize and present an overview for the decisions and solutions that were implemented.

The library classrooms were designed to meet the instructional needs as perceived through the LIS faculty and the instructional technologist's recommendations within the facility parameters determined by the architects. Curriculum needs were considered for LIS courses, information literacy training, and the "one-shot" B.I. sessions, as well as guest lecturing or other possible instructional opportunities. Two of the three classrooms are equipped with computers to allow for hands-on, active learning capabilities as requested by the LIS faculty.

The multimedia lab was designed to provide tools that would:

- Supplement curriculum needs and offer multimedia exercises.
- Resemble the other labs on campus and their resources to allow additional access through the library's extended hours.
- Offer the tools and capabilities that could support new approaches and methodologies for the teaching and learning activities across the university.

The instructional lab was designed to provide a testing and prototype of the technology found as the standard installation in the Missouri State classrooms. Here faculty could investigate, practice, and become familiar with new approaches using technology. We can also offer orientation and training sessions from this lab. In addition, this lab is used by the Center for Continuing and Professional Education for faculty development courses in instructional technology.

The faculty media development lab was upgraded to keep-up with developing interest and needs. Training is also offered out of this lab to assist faculty in producing their own materials.

Conclusion

All of these instructional resources and activities identified here originate from the library. Although the ETC currently reports directly to the Office of Academic Affairs, the instructional resources referred to in this article were considered, planned, and implemented when the ETC was still part of the library. These developments came about when the library was expanding through the construction of a new addition. Planning beyond brick-and-mortar issues was addressed that not only included consideration to instructional activities and resources inside the library, but also responded to the growing needs expressed across the campus.

The focus of this article is to suggest that libraries should play a more prominent and active role in the university's response to instructional technology support. It should be realized through this example that a library can be more proactive in its approach and ability to address the growing demands and needs for instructional technology and how a library can take a leadership role to meet these expanding developments in higher education. Even though the reporting structure has changed at Missouri State University, an active collaboration between the library and the ETC continues and a close association is still the perception across the campus. This experience and recent history at Missouri State University offers great case studies for exploring new approaches that libraries might consider as we examine the potential impact for our profession.

New Methods for Delivering Instruction at Missouri State University

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Abstract

Assigned the task to develop a methodology and new campus standard for delivering Capstone courses at the University, we formed a team and developed our project goals and time-line. After exploring the various approaches used on campus and evaluating available applications, we decided to create our own customized Flash-based application. The client can use the new application, called Locomotion, to develop and produce their capstone course and then deliver their instructional materials via CD-RO M, DVD, and/or the Web. This collaboration, involving the Educational Technology Center, Meyer Library, Biology Dept, and Academic Outreach, resulted in a solution that provides convenient access for the student, manageability for the faculty, and a tool to review and standardize course materials for administrators.

Introduction

At Missouri State University, most of the distance learning, professional development, and academic outreach programs are usually handled through the College of Continuing Education and the Extended University. As with most institutions, there are certain interdepartmental practices, principles, and boundaries between the various service units that are part of the University's culture. Occasionally collaborations occur between departments that can bring about new approaches and growth, and this article is about one such occurrence at Missouri State University.

The Educational Technology Center (ETC) reports to the Vice President of Academic Affairs, with a mission to support the academic programs at the university by providing services and resources for media and instructional technology. Although the priority for ETC responsibilities is designated for teaching and learning activities, it also includes support and cooperation between other university related departments. One of these interdepartmental collaborations grew out of a request from the Assistant to the President. The project originated from a normal ETC request to investigate a certain technology. The uniqueness of the project developed when this evaluation involved exploring the potential for distance learning applications, particularly video conferencing, to support the courses being delivered to China.

The Project

The technology that we evaluated is a conferencing tool called E-Studio. The outcome from our investigation was that for the price and capabilities, a better solution was to use Apple's i-Chat,

delivered across Macintosh computers. A new project then evolved when the inquiry broadened to explore other possible applications for E-Studio, such as providing course delivery for across the campus and beyond.

This project involved three departments on the campus in developing and producing a GEP 397 course. GEP, or capstone courses, have various requirements across each of the college curriculums. It is the public affairs component of the general education requirement, with the intention to provide learning that educated persons will use throughout their lives in their many roles and communities. Because these courses are required in every degree program, the university struggles to provide enough available classes for on-time/demand delivery. In our project each department would track the time and expenses involved, which would later be evaluated along with the overall effectiveness of each product and approach. One project would be the typical video course as produced by the Distance Learning & Instructional Technology Center, DLIT. Another project would be completed by Ozark Public Television, OPT, to produce a telecourse that could be delivered across PBS. The third project would be for the ETC to come up with a new approach, utilizing multimedia to produce an interactive course delivered via CD-ROM. The final analysis of the entire project is still under review by the university.

Some preliminary developments for the ETC project were to assess the various approaches and applications and evaluate them in order to arrive at the best recommendation for a campus standard. The goal was to create an efficient and cost-effective process for developing, producing, and supporting such projects. In addition, we needed to follow the accessibility guidelines. We also needed to ensure that our solution would be compatible with the other systems used throughout campus (i.e. Blackboard). In addition, the process needed to be easy for the end-user (instructors and students) to implement and utilize.

Team Roles and Collaboration

We began by forming the team who would be responsible for the work of developing and delivering the course. The Director of Academic Outreach was the Project Director, and represented the interest of the Vice President. His assistant provided input throughout the project and was responsible for implementing the course. The oceanography instructor, a marine scientist and faculty member in the Biology Department, provided the content and delivery of the GEP 397 course. The ETC Multimedia Developer provided all of the development and production work. The ETC Director provided the roles of instructional designer and project producer. A reference librarian and Library and Information Science faculty member acted as the information resource expert who provided additional support.

As the instructor reviewed his course materials to revise it for delivery across a multimedia format, the multimedia development team in ETC began the process of assessing and evaluating the various multimedia approaches. Our review included applications that were already used on campus such as Centra, Microsoft Presenter, and Director, as well as other applications, such as E-Studio with PowerPoint, Authorware, Breeze, and Flash. We concluded that the available technology did not perform to the expectations that we desired and decided to customize an application that was Flash-based. After considering the future trends, capability standards, and

compatibility issues, we felt that this approach would best address all the project goals we had set, as well as serve as the most cost effective solution.

To accomplish the task of developing a customized application, one would need a technical programmer, a graphic designer, a web designer, and an interactive authoring technician. In our case, we were very fortunate to have all of these skills reside in a single individual. While it may not be typical to find this in one professional, we tried to make the most of the talents of our multimedia developer. He had to address several project needs as he developed our new application. One was to design a more efficient interface between the content expert and the multimedia developer to allow for a better flow of information. The second task was to create the template from which the instructional materials would be delivered. The last task was to develop a content management tool and thus, "Locomotion" was born.

The End Product: *Locomotion*

Locomotion is a web-based product that allows an instructor to enter content at his or her own convenience. The interface was set up to resemble the template from which the "Ocean Resources: Use and Protection" course would be viewed. This template included:

- A dialog box to enter the narration, which would later accompany the audio lecture as scrolled text.
- An object box containing the media materials including graphics, photos, movies, or other visuals to be included in the program.
- An object box to contain resources that would be used for additional learning materials such as links to web sites, online articles, or materials posted on Blackboard.
- Another dialog box to store quizzes and other learning activities.
- And, one more dialog box to post tips, access help, and address questions about the program.

Our multimedia director would receive the materials from the instructor and work on building the program from the ETC. The instructor only needed to come to the ETC to record his lectures in the studio and occasionally to follow-up on certain development steps as required.

Since this program would be delivered across a CD-ROM, instead of over the web, we had to set up accounts on a server and provide links to Blackboard. The instructor could interact with his students and update materials and links as needed, and if the course were delivered over the web, the instructor would be able to make dynamic changes on his own.

The actual template for the GEP 397 course included navigation for all 28 lectures. The lectures would be delivered through audio files with scrolling text. Images would change with the lecture. Another navigation button would list all of the homework and course assignments. The syllabus and overview of the course would be listed on another button. Resources with additional learning materials, including links to related web sites would be accessed through another button. Navigation would be designed and constructed to move throughout the program as the instructor desired.

Collaboration with the Library

The scope of the librarian's involvement was the provision of an annotated list of resources related to the oceanography course material. The resources ranged from essential library databases to a selection of relevant World Wide Web (WWW) sites. All of the resources were further reviewed and approved by the instructor before inclusion in the course materials. Beyond the inclusion of these initial resources are future plans to embed many of these resources within the text of each lecture. The provision of resources directly at the point of need increases the interactivity and the educational value of the multimedia experience. Increasing interactivity within the course materials provides a richer educational experience that should appeal to students who appreciate a "surfing" type of educational environment. This will provide students an active learning environment while also providing guided excursions onto the WWW. While the utilization of a multimedia CD-Rom is certainly not new (e.g. Encarta), it is an appealing alternative in distance education provision and the library is looking forward to future collaborations with the ETC. In addition, the Library is considering the use of the Locomotion interface as part of the design of a new information literacy course. This interactive interface with its dynamic change abilities is ideal for an information literacy class due to the constant flux of library resources.

New technology leading to changes in the provision and dissemination of information has triggered a fundamental shift in the traditional role of the library and the librarian. The librarian of the 21st century is expected to have the advanced technological and pedagogical skills needed to provide access, service, and instruction in a dynamic, diverse information environment. We are no longer just the "keeper of the books;" our expertise must include the entire breadth of available information formats, and the ability to teach others an essential set of transferable information literacy skills. However, regardless of our willingness to adapt, change, and now reach out to share our newfound roles, convincing faculty of our worth as informational resource professionals still remains a challenge. Faculty rarely recognize what librarians can add to their courses beyond material provision and individual student assistance. Furthermore, since faculty perceive themselves, and rightfully so, as the content experts, they often don't recognize the librarian's ability to provide them with substantive resources within their respective fields. Therefore, librarians now find it necessary to reach out from the library and actively market their expertise. Fortunately, campus technology centers are an ideal source of collaboration for libraries. Technology centers provide a storehouse of creativity and expertise that appeal to both students and faculty alike. The opportunities for collaborative support of the campus community through partnership with technology centers are vast.

The collaboration to create the GEP 397 Oceanography class was a small, but significant achievement for the Library. First, the Library was able to do what it does best, provide quality resources and personal assistance to the GEP 397 students. Second, the successful collaboration provided the opportunity to show faculty colleagues the types of services and pedagogical assistance librarians can now provide. Lastly, recognition and inclusion as information professionals by the ETC is a positive indication of progress in the librarian's shifting role within the university community.

Conclusion

Our project benefited from active collaborations between professionals from different areas of expertise, backgrounds, and capacities within the university including:

- A very flexible and collegial faculty member who had exceptional command of his material.
- Project administrators who were supportive and skillful in their abilities to develop and apply a new product.
- A librarian, who in this time of information overload, understood the need for quality information resources and demonstrated the value and professionalism of her trade.
- An exceptionally talented multimedia developer who possessed a unique combination of technical astuteness, quality design skills, and great instinct for usability standards.
- A high-level administrator who had the vision, imagination, and resources to allow us to reach our goals.
- The ETC Director who shared the vision, prompted the opportunity, and applied the capability to pull it all together.

What's the point of all this? Was it really a new approach at Missouri State University to use multimedia for distance learning? Was it possible for various departments to work together in concert for a common goal? Could we package a whole course and deliver it across a CD-ROM? Our realization was more than creating a new product; it resulted in us developing a new approach. The difference in this process was that we made the time to look outside the realm of normal protocol. We choose to be innovative and explore all the options rather than just going through the normal motions already established. We invested the time to explore all the various applications, evaluate and compare processes, and assess the outcomes. This project permitted us the opportunity to gain more than just another completed project, it allowed us to expand our horizons by arriving at new conclusions based upon broader thinking. We learned and benefited from the freedom and creativity to make new discoveries. Too many times we're so focused on completing our task within the boundaries of our particular role in the university that we truly limit our potential and capacity. At Missouri State University we benefited by daring to reach further than the norm. It was a refreshing experience and hopefully a new approach for future projects.

Serving as an "Embedded Librarian" in an Online Course

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Abstract

Librarians at Central Missouri State University began an initiative in the summer of 2004 to create online tutorial modules for library users. As a result, librarians on the James C. Kirkpatrick Library's Distance Education Initiative Committee were invited to provide research assistance for an online history course delivered through the Blackboard course management system. In consultation with the course instructor, it was decided that we would serve as "embedded librarians," offering online tutorials on library resources and providing research assistance to students.

Online tutorials were designed using Macromedia Breeze, allowing the addition of audio to PowerPoint presentations. By recording our lectures, the online tutorials more nearly matched the instruction we would give in a face-to-face classroom setting. Finally, using Macromedia Breeze Live we attempted our first synchronous bibliographic session in which students could ask questions during the presentation.

We compared and analyzed student usage of tutorials and participation in online instruction sessions in order to formulate recommendations and conclusions. Our results so far have revealed some interesting insights into the information seeking behavior of students and the effectiveness of interactive online tutorials on student success. Results seem to indicate that designing effective tutorial modules and remote bibliographic instruction sessions is an ongoing and evolving process that requires continual analysis of student information needs and current technology.

In addition to providing online tutorials and instruction sessions, we have become an integral part of each class, participating in discussions, checking research papers for citation formatting and for plagiarism. Our interactions with the course instructor and with students have also provided us with some clear insights into the challenges associated with librarian-faculty collaboration in an online course environment and how the collaboration process can be improved in the future.

Introduction

The increase in the number of distance education students and the proliferation of online courses offered at Central Missouri State University prompted librarians at the James C. Kirkpatrick library to begin an initiative in the summer of 2004 to create online tutorial modules for library

users, particularly distance students. Librarians on the library's Distance Education Initiative Committee determined that the tutorials should be focused on important research resources and that they would be designed by utilizing Macromedia Breeze.

As a result of our involvement on the committee, we were invited to provide research assistance for an online history course delivered through the Blackboard course management system. In our role as "embedded librarians," we were primarily responsible for collaborating with students on a research paper assignment. We were able to incorporate our tutorials into the collaboration process and were able to examine the impact these tutorials had on student success with this assignment. Our interactions with the course instructor also provided us with valuable insights into the challenges that face librarians in an online course setting.

Literature Search

When the opportunity of working within a courseware environment presented itself, a literature search was performed and several helpful articles were reviewed. Susan L. Silver and Lisa T. Nickel's article, "Taking Library Instruction Online: Using the Campus Portal to Deliver a Web-Based Tutorial for Psychology Students," described the "planning, design and implementation of an online library tutorial" within Blackboard as an alternative to instruction in a classroom setting. Insight in guiding students towards accessing library resources from inside courseware is offered by Marianne A Buehler in her article, "Where Is the Library in Course Management Software?" The idea of collaborating with faculty in as many areas as possible in Barbara I. Dewey's "The Embedded Librarian: Strategic Campus Collaborations," led us to consider offering a full range of library service in Blackboard to an interested member of the teaching faculty as well as the title for this paper.

Developing the Tutorials

A number of libraries offer online tutorials on library resources to their users. Many of these tutorials cover such basic concepts as how to use the library catalog, how to use the library databases, how to formulate a search, etc. Members of the Distance Education Initiative Committee made the decision that we also would focus on essential skills that would be of interest to a large segment of library users.

Once the question of content had been resolved, the Committee then had to address the question of format. Some libraries offer their tutorials entirely in HTML format, such as the University of California Berkeley libraries, http://www.lib.berkeley.edu/TeachingLib/Guides/Internet/FindInfo.html and Cornell University libraries, http://www.library.cornell.edu/olinuris/ref/tutorialsguides.html. Tutorials such as these oftentimes include large amounts of text and few graphics or images. While these tutorials are informative, they run the risk of not holding the attention of students and are not aesthetically pleasing.

Some libraries have chosen more graphics heavy tutorials that include animated screen shots and require some interaction on the part of the user. Many of these tutorials require the use of interactive software applications such as Macromedia Flash or Macromedia RoboDemo. For instance, Colorado State University libraries and Washington State University libraries offer

tutorials that incorporate the use of Macromedia Flash, http://lib.colostate.edu/tutorials/ and http://www.wsulibs.wsu.edu/usered/viewlets/. The advantage of these types of tutorials is that they allow the user to obtain some hands-on practice with library resources. The disadvantage to this type of tutorial is that it is difficult to view for users with dial-up or low speed connections and is geared primarily to those who are visually oriented learners.

In the end, the Committee made the decision to design tutorials that would blend these two approaches. We decided to utilize Microsoft PowerPoint presentations, incorporating both text and screen shots of library resources as the basic framework for our tutorials. We then chose the interactive software application Macromedia Breeze to allow us to add in an audio track narrating each slide as the user clicks on each slide of the presentation. This approach allowed us to design tutorials that were aesthetically pleasing, interactive, and that appealed to learners that are either visually oriented or auditory-oriented.

Implementation of the Tutorials

Prior to our first semester as embedded librarians in the fall of 2004, it was decided in our talks with the course instructor, Dr. Delia Gillis, that our main role in the course would be to instruct students in discerning the difference between popular literature and websites on the Internet versus peer-review literature found in library databases and quality websites. It was also decided that the tutorials would play an important role in introducing students to these concepts by providing them with interactive overviews of library resources.

During the first two semesters that the tutorials were offered, five short tutorials were included, none more than five minutes long. Three had audio tracks added and two did not. Macromedia Breeze tracks use by individual slide and from this we learned that 50.02% of the students completed the presentations without the audio component, while there was a 59.3% completion rate for the presentations with an audio track added.

Macromedia Breeze does not allow for user feedback, so it was difficult to ascertain student opinions on these tutorials. It does appear from the usage stats, however, that the presentations that included the audio did appeal to a slightly larger number of students and that some students may prefer the auditory aspect of these tutorials.

Course Experiences

During our first semester, our role evolved as the semester moved along, with both the instructor and us unclear as to the extent of our role as “embedded librarians.” At first, it was decided that our role would be chiefly limited to providing the tutorials and answering questions students might have as they worked on a short research paper assignment. Despite our objections, Dr. Gillis required the students to use online only sources, excluding the use of print materials. Thus, many of the questions we received centered around helping the students to use our academic databases and to find reputable Web sites.

As the semester moved along, it was decided that students would submit their bibliographies to the librarians for us to check the quality and validity of their sources and to check that their

sources had been cited correctly. We were troubled to find that not only had many students not utilized our academic databases, but many had gone against our advice and chosen Web sites of questionable validity as sources. During this process we also discovered quotations that were not cited and in some cases, entire plagiarized papers.

Prior to our second semester serving as embedded librarians in the spring of 2005, we met with Dr. Gillis to clarify our role and to determine ways in which to improve student performance on the research paper assignment. It was decided that the research paper assignment would be more structured. Students would be required to have their topics approved by the librarians. They would also be required to have their sources checked prior to turning in their final paper and again, we would be checking their final papers for plagiarism and checking the content and format of their bibliographies. In an attempt to maximize the effectiveness of the tutorials, students would be required to view the tutorials before starting their papers. We gained a concession from Dr. Gillis in allowing students to use print materials as sources and also agreed that we would emphasize the scholarly research process by requiring students to use books or articles as two of their three required sources.

Increasing the structure of the assignment and requiring more interaction between the students and librarians allowed a better overall result in the quality of student papers. While there wasn't a significant increase in the usage of the tutorials, student research efforts did seem to indicate that students were viewing the tutorials more seriously and taking note of how library resources could aid them in their research. Requiring the librarians to approve topics allowed us the opportunity to steer students away from obscure topics in which it would be difficult to locate sources.

Dr. Gillis required the students to turn in a rough draft to us prior to turning in their final paper, which allowed us the opportunity to not only check sources, but also to make editing suggestions to the main bodies of their papers. Requiring the students to use books and articles greatly increased the number of scholarly sources utilized and even caused a greater increase in the number of reputable Web sites used. This also could be a contributing factor in a decline in the instances of plagiarism and in the number of non-cited passages, as compared to our first semester working with the class.

Conclusions and Looking to the Future

Our role in the course continues to evolve as we enter our third semester as "embedded librarians." The concept of librarians serving in this type of role in online courses is relatively new, so attempting to determine exactly what our role is has been somewhat difficult. From the outset, in collaboration with Dr. Gillis, we agreed that our primary duties would be to provide research support and assist students with a research paper assignment. However, our involvement has evolved considerably since our first semester working with the course.

During our first semester, our role was primarily relegated to answering student questions on finding sources, checking sources for validity and reputability, and checking for plagiarism. Student struggles with the research paper assignment provided us with opportunities for further involvement in the class and ideas on how to improve student performance.

During the second semester, our role was greatly expanded to allow for more interaction with the students and the structure of the assignment was increased in order to make the details of the assignment clearer to students and to keep them on task. Convincing Dr. Gillis to introduce more required tasks and persuading her to allow the students to use printed materials as sources were key factors in the quality increase in student papers that we observed in the second semester.

As our third semester begins in the fall of 2005, we have decided to structure the research paper assignment further, adding a checklist that will require students to check off tasks as they complete them. We believe this will allow more students to stay on track and will produce better quality papers. The importance of the research paper assignment has also grown as Dr. Gillis has increased the point value of the assignment from 10 percent to 20 percent of the students' total grade in the course.

It is difficult to pinpoint the role the tutorials have played in student success; however, the increased usage in the second semester, along with the emphasis on the scholarly research process, seems to indicate that the tutorials have had some effect. From examining the usage statistics, it seems that students prefer audio in the Breeze presentations. Therefore, we intend to add audio to all existing presentations and any new tutorials created in the future. Beginning this semester, we will be involved in the presentation of a live online bibliographic instruction session using Macromedia Breeze Live. Students are able to able to ask questions and make comments during the presentation, as they would in a typical face-to-face presentation in a classroom on campus.

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You Got What You Paid For...Now Learn How to Fix It! Manipulating "Free" Records and Loading Electronic Resources in Your Catalog

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Abstract

Most journal aggregators and many ebook collections (NetLibrary, Alexander Street Press, Thomson Gale, ProQuest) provide "free" bibliographic records for the books and journals available in their resources. Sometimes the Library pays for the bibliographic records while other times the records are included in the cost of the resource.

During six months in 2004-2005, the University of Texas at Dallas loaded over 270,000 bibliographic electronic book records and initiated service with a journal management vendor. Due to the volume of records acquired from vendors, we discovered a number of ways to correct potential cataloging disasters from happening. In addition to slowing your System down to a trickle, bulk loading “free” records involved finding a valid match point to avoid duplicate records for print and electronic items.

While matching is an important consideration, the nature of records presented us with a variety of types of problems never encountered with the traditional cataloging approach. Sometimes, the record provided was not for the book acquired or the dates and publisher did not match the electronic version. Journal issues cataloged as ebooks without a title, incorrect series indicators, and poor authority control are examples of problems that can be minimized by analyzing and manipulating the records prior to bulk loading. The following paper will explain how to optimize and “fix” your free records.

Introduction

For many libraries, the concept of cataloging the content available through a journal database or a collection of e-books is overwhelming. Many cataloging departments have relatively small staffs and would be unable to handle the volume of titles made available when a database is purchased. Some journal aggregators and many e-book collections (NetLibrary, Alexander Street Press, Thomas Gale, and ProQuest) provide “free” bibliographic records for the books and journals available in their products. In addition, companies such as Serials Solutions and TDNet can provide records for journals or A-Z list of titles with holdings that are updated monthly. If all library materials are not entered into the catalog or if lists are available for electronic products, it makes the job of identifying ownership more difficult for the learner.

Often, the challenge for the library is to determine if the records should be loaded into the catalog as a set or should be merged with the existing records. Public services and technical services librarians often disagree about adding multiple records into a catalog when the only difference is the format. While having separate records for titles with different formats is easier for the staff, it hampers discovery in the catalog by the user.

If the vendor supplies these records, who created the records and what standards did they follow? Are they to the standards of the other materials in the catalog? What is the impact of loading inferior records into a catalog?

The State of Vendor Supplied Records

Beall (2000) described problems with loading vendor records for Spanish language materials and their impact on OCLC and RLIN. While the situation is slightly different with electronic materials, many of the issues are similar such as unauthorized forms of names, series, and subjects. One of Beall's major concerns is the lack of corrections made by libraries using the record included in the bibliographic utility.

The major problem with the vendor supplied records sets for electronic materials is that they usually do not follow national standards. The records often include invalid subject headings or do not always include authorized name formats. Rather than describe the original piece, the record may include the date of digitization, not the original publication date. While this nuance is clear to a librarian, it is not easily noticeable to most users and negatively impacts searching using date limits. These records may not include alternate titles for foreign language items, items with non-standard spelling as in the case of historical materials, or with punctuation such as an ampersand within a title that could impact retrieval.

When a library decides to add a set of vendor records, the library should review a small set of records to check various elements within the record. These elements might include the authorized forms of series, names, and subjects. It might also include looking at the fixed fields of the record (006, 007, and 008 fields). These fields describe electronic materials and impact how limits within search systems operate. In addition to the overall quality of the records such as names, spelling, or physical description, common problems are that the 006 field is not coded for a computer file (important if the catalog user is qualifying a search to electronic materials); that the 007 field is not coded for remote access or is coded as an optical disk rather than for Internet access; and that the records do not include a 530 note (specifies that the item is available on the Internet).

While it is not particularly the standard, catalogers might exercise local practice and add an 830 note as a quick way to collocate related records from a specific publisher or a database. Use of such a field can facilitate the rapid identification and retrieval of records pointing to the full-text content included in a database purchase. If URLs needed to be changed, or a database cancellation required that the related items be removed, the addition of such fields would expedite this work.

It is also common to find 949 fields with irrelevant data within the records. Finally, many fields are simply empty. This problem is difficult to identify and depending on the field is hardest to handle and must be addressed on a case-by-case basis.

How to Handle Some of These Problems

The Libraries of the University of Texas at Dallas have invested heavily in the electronic delivery of materials. Since 1999, the Libraries have individually cataloged and added record sets for over 300,000 electronic books and 37,000 electronic journals. The Libraries have a strong cataloging team, but it would be unable to catalog most electronic books without loading vendor record sets.

For most small or medium sized libraries, producing a record for each electronic piece is not an option as most cataloging departments are unable to handle the volume of titles available within some databases. Whenever possible, it is important to fix certain types of problems which occur in the records before they are loaded into a catalog so they do not have to be handled individually.

Over the past 20 years, the librarians at the University of Texas at Dallas (UT Dallas) decided to have one record access to titles regardless of formats. This decision was initially made to include microforms and print on the same record, but has been expanded to include electronic access to the title. The single record method was decided at UT Dallas with the patron in mind. The goal was to provide less confusion in retrieval results lists in the catalog.

For most titles, the Libraries want to enrich the existing record by adding certain fields to describe the attributes of the electronic version and add a copy statement with a link to the text. Certain fields are added (440/830 for series, 856 for Internet URLs, 530 for a note about Internet access, etc.) to the existing record.

Many of the issues can be successfully improved by using MarcEdit, a freeware developed by Terry Reese from the University of Oregon. The records can be manipulated using the software and the records loaded after editing occurs. In addition, the software can manipulate the 856 field containing the valid URL to include a proxy prefix if it was not included by the vendor.

Rather than simply add the records in bulk, the titles are corrected by using MarcEdit and then loaded into the catalog. The loader program matches the title against those already in the catalog. Items are updated and merged against existing records. The loading requires a valid matching point. Libraries often match on unique numbers such as an OCLC number, ISSN, or ISBN. As electronic materials have unique e-ISBN numbers matching on the print ISBN is not useful. Often, vendors do not supply records containing OCLC numbers as more times than not the vendor records are machine generated.

One recent addition to the matching issue has been the inclusion of the print ISBN number in a 776 field. If the electronic record contains an ISBN number in the 776 field for a title already owned in the catalog, the loading program adds a copy statement to the print record for the title rather than loading a separate record. The addition of the 776 field with the OCLC number has been a very positive step in combining information on two formats.

Two special circumstances are worth noting as they are becoming more frequent. One situation is that e-book collections such as ebrary and NetLibrary are providing records for items that are uniquely titled issues of journals. These "books" are a problem as their records often do not provide the unique title of the issue (journal name only) or perhaps they do not include the title of the journal (the relationship between the supplement and the journal is not included). Records in series are another problem. Records for multi-volume sets and numbered series may also be handled by the publisher by providing separate records for each volume of the series rather than one record describing the entire set. The result can be separate records for each volume of an encyclopedia instead of one record for all volumes in the series. The publisher is providing records for items in a specific database rather than describing the title for identification outside their resource.

One of the most serious problems has been when the record is provided and only a portion of the work is available electronically. Rather than add a subtitle that reflects that there are selections from work available, the word "selection" is added to the 533 reproduction note. The practice of adding the word selection to a field other than the title is totally lost on nearly all users. For example, if a letter is included in a biography, the vendor includes a record for the biography. If the letter is the only part of the biography included in the database, and the record provided by the vendor describes the book from which the letter was excerpted, the catalog would not include specific information about the letter (such as the title) and the record mistakenly indicates that the library owns the entire book.

Conclusion

Librarians can play an integral role in helping publishers provide quality records for electronic content. In many situations, the record that the vendor provides does not accurately describe the work. Often, these non-standard records are inferior in quality. Detailed communication with vendors about the types of problems found in their records will initiate corrective action to produce a more acceptable record. Librarians can improve the quality of these records sets through the development of bulk editing techniques and provide title level access to content in e-book and journal collections. If the library catalog is to remain viable, the inclusion of all materials is essential and the quality of the bibliographic data must be maintained to assure that all users can easily find the information they want to use.

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Fair's Fair: Intellectual Property, Fair Use, and Copyright

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Abstract

Anyone who uses electronic resources for teaching or scholarship needs to understand the implications of current copyright law and how the use of written materials recorded in a fixed format may or may not be considered "fair." This paper will include a discussion of the evolution of the concept of copyright and how it protects intellectual property in the United States. A look at the (very readable) copyright legislation will serve as a basis for the discussion. In America, laws protect intellectual property from abuse and encourage the fair use of copyrighted materials under certain circumstances. Because the copyright law does not contain specific quantifiable guidelines regarding fair use, it is up to the user of copyrighted works to be informed and to make reasonable, good faith decisions when using works that are copyrighted. In order to make reasonable decisions about usage, to guide their patrons, and to do their own research for tenure and promotion, academic librarians need to be familiar with key elements of current copyright law. Some elements of interest include copyright origins, basic structure of the United States laws, and scope. It is especially important to understand how copyright rules governing content in an electronic format may differ from those that govern traditional media. Furthermore, academic librarians also need to learn about ways in which their own scholarship is protected by law.

Introduction

It is easy to shy away from the topic of copyright: no clear, quantifiable guidelines exist as to fair use and user rights. As professional librarians, our interest lies in encouraging the dissemination of information to the greatest extent legally possible. Through the course of this paper, a general background of copyright law will be discussed as it pertains to creators/copyright holders and to users. The discussion culminates in the way these topics converge to support academics at the university level.

Copyright Basics: Protecting Copyright Holders

In the plainest of terms, copyright is a legal means for protecting creative intellectual property. The United States Congress saw fit to codify the protection of intellectual property via a set of laws that protects the creator or copyright owner from exploitation. The current Copyright Code that we use today was enacted in 1976. It is currently composed of 13 chapters and 9 appendixes. Section106 of Chapter 1 describes the rights of the copyright owner; as set forth in the title to the section, the rights listed are the exclusive to the copyright holder (17 USC 106, 1976).
Under current law, any imaginative work created and recorded in a fixed medium is automatically protected by copyright law. Standard fixed media include paper, canvas, marble, and film. Sound recordings are protected if the sound can be re-emitted at a later point in time. It does not matter if the recording is digital and easily alterable or if it is in the grooves of a 78 rpm

record album. The same holds true for a document, be it electronic or in more traditional medium such as paper. Creative works on non-traditional surfaces, such as sidewalks (covered with chalk art) or cardboard boxes (decorated with construction paper cutouts), are also protected by copyright law. Many creators also choose to register their works with the United States Copyright Office. Such registration becomes effective on the day the application is received at the Copyright Office (Literary Works).

Intellectual Property Not Copyrightable

Not all creative or fixed-format works are intended to be protected by copyright law. For example, names and logos are creative, but are protected by trademark law. Likewise, processes or inventions are creative, and are protected under patent law (What Are Patents, Trademarks, Servicemarks, and Copyrights?).

Three main types of works recorded in fixed media do not fall under the protection of the Copyright Code; these works are part of the public domain. Lolly Gasaway from the University of North Carolina gives the following definition:

A public domain work is a creative work that is not protected by copyright and which may be freely used by everyone. The reasons that the work is not protected include: (1) the term of copyright for the work has expired; (2) the author failed to satisfy statutory formalities to perfect the copyright or (3) the work is a work of the U.S. Government (Gasaway, When U.S. Works Pass into the Public Domain).

Let us examine more closely these three cases, and supplement them with the discussion of a fourth scenario. Addressing the first two points, we can say that it is generally safe to assume that creative works published in America before 1923 are out of copyright and can be used freely. Due to the variety of laws enacted over the years, it is not always possible to guess the status of written works created after 1923; therefore, it is difficult to know if a work falls into the second category. Refer to the online chart that Gasaway provides to ascertain the longest period of time works might be covered.

The third case mentioned is that of government information which cannot be copyrighted. It may be worth noting, though, that government information repackaged with “value-added” elements may indeed be copyrighted by external entities. Examples of this would include creative layouts or finding aids that are the addition of private enterprises and that contribute to the use of the material in a meaningful way.

One additional type of material that cannot be copyrighted is information that is purely factual. Examples of non-copyrightable factual information include information found in telephone directories (Harper). Although it would be difficult to assemble such a list without the phone book, lists of phone numbers and addresses are not creative or artistic and therefore are not covered by copyright.

Whether registered officially or not, a work created today is protected for the life of the author plus 70 years. The current length of copyright protection is the result of the Sonny Bono Act

(October 21, 1998) which was endorsed by Sonny Bono in an effort to protect California's Disney interest (Keyt).

Fair Use Considerations: Protecting Users

Logically, what good is it if creative works are made public but are so protected by the legal system that they cannot bring about discussion, reaction, or further scholarship? Legislators drafting the Copyright Code foresaw this situation, and wrote into the code a provision to help protect users in certain situations. Copyright holder rights are "subject to sections 107 through 122" where we find a series of exceptions that allow for the use of copyrighted works in specific circumstances (17 USC 107-122, 1976). Fair use is the overarching mechanism that protects users and encourages the limited use of copyrighted materials.

> **§ 107. Limitations on exclusive rights: fair use**
> Notwithstanding the provisions of sections 106 and 106A, the fair use of a copyrighted work, including such use by reproduction in copies or phonorecords or by any other means specified by that section, for purposes such as criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of copyright. In determining whether the use made of a work in any particular case is a fair use the factors to be considered shall include —
>
> (1) the purpose and character of the use, including whether such use is of a commercial nature or is for nonprofit educational purposes;
> (2) the nature of the copyrighted work;
> (3) the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and
> (4) the effect of the use upon the potential market for or value of the copyrighted work.
>
> The fact that a work is unpublished shall not itself bar a finding of fair use if such finding is made upon consideration of all the above factors (17 USC 107, 1976).

Uses carried out in accordance with Section 107 are "not an infringement of copyright." We can imagine that many more fair uses of copyrighted material could exist than those enumerated. No quantifiable indicators are included that would help us know how much we can legally use as part of fair use. There are four factors to be considered.

The first factor to consider is the purpose and character of the use. Educational or research-related purposes weigh in favor of fair use. The second factor is the nature of the copyrighted work. A highly creative work will swing the balance in favor of fair use more than a descriptive work. The amount used is the third factor. Although no limits are given, we do know that using more than is necessary or giving away the heart of the work count against a fair use defense. The effect on the market for the work is the final factor. If sales of the work are severely hindered or if a new market would have been created had the copyrighted work been used differently, the use is less likely to be considered fair. See the handout from Kenneth Crews on Indiana University's web site for a straightforward means of assessing if a particular use is more in favor of or opposing fair use (Crews, Checklist for Fair Use).

Much of the burden is on the users; they must be knowledgeable about fair use and make a conscientious and reasoned decision when using protected materials. Copyright owners must be protected from violations of their rights, and users need to understand their role in this process and be required to adhere to the spirit of the law. However, "on the safe side" limits can curb legitimate usage. Given the fact that the law specifically allows for fair use, it is the duty of librarians to ensure that patrons are able to use material to the extent legally allowable. With First Amendment rights as with fair use rights, we need to use them to ensure that we retain them.

Copyright and Academics: Converging Points of View

Let us turn our attention to the academics we support and the unique set of circumstances that arise as we serve both creators and users of copyrighted material. Sections 108-122 of the copyright law allow for particular uses of copyrighted material. These sections help to balance further the rights of authors and the larger public interest in the United States. They are straightforward and clear in comparison to the fair use doctrine.

In academics, we are impacted by Section 110: Performances and Displays. Section 110 allows for exemption of certain performances and displays in the case of face-to-face instruction. It allows for "performance or display of a work by instructors or pupils in the course of face-to-face teaching activities of a nonprofit educational institution" (17 USC 110, 1976). Allowable activities include use of documents, audio-visual materials, etc., as long as the purpose is instruction, and not simply entertainment.

The Technology, Education, and Copyright Harmonization Act (TEACH Act, 2002) offers more flexibility than previous versions of Section 110. However, it is up to each institution to make sure that it satisfies the requirements of the Act (Crews, New Copyright Law for Distance Education). In general the TEACH Act allows for distance education to receive the same general considerations as traditional classrooms in terms of use of copyrighted material. Essentially, the material used must be comparable to materials used in a traditional classroom.

To all appearances, electronic reserves are subject to the same rules and limitations as hard copy reserves. The American Library Association Washington Office has issued a statement on fair use and electronic reserves that is available online (Fair Use and Electronic Reserves).

It is only with certain digital "statues" that fair use is not always applicable. The Digital Millennium Copyright Act (DMCA) is the most notable example of American legislation where this is the case. The United States was required to pass the DMCA in order to comply with international copyright law set forth by the World Intellectual Property Organization (WIPO). Under Section 1201 of the DMCA, the circumvention of digital locks is prohibited under any circumstances, even if doing so would be fair use (Browne).

In 2001, a Russian computer programmer named Dmitry Sklyarov demonstrated at a conference in Nevada how one could 'unlock' eBooks secured by Adobe software. Even though, according to the Treaties Database on the WIPO website, Russia was not a signatory of the WCT and the WPPT (the two treaties that required the creation of the DMCA), he was demonstrating his thesis

material for his doctorate at an *American* conference (Treaties Database Contracting Parties). Adobe promptly had Sklyarov arrested, and, since the laws of the country in which one uses materials are the laws by which one must abide, the criminal provisions of the DMCA were applied in his case (FBI Arrests Russian Programmer for Violating DMCA). By December of the year, the case was dropped and he was allowed to return to Russia, but the incident had raised the ire of those concerned about rights in cyberspace (Feds Free Russian Programmer in Return for Testimony).

Also according to those two WIPO treaties, it is illegal to alter Digital Rights Management (DRM) technology. One example of DRM technology is the encrypted codes identifying images. If a digital image is posted to a website, the DMCA specifies that the web software cannot strip the imbedded digital watermarks. Librarians have been fighting these two restrictive provisions of the DMCA on the grounds of fair use rights since its inception.

Other Technological Considerations

Although the Missouri Department of Elementary and Secondary Education: Division of School Improvement reminds us that “works found on the Internet should be treated with the same discretion as materials found in offline formats,” issues still arise due to the nature of electronic environments that have no counterpart in an analog world (Copyright Applies to Everyone 87). Hyperlinks are one such example. Based on current case law, making a link from one website to another is not a violation of copyright. It is more prudent to ask permission and to get it in writing ("Linking Agreements"). Less prudent, but certainly acceptable and by all indications legal, is the direct linking to the homepage of an organization. However, setting up a “deep link” to a page within the hierarchy of the site is less sure. Out of respect for the site and its marketing concerns, it is advisable to direct Internet users on how to access the webpage in question from that initial homepage, and to provide a link only to the homepage. Lastly, it is advisable to be prudent if the content on the site is clearly in violation of American copyright; American law applies if the material is used in America (Harris).

Information presented to students in password protected environments provided by Course Management Software (CMS) can certainly argue in favor of fair use since materials are only available to a certain set of enrolled students (Browne). Examples of CMS include Blackboard and WebCT. Even when providing material on the CMS, it is always advisable to post links rather than reprint an article in its entirety. It is also advisable to turn off access to a site after the course is over, out of respect for the intellectual property referenced.

Issues surrounding the use of digital images can be even more complex than those surrounding text. Ownership of analog vs. digital images enters into the equation. It is possible to sell or give a physical item without transferring copyright. Therefore, archives that own photographs may not necessarily own the rights to the intellectual property and should not digitize those photos for publication to a website. Also, the subject of a given photo may well be a protected entity, such as the Empire State Building. Even if there is permission to use the intellectual property generated by the photographer of the image, there has not been permission given by the trademark holder for the Empire State Building (Tadic).

One consistently safe use of digital images has been the thumbnail. According to rulings by the courts, thumbnail images do not violate display or reproduction rights and have been safe to use (Tadic). Another means of finding digital images that are safe to use is via the Creative Commons organization. Creative Commons is a nonprofit that offers a flexible copyright for creative works of all types: http://creativecommons.org/. Everything posted to the Creative Commons web site states explicitly how use of the work is, or is not, restricted.

"Works for Hire"

There are instances where the creator/author cedes his rights to the work. In a commercial setting, any work created on paid company time usually belongs to the company and not to the individual. These types of creations are considered "works for hire" and they are the norm in industry. Fortunately for those of us at the university, the courts have favored an academic exemption to this "work for hire" rule due to the nature of our situation (Gasaway, Getting It Down in Writing: Institutional & Policy Issues). The "academic exemption" is the general rule for scholarly work created by university faculty. Scholarly articles that they write and course syllabi that they create are generally their own intellectual property.

Some intellectual property created by professors at universities will be considered "works for hire" and will not belong to them. Content generated for Distance Education (DE) will be "works for hire." Inventions which are protected by patents will likely be considered the intellectual property of the university as well; it is interesting to note that universities fight much harder to be the intellectual property rights holders when the creative product is likely to have a large market value (Townsend). Also, professors may need to be wary of student or staff contributions to their copyrighted scholarship, as students and staff are not granted the academic exemption. Staff or student hours, paid for by the university, may affect the ability to apply the "teacher exemption" and subsequently to claim ownership of a work (Gasaway, Getting It Down in Writing: Institutional & Policy Issues).

Conclusion

The maze of laws and regulations surrounding copyright seem only to get more complex with the passing of time. Old laws remain in force, new laws contradict old laws. Library patrons expect to be informed, and academic librarians are responsible for creating policies and guidelines to help serve these patrons. Unfortunately, the situation will likely continue to get more convoluted as globalization extends and as new media are invented. In the meantime, all we can do is stay informed, use our rights as they are laid out, and encourage our patrons to exercise their rights within the limits of what is ethical and legal.

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Government Information Awareness to the Masses (of Staff and Users)

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Abstract

The changing delivery of reference services along with other organizational changes provided a new opportunity to broaden the awareness of government information at the KU Libraries. In 2004 a "Peer and Tier Reference" structure was introduced and the challenge of quickly training student assistants and "non-reference" staff began. A three-person team formed to develop a training program that would promote government information as part of the "Peer and Tier Reference" training. After "overwhelming" the first group with information and unintentionally maintaining the status quo of referring the user to "expert" at the first hint that government information may be needed, the training team was challenged to raise the awareness of government information without instilling "fear" of the vastness.

So what is it about government information that causes reference staff to run for the expert without conducting a reference interview? Or on the other end of the spectrum, how do we increase awareness enough for reference staff to probe deeper when a user asks what sounds like purely a direction question, "Where do you keep the documents?" The aim is to develop training to increase the comfort level for fulfilling the user's immediate needs while recognizing when to refer to an expert.

We explore common conceptions that patrons and staff alike may have about government information materials and attempt to unearth some of the apprehensions. The paper also includes: a review of the actual techniques used in training to raise basic awareness, comfort level, and ease of approaching these materials and providing quick assistance to users; how to suggest that a patron may want to use government information; and a model for expert referral.

Introduction

The purpose of University of Kansas Libraries' recent efforts to train student and staff working shifts at the reference desk has been to create a better awareness and use of government information. As citizens of a democratic society we make use of government information as we fulfill our duty to be well informed and able to make wise choices. The quotation "Information is the Currency of Democracy," commonly attributed to Thomas Jefferson is often referenced when talking of the importance of open access to information, particularly from the government sector (Jefferson Library). A verifiable quote from Jefferson speaks to the same principle, that a well-informed citizenry is essential to a democratic society. "Whenever the people are well informed, they can be trusted with their own government; that whenever things get so far wrong as to attract their notice, they may be relied on to set them to rights" (Thomas Jefferson Papers).

These values have long imbued government information services in libraries throughout the United States. As an academic library, participating in a culture of learning, we are helping to prepare students to pursue their lives and be part of this democratic society. We also see connections to these values of access to information in the University of Kansas' stated Goals of General Education, outlining the overall objectives of a classic liberal arts education for our students, particularly in: "Goal 1: Enhance the skills and knowledge needed to research, organize, evaluate, and apply new information, and develop a spirit of critical inquiry and intellectual integrity.", and, "Goal 4: Understand the history, culture, and diversity of the United States and of other societies and nations." (University of Kansas General Education Goals 2001).

There is incredible breadth and depth of information available from the U.S. Federal Government for public use, particularly for academic purposes. The ongoing Census of Population and Housing program detailing the growth and changes in the American population is one of the most widely known and used types of government information. But there are many other useful types of government information available. For example:

- Congressional information documenting public policy and legislation, as well as evolving debates on societal issues. (One such example could be remarks made in the House and Senate regarding the Terry Schiavo situation during 2005 documenting Congressional efforts to influence that situation.)
- United States Geological Survey research on the New Madrid Fault in Missouri.
- A first-time ever survey from the U.S. Economic Census on Information Technology and Communications expenditures in the U.S. Business sector released in June of 2005.

Government information library staff and regular consumers know there is information available on almost any topic one could imagine. The exciting challenge is in spreading awareness of this rich resource to even more people.

Background

The University of Kansas Libraries has maintained a federal depository collection since 1869. Historically this collection was managed and serviced in a special libraries model. Approximately six years ago, the collection and services were merged into a general reference environment. A few years later, government information materials processing was also mainstreamed into centralized technical services. The more recent development, within the past two years, was a change in the reference services model to a "Peer and Tier" structure influenced by the Brandeis Model. This evolution of reference service is noted in the literature (Frank). These rearrangements created new challenges, but also created opportunities to broaden the awareness of government information. Some of the challenges and opportunities at the University of Kansas Libraries are similar to the experiences at the University of Arizona Library as they integrated government publications into general reference services in 1992 (Rawan and Cox).

Challenges and Opportunities

The shift from a “special library” approach to integration into a more diverse and general reference environment was a challenge for providing high-quality government information reference service as it would for any topic area. In a specialized environment, the nature of questions and needs is often more focused, allowing for continual reinforcement of learning and skill development, resources used, and development of services. That first change, and the later Peer and Tier structure, challenged staff struggling to hold on to the familiar. Veteran staff, servicing government documents collections exclusively, were not accustomed to training general library staff in government information. Staff working general reference desks were familiar with a broad array of reference resources, but not specialized resources for government information. However, the Peer and Tier environment provided opportunities to increase awareness of government information as a valuable resource. The integration of government information services and collections, coupled with the ever-growing quantity of government information on the Internet, has made available at our finger tips information that was ‘hidden’ in the special library structure.

The Peer and Tier Model

The delivery of reference services and assistants has evolved at the University of Kansas as it has in other places. A modified "Brandies reference model” implemented at the University of Kansas Libraries currently consists of three Tiers of staffing (Frank). The first Tier is comprised of students, or “Peers.” Peers are trained to be the first line of contact for on-site library service to answer the phone, help with basic directional and functional questions, and begin the reference interview consultation. Tier 2 staff members also work at the service points during high traffic periods and are comprised of non-student library staff from reference services and other areas of the library; and generally work one or two desk shifts a week. Tier 3 staffs are by and large the professional librarians and other highly experienced staff, and although do not directly staff the service points, are available as scheduled for more complex questions and needs. This staffing structure was devised and implemented for reasons both strategic and practical. Front line staffing with Peers is intended to create a less-intimidating first contact point for the large undergraduate population. And given that a large majority of service needed initially is often of a directional, operational (basic technology), or basic informational nature, well-trained students are more than capable of contributing. The shifting of highly experienced staff into Tier 3 continues to provide for more complex reference support (Herman 17). It also frees up staff time for developing more intensive library support for a subject specialists’ assigned academic department, or for other professional responsibilities. Yet there are challenges to providing good reference service in this environment, particularly for Tier 2 staff, which are a key element in this service model. Day-to-day learning from experience can be limited when a person only staffs a service point one, two, or three shifts a week. The expectation is to conduct a reference interview and help the user as far as they are able. Reference questions with increased difficulty or outside of the Tier 2 current experience and abilities are to be referred to the Tier 3. Training efforts are on-going due to the quantity of people involved at the reference desk, including over 50 people each semester and allowing for staff turnover, particularly at Tier 1.

Ironically, when Government Documents existed as a "special library," a tiered service model was utilized to great effect. This model was very effective at developing a trained reference staff. One of the challenges for a centralized service is to develop well rounded "generalists." Where as the veteran government information staff was accustomed to training "specialists." How does one scale the model from a small staff with focused resources to a large staff with a wide scope of resources? So far we have learning that we need to rethink basic training needs for the Peer and Tier levels of desk staff. The five basic goals we are currently employing in our staff training on Government Information as developed given the conditions expressed above, and our experiences expressed below, include:

Goal One: Provide reference service staff (all Tiers) with a basic awareness of the breadth and depth of government information that is available for use.

Goal Two: Recognize and help locate government information materials as discovered via our OPAC.

Goal Three: Introduce a few basic reference tools.

Goal Four: Information on how to probe for interest or need of government information.

Goal Five: When and how to refer a patron for more specialized reference assistance on government information

Training Tier Staff to be Aware of Government Information

Following the integration of government information services into the broader reference environment, but prior to the Peer and Tier implementation, one training effort for Reference Staff involved a very lengthy and modularized approach. Although quite comprehensive and detailed, it was unsuccessful given the expert nature of the training coupled with a lack of opportunities to apply that information. In the Peer and Tier environment, a first training effort offered in Fall 2004 for Tier 1 and 2 staff unintentionally again proved overwhelming. The one-time sessions were short and intense. Tier staff members were introduced to the breath and depth of government information, not as detailed as before, but still too complex and confusing. Some of the fine details were illustrated to support the importance of the collection (as example, how to conduct a full legislative history on passed legislation). Unintentionally, Tier staff left with the idea that accessing government information was too complicated and that they should always turn to the expert, even bypassing the Tier 3 backups. To add to the complexity, anyone working a desk shift was encouraged to attend specialized public workshop training designed for researchers. These workshop topics included: an overview of government information resources, statistics, and legislative resources. These early attempts to introduce and excite reference staff to scope of government information failed.

The Revised Training Strategies

The new training plan is to ease staff into an awareness of government information and prepare them to handle very basic questions with confidence (see our stated goals above).

We work to grab their attention by tying the training to other interest areas or experiences. We hope to develop some excitement and interest in government information. During a training session, the OPAC is searched by keyword for a topic of broad interest or awareness, such as bioterrorism. The class is asked to note the total number of hits. Then the search is rerun using a limit to the government information collection. The exercise has been repeated using various topics and frequently a significant portion of the hits are from the government information collection. This figure as been as high as 75%, and we do this to show just how much government information is available. Other components include: what is and is not available in the OPAC due to lack of cataloging records (the 1976 divide); how government information is important and relevant as a primary resource; and, documenting policy and legislating influencing our county and the world.

We want to empower staff to answer the reference questions that patrons will have if they manage to find government information in the OPAC. At some point in the training efforts, we realized that staff members were not comfortable with the SuDoc classification system. In the past training we spent very little time explaining the shelving arrangement. We now spend time explaining the origins of the SuDoc system and how it is structured. Staff members seem to have more buy-in when they realize that SuDoc is a 'readable' system that makes sense.

Future Training

As noted earlier, the training efforts are ongoing and evolving due to several factors. New students and staff working the desk, the quality of staff and the wide scope of the collections limit our contact and training opportunities, competing interests for limit training time; are all factors to be dealt with. There is also a need update and revise the training materials due to changes in the formats and content. The training efforts therefore must concentrate on the constants, the theoretical, and the basics have to be repeated. The basics are repeated especially for when they may change, e.g. location of the collect has moved, additional materials are now cataloged in the OPAC. Training will continue to focus on the structure of the government as it has been the basis for the SuDoc system and remain relevant for developing an understanding for the arrangement of government information available on the internet.

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On Site and Online: The Library and College Freshmen

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Abstract

Most of the students at Pittsburg State University come from small public schools with very limited library services. For a number of years, both librarians and faculty realized that students in all classes were having difficulty determining where to find quality and authoritative information for class assignments. This paper presents how a team of public service librarians at Pittsburg State University built a freshman orientation program to introduce freshman to finding quality and authoritative information for class assignments.

A description of the two instruction session approach we developed is given. First, we give all freshmen a location centered, on-site information session. The second instruction session centers on using the library's home page to locate the library catalog, databases and web sites. The conclusion describes the impact the sessions have had on our library instruction program.

The Setting

Pittsburg State University is a multi-purpose state –supported university whose primary objective is to offer strong undergraduate and graduate education programs to those in its service area. There are approximately 6,700 students from the U.S. and 46 other nations attending PSU. Almost 1000 students live on campus. PSU is in the top 10% ranking in the country for students to computer ratio. On average, our freshman class varies from 1,000 – 1200 students.

To serve the 6,700 students of Pittsburg State University, Leonard H. Axe Library has 10 librarians and 11 classified staff. Prior to 2001, freshman library orientation was given primarily by one librarian in English composition classes.

Identifying Our Needs

In 2001, we began an assessment of our library instruction program. The assessment process identified three major issues in our program.

First, we were providing library instruction to fewer beginning English classes. Because of a change of emphasis in the English department from teaching composition as part of the research process to teaching writing as a process and creating writing portfolios, fewer English classes were scheduling library instruction sessions. Consequently, since we used the English classes to

introduce the library, we were losing contact with an important element of our library instruction program.

Second, we felt we lacked an effective way to inform students about library databases. We were rapidly adding a number of databases. Even though these databases were marketed to faculty, we lacked a systematic way to inform students about their availability and how to access them. The library homepage was becoming the most important access point to resources and we needed a way to get that message to the students.

Third, we had recently moved from having one librarian doing most of the beginning library instruction to having all reference librarians sharing the teaching load. With more people involved in library instruction, we often didn't know what each other were teaching and students sometimes complained about repetition. In short, our library instruction lacked a logical sequence.

After identifying our major library instruction problems, we developed a set of goals for improvement.

The goals developed were:

- Create a library instruction ladder, with the bottom rung being an introduction to the library for all freshmen.
- Introduce all incoming freshman and transfer students to the Axe Library home page.
- Avoid repetition by having what is taught in the introductory session be distinct from what we teach in other courses.
- Create a logical sequence from introductory sessions to beginning general education classes.
- Create a distinction between lower division classes and upper division classes. Upper division classes would receive instruction on more sophisticated resources and searching techniques.

To restructure our library instruction program, a library session for freshman which included both an introduction to the library's services and materials and to the library's home page became our first priority.

The Opportunity: Conceptualizing a Solution

Having completed an assessment of our library instruction program and having established our priorities for improvement, we turned our attention to finding a place in the university curriculum for freshman orientation to the library.

After considering various alternatives, we chose the Freshman Experience program as the most logical place for our foundation library instruction session.

The Freshman Experience program at Pittsburg State University is intended to help freshmen succeed in college. The Pittsburg State program was established in 1994 and now includes all

zero-hour freshmen under age 21. Currently over 1,000 students are enrolled in FE. Content and relationships are the two primary aspects of the Freshman Experience program. The relationship aspect includes such things as acceptable behavior, diversity issues, career planning, and participation in campus events. The Content issues include study skills, an introduction to critical thinking skills, money management, and drug abuse issues. Freshman Experience classes meet twice a week for twelve weeks and students receive a letter grade, primarily for attendance and participation.

Knowing that adding two library sessions would require Freshman Experience faculty to give up some other activity, we decided to take a proactive approach by creating a finished product and marketing it to them. We prepared an oral presentation and a written proposal with all documentation. The proposal contained both a content and relationship component to conform to the goals of the Freshman Experience program. We did not want to just ask for inclusion, we wanted to convince the faculty that our proposal met an important need of all incoming freshman and that the logical place to meet that need was in the Freshman Experience program.

In developing our proposal we identified two goals and developed objectives for each goal. Our first goal was to introduce students to the physical library, especially library services, materials, and their locations. The objectives for this goal included:

- to have the students meet the librarians and library staff.
- to have the students feel comfortable about returning to the Library to seek help.
- to make students aware of the services and service points within Axe Library.
- to make students aware of the types and location of materials.
- to have the students actively participate in the program.

Our second goal was to introduce students to the Axe Library home page and its importance in finding information. Our objectives for this goal include:

- to have students understand the value of using the Axe Library Homepage.
- to have students understand what is available in each of the four major sections of the Axe Library homepage, *Find Books & More, Find Articles & More, Other Resources,* and *Find it Fast.*
- to have students demonstrate an ability to choose appropriate databases to meet specific information needs.
- to have students understand how to access the information available through the Axe Library homepage from off-campus locations.

Having set our goals and objectives, we were ready to design a program to present to the Freshman Experience faculty.

The Program

Using our goals of introducing library services and materials and the Axe Library home page to all freshmen, we developed two one hour instruction sessions.

First Session: Library Services and Materials

The purpose of the onsite session is to introduce students to the six public services areas of the library and to meet the librarians and library staff in each area. In each area, librarians composed a set of suggested questions that best reflected their service area. Each set of questions was printed on a different color of paper. The six service points and the color of paper for the questions are: Special Collections (yellow paper), Periodicals (salmon paper), Interlibrary Loan (pink paper), Reference (orchid paper), Circulation (green paper), and Government Documents (blue paper). In a class of 24 there are four students with the same color of paper and the same set of questions.

Procedures for Session One include:

Welcome and Explanation: (Five Minutes)

A Session Facilitator meets the class in the Browsing Area of Axe Library (close to the front entrance). The facilitator welcomes the class to the library, makes a few general comments about the library, and explains the purpose and procedure of the library FE session. The color-coded interview sheets are distributed and the students are dispersed to the six service areas.

Small Group Sessions: (Ten Minutes)

All students with questions on a yellow sheet of paper go to Special Collections. Those with salmon sheets go to Periodicals and so forth. Each service point has a display board with colorful (and, we hope, helpful) graphics to illustrate the collections, services, or activities of the area. A librarian or library staff member meets the small groups and introduces themselves and their area. They encourage all students to participate by asking the students a few questions. Students will then ask the librarian or library staff member the questions they have on their sheets of paper. Questions other then the ones suggested are also welcomed. Space is available on the question sheet for the students to write answers and notes. After the interview, the small groups return to the Browsing area. As they return they will confer among themselves about their interview and decide how they will present the information to the entire class.

Group Tour: (30 minutes)

The Session Facilitator reconvenes the class and all proceed to the Special Collections area. If possible, the Session Facilitator will introduce the librarian and library staff in the area. Using the results of the interviews, the students who attended the Special Collections small group session will give their classmates a summary of the services and materials available in the area. Students who listen to the presentation are encouraged to ask questions and the Session Facilitator can add short additional comments. The class then moves on to the next service point where the procedure is repeated.

Closing the Session and the One-Minute Evaluation: (Five Minutes)

At the last service point on the tour and after the last student presentation, the Session Facilitator will close the session, thanking the class for its participation and encouraging their return to the library. One-minute evaluation sheets are then distributed. The intent of the evaluation sheet is not so much to measure what the students learned, but to solicit their reaction to the student led tour and gain their insight on what was valuable to them. Their comments provide us with ideas on improving the sessions. Sometimes we can make immediate adjustments to our presentations or, if not, incorporate the suggested improvements in next year's presentation. The questions on the One-Minute Evaluation are: *What is the most important point you learned during your class tour? What important question about the Library remains unanswered for you? What did you learn about the Library that was the most surprising to you?*

As the students leave, we give them a token such as a pencil with the library's name and web link or some coupons for free printing.

Second Session: Using the Axe Library Home Page: An Introduction to Online Resources

The online resources instruction session is designed to introduce students to the library's homepage, especially finding an appropriate database for their research needs and using the library catalog. An emphasis is placed on the student practicing how to find information on a diverse set of needs.

The online instruction session procedures are as follows:

Welcome and Explanation: (Five Minutes)

A Session Facilitator meets the class in the Browsing Area of Axe Library (close to the front entrance). The facilitator welcomes the Class to the library and explains the purpose and procedure of the Library instruction session. The class is then moved to the electronic classroom.

Overview of the Axe Library homepage: (15 minutes)

The Session Facilitator gives an overview of the Axe Library homepage with an emphasis on the four main sections of the homepage, *Find Books and More, Find Articles and More, Other Resources,* and *Find it Fast.*

The purpose of *Find Books & More* is to lead students to the library catalog. We briefly demonstrate subject keyword searching, finding the location of books, and finding faculty reserve material.

Next, we introduce the section of the homepage labeled *Find Articles & More.* Our databases are organized by title and by subject. We have 3 broad subject categories: *Starting Point, Subject Specific,* and *Multipurpose.* We stress the general purpose *Starting Point* databases because they have a lot of full text and include both journals and newspapers. The *Subject Specific* databases have categories for curriculum areas such as art and music, education, science, technology, etc. Here students can locate to databases in their field of study. In the

Multipurpose category section are databases covering topics such as biography, career, book review, law, etc.

Under *Other Resources* section, students are introduced to "Serials Solutions."

We use the *Find it Fast* section of our homepage to reinforce the importance of our Special Collections and Government Documents collections.

Practice Using the Home Page: (25 minutes)

A practice sheet with ten questions is handed out to the students. Each student has their own workstation and uses the library home page to find the answers to the questions. Sometimes we will work through a couple of questions as a group so that everyone gets a good start and sees the purpose of the activity. Our purpose is not to go into the databases to find answers to specific questions, but to select a database that should answer the question. An example question: *What databases could you use to find biographical information on Giovanni Abatessa, an Italian guitarist and composer?*

During the practice session, the instruction is one on one. Our classroom is set up so that the Session Facilitator can easily see all the students' monitors and can move freely among the students. If anyone seems to be struggling, we stop and help them. As with the first session, we want the students to experience a sense of accomplishment and leave the library feeling that they learned something useful.

*Wrap Up (*5 minutes)

At this time, the Facilitator can make comments on the practice sheet to verify answers or answer any questions. As the session ends, we encourage the students to keep the practice sheets. We usually offer a couple of free print coupons as they leave.

The Results

Creating sessions specifically for freshman orientation has had a dramatic impact on our library instruction program. Eighty freshman instruction sessions, with approximately 2400 students participating, are given each fall semester. In addition, faculty and administrators have requested that the program be extended to incoming second semester freshman and transfer students. The sessions give us a chance to interact with faculty which has increased our non freshman library instruction sessions. Faculty see the benefit of having a library session and want to have instruction for their other classes as well. We now have 252 library sessions per year involving over 5,000 students. At the present time, we are using this model to explore the possibility of giving disciplined specific instruction to incoming freshman in the School of Technology. Finally, our freshman orientation program has helped us create an overall sequential structure to our library instruction program which includes freshmen to graduate students.

Conclusion

Although we consider the numbers generated by the freshman orientation to be impressive, the intangible results of the program are just as important. Having all the public services librarians involved in the development and teaching of the program has sparked a sense of team work among the librarians. Likewise, the new program has rekindled the spark that librarians and libraries are important. We have seen how initial contact with new students, using an informal setting and letting the students provide leadership, can give the students a sense that this is their library—there for them to use and enjoy. As librarians, we feel the major benefit of the program is that we get to meet the new students and they get to meet us. Not only is the face to face meeting beneficial to the librarians and students, but the interaction is fun.

Bookmarklets and Your Library:
How to Search Your Catalog from Any Web Page

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Abstract

In the never ending quest to make access of library resources more streamlined, ubiquitous and easy for users, a new tool has emerged. Bookmarklets are becoming popular as a way to include extra capabilities in web browsers. With that in mind, UNCG (University of North Carolina at Greensboro) has created a set of bookmarklets designed to allow students to access library resources without first having to negotiate and navigate the library's website. They use javascript to enable users to perform a search of those resources from any web page.

Students can add bookmarks to their browsers which allow them to run a search through the library catalog from any web page they are currently on, by either selecting text or entering search phrases into a pop-up box. Students can also find out if UNCG has access to a journal by using a bookmarklet designed to search the Journal Finder database, which holds information about UNCG's journal holdings. Bookmarklets have also been created to run searches on databases for which UNCG has paid access.

What are Bookmarklets?

Bookmarklets or favelets are web browser shortcuts that contain brief javascripts. A little known capability of web browsers is the ability to run javascript that has been typed into the address bar. For instance, typing the words "javascript:alert('hello world')" in the address bar and hitting enter will give you a popup box with the famous 'hello world' salutation.

Bookmarklets are simply snippets of javascript that are crammed into one line, in order to go into the address bar. A web browser can save these scripts as if they were links to a web page. Clicking on the bookmarklet makes the script run, and they can be saved and organized just as if they were other bookmarks or favorites.

This capability means that javascript can be used to do a number of things within a browser. Bookmarklets can link to websites and allow you to easily highlight words on a web page and search for those words on a different web page or web form. Javascript can be used to manipulate html, rewriting web pages. It can be used to highlight the structure of a page, resize the images in a page, change the background colors, remove or replace images, find text, and a great deal more.

There is a limit in some browsers to how many characters can be placed in the address bar, which ostensibly restricts what can be done with a bookmarklet. The workaround for this limitation is that the bookmarklet script can be used to call other javascripts stored on a server,

thus greatly increasing the amount of functionality that can be called upon with one click of a button within the browser.

One of the earliest and most popular uses of bookmarklets was Jon Udell's Library Lookup bookmarklets. (Udell) This set of bookmarklets were made for a number of different library catalog products, enabling someone to perform an ISBN search in a library's catalog. The bookmarklet works by parsing the URL of a web page at a site like Amazon or Barnes and Noble to find an ISBN number, and then running a search of the user's catalog using that number. It is easy to add functionality for other libraries, because once the syntax of the specific library catalog software is worked out, the URL of a particular catalog is simply plugged into the bookmarklet's script. The Library Lookup Project can be found at http://weblog.infoworld.com/udell/LibraryLookup/.

Now, bookmarklets have been created for a great many uses. There are library bookmarklets that allow searching of catalogs, there are web developer bookmarklets that allow one to manipulate the web page currently loaded in the browser, and there are a great many more general bookmarklets that make many of the annoyances of web browsing a little bit easier to manage.

UNCG Bookmarklets

At the University of North Carolina at Greensboro (UNCG), bookmarklets have been developed to allow keyword searching of EBSCO, Proquest, and Wilson databases, and others. Google and Google Scholar bookmarklets are also available and a dictionary and thesaurus bookmarklet enable definition and synonym searching.

Proxy authentication is included in the code of the bookmarklet, so that students or faculty using the bookmarklets from off-campus are able to authenticate and gain access to the University's paid resources. When the bookmarklet is clicked, the user is sent to the proxy server to authenticate. The proxy server software determines if the user has already authenticated or if they are an on-campus user, and after authentication, transfers them to the resource.

UNCG bookmarklets have been modified so that a user simply needs to highlight text on a web page and click on the appropriate bookmarklet. A keyword search will then be performed on those word(s) in the desired database. Other types of searches, such as author or subject searches, are possible to construct depending on which database is selected. Keyword searching was selected because it would be useful in more situations. If no words are selected before clicking the bookmarklet, the script pops up an alert box which asks what terms should be searched for.

UNCG has also developed a bookmarklet that works with Google Scholar to create an OpenURL link to JournalFinder, UNCG's locally developed link resolver software. This bookmarklet was adapted from a Google Scholar bookmarklet developed by Peter Binkley, which is available at http://www.ualberta.ca/~pbinkley/gso/. (Binkley) When a student performs a search in Google Scholar, the student then clicks on the bookmarklet, which places a library logo image with link under each journal article in the results. The student can then click on the logo and be taken to

the link resolver software and local knowledge base, which will point them to an appropriate database with full text.

Another bookmarklet that is still in development will create a persistent link to an article in some of the larger and more often used database products. The bookmarklet calls a script that checks which database the browser is using. Different databases place the persistent or durable link for an article in different places on the page. Proquest lists it with the bibliographic information above the article, while Gale has an Infomark at the top of article pages that contain the persistent URL as a link. The bookmarklet scans the code of the page to find the appropriate URL, prepends the appropriate address for the Library's authentication server and displays the resulting URL in a popup box to the user. The user can then cut and paste this link to an appropriate place for saving. This could prove invaluable for e-reserves projects or for faculty who want to create persistent links usable both on- and off-campus within their syllabi or within course management software such as Blackboard.

Varieties of Bookmarklets

These are just a few examples of the wide varieties of bookmarklets that are available on the web:

- Search bookmarklets allow the search of a database. Nearly any database that accepts a URL string as input can be searched in this manner.
- Image bookmarklets, allow you to manipulate images on the web page, changing their size, removing images, showing image paths, alternate text, etc.
- Link bookmarklets allow you to hide links, open all links on a page, rewrite or redirect links, etc.
- Form bookmarklets allow you to toggle checkboxes, change from POST to GET, show hidden fields, etc.

Advantages of Bookmarklets

- Bookmarklets can be written to be browser independent. A simple browser test can be written into the javascript that will allow the bookmarklet to use different scripting depending upon the browser in use.

- Bookmarklets are not complicated. The would-be writer of a bookmarklet needs to know javascript, or even just how to modify javascript. There are already a number of bookmarklets available on the web that can be modified for library uses.

- Bookmarklets are adaptable to a large variety of purposes. Because of the power of javascript, bookmarklets can be written to allow you to do an incredible variety of transformations of a web page.

- Bookmarklets stay with the browser, allowing the patron to easily access library resources even when the patron is not at the library's website. A catalog search can be performed from any web page. As an extension of the Google Scholar – Link Resolver

bookmarklet, a bookmarklet could be created to insert links to the library catalog into the text of web pages at Amazon, Barnes and Noble and other popular book-buying sites.

- Bookmarklets are easy to install. No programming is needed to add a bookmarklet to a browser. A user can simply right click and choose to Add a Favorite, or Bookmark this Page from the context menu, or drag and drop the bookmarklet to their bookmarks toolbar.

Disadvantages of Bookmarklets

While it is possible to make bookmarklets cross-browser compatible, most are not. UNCG's bookmarklets work in Internet Explorer and Netscape Navigator, but have not been tested in Opera or in Mac browsers such as Safari or the Macintosh version of Internet Explorer.

There is a limit to the number of characters that can be entered in an address bar. Thus for longer scripts, there is a need for web space to store a larger script on. Also, at the point where you are calling a script from a web page, the issue of security comes in. If you do not know javascript, you might have difficulty in telling what script is being called for from what server.

Another limitation of bookmarklets is the need to know at least some javascript if bookmarklets that do not currently exist are to be developed. There is also the need to maintain bookmarklets once they are distributed, as database formats frequently change and render a current bookmarklet unusable.

Conclusion

UNCG has made available a number of bookmarklets to enable patrons to more easily gain access to library holdings. Bookmarklets are an effective way to increase usability for library patrons by reducing the number of 'clicks' a patron must use to find books, articles, or other resources. The capability to run javascript enhances browser usage and enables librarians to steer patrons to library resources, solving the 'appropriate copy' problem that arises with services like Google Scholar.

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Information Literacy and Reference Skills Assessments: Evaluation and Application of SAILS and WOREP

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Abstract

Are we making a difference in the classroom and at the reference desk? Tomorrow, what will need to change? The Reference and Instruction Group at Mabee Library, Washburn University, assesses student information literacy skills as part of strategic planning initiatives. This includes providing user-centered support for teaching and learning and assessing the effectiveness and impact of information services and resources. Mabee Library fosters a culture of assessment, focusing on student learning outcomes related to instruction classes, reference service, and other public services components. Although Reference/Instruction Librarians at WU wear many professional hats, all have been involved in the cycles of planning, implementation, evaluation and analysis of information literacy skills assessment surveys. An increasing need for benchmarking standards and tools has arisen as ACRL, AASL, and ARL prioritize information literacy assessment for various reasons: to ascertain users' needs, to ensure those needs are being met, and to validate library services and programming for budgetary decision making.

Mabee Library's Assessment program includes LibQUAL+™, Focus Groups, WOREP (the Wisconsin-Ohio Reference Evaluation Program located at http://worep.library.kent.edu/) and SAILS (the Standardized Assessment of Information Literacy Skills located at http://sails.lms.kent.edu/index.php) to better understand our patrons and ourselves. SAILS and WOREP are shared with an emphasis on how both tools were implemented separately and together to shape service and pedagogy. Judy Druse, Martha Imparato, Dean Corwin and Heather Smith-Collins were co-authors of this research.

The SAILS assessment is a performance-based instrument developed in collaboration with ARL, Kent State University and the Institute of Museum and Library Services. It measures college students' information literacy competencies based on the ARL standards for Higher Education approved in 2001. This tool documents skill levels of incoming and exiting students, establishing valuable internal and peer benchmarks. Pinpointed areas of improvement substantiate pedagogical and programming change.

Mabee Library describes two years experience and data gleaned from SAILS. Insight on not only the test and skill sets involved, but the analysis of the data and practical application of results to goals are explored. Future implications for Mabee Library from the analysis of the data are described.

Another tool used to measure information literacy outcomes is WOREP, which provides "numeric snapshots" of reference transactions for reflection, discussion and adaptation of services. These results have been combined with over 230 other academic libraries nationally for benchmarking. This service evaluation tool assesses the outcome of reference transactions; their success and the patrons' satisfaction. It contrasts the patron's and librarian's responses to the same transactions. As such, it gives librarians a context for understanding the interpersonal communication between librarian and patron and attempts to answer the question, "Are we seeing eye to eye?" In collaborating with Penn State University, Mabee Library has emulated Eric Novotny's WOREP Training Program, which relies on the process of analysis, reflection, and interpretation of the data to forge new perspectives on reference transactions and best practices.

Both SAILS and WOREP provide a multi-faceted context for understanding patrons and services at Mabee Library. Important questions necessary for understanding and serving student's needs are asked in WOREP and SAILS. Together or separately, these tools give insight into students' needs. Clear goals emerged for classroom instruction, reference transactions and overall approaches for future directions after collaborative reflection on the data. Results analysis and interpretation of SAILS and WOREP data is presented as a reproducible and applicable process for similar academic libraries embarking in either or both tools.

Evaluating Trends in Reference Questions

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Abstract

As educational institutions increasingly offer online and Web-augmented courses, librarians scramble to serve remote users. Librarians increasingly receive questions via e-mail, the Web, courseware, and telephone. Presenters describe the impact of these trends on reference service and analyze the nature and content of the reference queries they receive.

The presenters will share the changes in the delivery and style of reference that have occurred in their setting over the past five years. They will also ask attendees to share their own reference experiences during the same time-frame. Venues in which the presenters currently deliver service and changes they envision as looming on the horizon will be shared. Additionally, they will discuss an analysis of the content of reference questions at Owens Library, the service and marketing implications of that analysis, the value of recording the content and service format of reference transactions on an ongoing basis, a program prototype that facilitates the reference question recording process, and service and instructional improvements generated by the analysis of the gathered data.

I'm NOT Ready for Retirement Yet: Effects and Accommodations for Disabilities that Can Be Made in the Work Place

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Abstract

A literature search shows that most people with disabilities fall in the 40-60 year old age range. Library statistics show that many people that began their careers in the booming 1960s and 70s are now in that age range. Twenty-four percent of libraries report that they currently employ persons with disabilities. They are too young to retire, but have developed disabilities that keep them from doing normal day-to-day activities. These employees have a long range of experience and are, therefore, still valuable to their organization. Accommodations should be made for them. Of the libraries reporting, 62% have made accommodations for their employees.

The American Disabilities Act, the Family and Medical Leave Act, and a growing ergonomic industry have impacted the workplace. In our own situation at Owens Library, we have adapted by purchasing voice activated software, a foot mouse, foot rests, Stretch Break software, specialized computer tables, keyboards and chairs. We have one person with chronic health problems who has used benefits under the Family and Medical Leave Act. These and many other possibilities exist for organizations looking for ways to accommodate their employees.

Introduction

"In 1998, 57% of professional librarians were age 45 or older. Based on U.S. Census data, more than one quarter of all librarians with a master's degree will reach the age of 65 by 2009" (Berry 7). We are indeed an aging profession. As we age, many will have either a temporary disability or a permanent disability that limits our ability to do our jobs in the previous way. Whether we have a broken arm that leaves us typing one-handed for a while or whether we have more serious problems that permanently change our way of working, accommodations can be made for us to continue our jobs. We will look at how to find suggestions for accommodating persons with many types of disabilities. We will also talk about how ergonomics can prevent injuries and how persons employed in libraries may be accommodated using these strategies.

Literature Search

In searching the library literature, it was easy to find recommendations for how a library should accommodate patrons. Very little has been written about the benefit of accommodations on library employees. In a survey done by the UUP, a bargaining agent for the State University of New York, it was found "… that almost two-thirds of respondents with disabilities are between

the ages of 40 and 60." "More than a third of the respondents became disabled after they were employed by SUNY. 'We will have more to say in the final report regarding this group, who often have difficulty adjusting, obtaining accommodations and whose early retirement might deprive SUNY of talented and experienced employees, …" (Disability survey 1).

A study done by Florida Atlantic University worked to find what level of accommodation was available to disabled persons employed in libraries belonging to the Southeastern Library Network (SOLINET). Results were:

> Twenty-four percent of the libraries responding indicated that they currently employed individuals with disabilities. The numbers of employed individuals ranged from one to seven with identified disabilities such as deafness, blindness, wheelchair use, carpal tunnel syndrome and obesity. Sixty-two percent of the libraries hiring individuals with disabilities reported making some type of accommodation for these employees including building modifications, special furniture and equipment, adjustments to work schedules and work requirement, counseling, and use of a sick leave bank. (Wiler and Lomax)

What the Law Says

Two major pieces of legislation have come from the federal government on how to make accommodations for disabled persons. The Americans with Disabilities Act of 1990 and The Family and Medical Leave Act of 1993 have made it possible for persons with disabilities, persons with a family member who has a health problem or persons having chronic health conditions to remain employed:

> Title I of the Americans with Disabilities Act of 1990 prohibits private employers, state and local governments, employment agencies and labor unions from discriminating against qualified individuals with disabilities in job application procedure, hiring, firing, advancement, compensation, job training, and other terms, conditions, and privileges of employment. The ADA covers employers with 15 or more employees, including state and local governments. (Disability Discrimination)

Disabilities can be either physical or mental impairments. The Act mandates that qualifying employers make reasonable accommodations. Reasonable accommodations are those that are not "…an action requiring significant difficulty or expense when considered in light of factors such as an employer's size, financial resources, and the nature and structure of its operation." (Disability Discrimination)

The Family and Medical Leave Act allows eligible employees to take up to 12 weeks per year off without pay for medical emergencies or chronic conditions for themselves or their direct

family without loss of job or health insurance. Like the ADA, it has some restrictions regarding where employed and under what conditions an employee qualifies.

Many books and websites are available to help employers and employees make decisions about reasonable accommodations. Several sources are included in this paper's Works Cited. One that is worthy of note is the Job Accommodation Network. It offers suggestions for many common disabilities in an A-Z list. For example, a person with arthritis might have these accommodations made:

- Allow use of a personal attendant at work
- Allow use of a service animal at work
- Make sure the facility is accessible
- Move workstation closer to the restroom
- Allow longer breaks
- Refer to appropriate community services
- Allow access to a refrigerator

This is only a short list of possible accommodations listed in the Accommodations and Compliance Series found in the Job Accommodation Network web site.

Repetitive stress injuries are the most common disabilities found in library employees. What can managers do to make employees once again productive and not be forced out of the profession?

Ergonomic Factors

Ergonomics is the science of workplace design and its effect on man. Because of technology, ergonomics has become an issue as well as a science. In today's world of advancements, technology does so much for us. Unfortunately, ergonomics does so much to us. Staff members suffer from repetitive stress injuries everyday. In most libraries today, you will find at least 25% of the workers suffering from some kind of repetitive stress injury (Environmentally Correct). Fortunately, there are ways to avoid this. Unfortunately, it's a costly and time-consuming undertaking. There are discussions these days, among managers, about whether it is worth the cost to buy ergonomic devices to help injured or potentially injured workers. The old adage, "a penny saved is a penny earned," doesn't really fit anymore. Money that's spent for ergonomic devices to help employees avoid being injured can save businesses thousands of dollars in absenteeism, insurance payments, and workmen's compensation payments. One would believe that businesses would be willing to spend the money to avoid such injuries when there are a multitude of devices and procedures that can alleviate some of the injuries that are occurring every day in the workplace.

It is unfortunate that businesses view these issues as too costly considering that the number of injured workers is rising every day. In fact, statistics show that more women than men are injured in the workplace. Also, more women are entering the workplace everyday and many of them are between the ages of 40 and 60 (Leavitt). Everyday, it is becoming more and more apparent that people are injured beyond the ability to recover and come back to work. Some of the injuries cause such disabilities that workers are forced to find other sources of employment or

worse yet, or become unable to find employment at all, because of preexisting conditions. The numbers are probably higher than reported, but employees, concerned with their employment, many times do not report the injuries until it is too late and the injuries are irreparable.

One of the most common injuries is carpal tunnel syndrome. In addition to carpal tunnel, you'll also find eyestrain, tennis elbow, golfer's elbow, not to mention shoulder, back and neck injuries. At-risk computer users and proactive administrators can learn specific techniques for adapting workspaces and work habits to ergonomically sound environments and experience. The expanding problems and cost issues associated with workspace ergonomics, include injuries, absenteeism, personnel training and retraining, as well as workers' compensation.

There is some good news concerning ergonomics. Strategies to help prevent repetitive motion injuries are being discovered everyday. Solutions to these problems include proper desk setup and workstation placement, selection of proper chairs and lighting, good posture, and utilizing break-time away from the computer. New devices are being developed, injuries are being studied and businesses are looking at their staff as a resource. Because employees are believed to be their most important resource in a business, it is important to management to keep them healthy. One way to do that is to offer measures that help employees avoid repetitive stress injuries before they happen. A focus on Ergonomics must be considered in all work environments to provide a safe workplace and prevent economical loss to the organization.

Causes and Symptoms

Nearly everyone in the library is at risk for repetitive stress injuries. Most of the literature found that addresses ergonomic issues is focused on the patron and not the staff. Not to dismiss the patron as an important part of the library, it is still important to first focus on the major library user, its staff. Catalogers who spend hours a day at their computer, reference librarians developing web pages, computer staff setting up equipment, all are at risk. Some of the symptoms staff will show are tingling fingers, numb and cold extremities, headaches from eyestrain, or back pain from sitting in their chair too long. If these symptoms are not addressed, permanent damage can be sustained. Because of the symptoms, we will see absenteeism, personnel attrition, as well as Workers Compensation claims. According to the Department of Labor "nearly two-thirds of all occupational illnesses reported, were caused by exposure to repeated trauma to worker's upper body (the wrist, elbow or shoulder). One common example of such an injury is carpal tunnel syndrome." Also noted in this report, over 260,000 carpal tunnel releases are being done every year (Balance Systems).

The cost to society is phenomenal, when you take into account the medical payments, the days off work, settlements and insurance issues that come from such injuries. Employers and employees alike can offer solutions, some more expensive than others, but in the long run, more cost effective than the present day cost.

The Owens Library Ergonomic History

At Owens library, many employees have been affected by repetitive motion injuries. Among the staff, surgeries have been performed for carpal tunnel syndrome, neck and back injuries,

shoulder injuries; even eye problems have been addressed. Many times, we would like to attribute these injuries, aches and pains to age, but that's not always the case. In the case of Owens library's employees, spending too many hours developing web pages, inputting data, cataloging, even opening boxes, could be blamed for some of the injuries. Fortunately, our administrators have been very proactive in addressing ergonomic issues.

We began initially thinking about our workstations needs. The library director allowed the staff to look at new furniture, which included computer work stations, chairs, and foot rests. The staff was able to purchase office equipment that would work best for the individuals using it. We purchased some workstations that included storage, if the individual needed that, or larger tables for staff members who did not also have desks in their offices. For employees who suffered from back pain, chairs were brought in, tried out, and then ordered to fit the individual. This helped to address the many different sizes and abilities of the staff. Also, various software packages were purchased, including Stretch Break, an exercise program, and Dragon NaturallySpeaking, a voice activated dictation program.

Stretch Break operates while in Windows and automatically reminds the user to take periodic breaks. During the breaks, the software shows animated figures illustrating exercises that help prevent repetitive stress injuries.

Dragon NaturallySpeaking is a voice-activated software product that can be used to counteract repetitive motion by replacing keyboard and mouse activities with voice commands. Several employees at Owens Library use these products daily. The staff carefully reviewed and evaluated as many voice-activated software packages as possible, before deciding to use Dragon NaturallySpeaking. There are both advantages and disadvantages to the software, but when looking at the overall help that it offers to the users, this is probably one of the best enhancements that have been made for the staff. The cost of the program, when purchased as a site license, is much less expensive. The newest version, Dragon NaturallySpeaking 8.0, begins at approximately $300. With the site license, a company or library could purchase it for less. Though there is some training time involved in learning to use this software package, in the long run for the users at Owens library, we have found that it is a very cost-effective improvement for the staff. In addition to equipment and software, Owens library has hired student workers to keyboard for employees who are no longer able to spend hours at the keyboard.

The present library director has allowed staff members to purchase special mice, keyboards, and even mice that are run by the feet. The foot mouse, which is run by both feet, one to click and one to move the mouse, is still being used under trial. It was noticeably easier for younger staff members to operate it. The difference in their dexterity is obvious when using something like this the mouse. Just moving a regular mouse from one hand to the other can be quite an adjustment. The phrase "eye-hand coordination" really comes into play when using this sort of software.

Ergonomics Solutions

There are a multitude of low-cost solutions. If your arms hurt, look for the gel-filled arm covers to fit your chair. The cost of these arm covers is approximately $25 and can help arm pain

immensely. If you sit at your desk for long periods of time, bring a towel from home, fold it and use it as an armrest. Many little gadget shops have lumbar supports for your back, some with heat or vibration, some without that are not expensive. Many can be moved from your desk chair to your car. Small pillows are also an answer for both back pain and arm pain.

Turning your head away from your computer to rest your eyes is a simple but effective way to stay away from eyestrain. For people who wear bifocals or trifocals, a pair of computer glasses can be an enormous help while working. This allows the eye to be able to focus and use the entire lens to view the monitor and alleviates tipping your head back, causing neck and shoulder pain.

Some of us may not want to hear this, but one of the best things in the world for us is exercise. Few of us like it when the first thing our doctor tells us is, "you need more exercise. You need to move around." I know that, just as you do. Unfortunately, it is true. We sit too long at our computers, hurting our back, our eyes, even our feet. Small walks around your building or across the lobby of your library can give you a chance to stretch your legs, keep the blood flowing to your feet and stretch your muscles. As we age, tendons and muscles in our body take longer to respond. This makes strain harder to recover from and makes us more susceptible to injury (Roth). A good way to alleviate the strain on our muscles is to drink water. Water exercise is also helpful to allow joints to move freely and recover from so much sitting or standing with out the strain of regular exercise.

Simple soft gel balls are a good way to exercise your hands while sitting at your desk. If you want a bit better work out, buy some of the very inexpensive stretch bands that physical therapist might offer. These can be bought at May Department Stores for only one dollar. Though it's not easy to exercise in one's office, it easy to shut the door take a moment of silence and just stretch.

Then there's the common library ailment, "the turkey position" (deLong). Suzanne deLong, in an article entitled, "don't stick your neck out, librarian," describes this position as the forward head position, that librarians and staff use on a regular basis when doing any kind of reference interview or helping with the students. Not only does she suggest that we look a little strange but that it's really doing damage to the vertebrae in our neck and could possibly even stick in that position. Her suggestion is to not stay in that position very long, but to pull your shoulders back and to move your head about so as to stretch the tendons all directions. This does not mean you need to do the Hokey Pokey in the middle of the library lobby (deLong).

Don't fall for the misconception that all mice are the same. They are not. After the use of several different types of mice by staff in Owens Library, it was found that the rollerball mouse was not as ergonomically well designed as originally thought. One of our staff members used the rollerball mouse, because she was told that it would help reduce clicking. It did, to the forefinger and middle finger, but it totally destroyed the thumb joint of her right hand. After going through a thumb joint replacement, the same staff member has learned to use a regular mouse moved to the left side of the keyboard. She used to keyboard with a center fingertip mouse, because she found that her "eye-hand coordination" didn't work as well as she had hoped. Many times, it's best to purchase one’s own particular ergonomic devices. What works well for

one person, may not work well for another. By buying one and trying out in different offices, you can find the best resources for everyone.

Final Observations

Beyond the purchase of resources, such as Dragon NaturallySpeaking and Stretch Break, mice, ergonomic keyboards, furniture and chairs, there are other specific solutions that can be used to benefit individuals who are at risk for RMI. As users, we must take care of ourselves and not wait until we are suffering to ask for help. Ergonomic education should be a part of every new employee training session, as well as refresher courses for all employees. This would be one way to eliminate some injuries. Library professionals are too valuable to lose due to overworked bodies, injuries, and disabilities. It is recommended that managers accommodate their staff with forethought and cost effective equipment.

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From Access Science to xreferplus:
Making the Transition from a Print to an Online Reference Collection

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Abstract

A literature review in the area of collection management identifies a great many articles about “electronic journals” (1145 in Library and Information Science Abstracts (LISA) and 324 in H. W. Wilson’s Select Plus) and “electronic books” (327 in LISA and 397 in Select Plus). When the term "reference" is added to the "electronic books" search, however, the results plummet (36 in LISA, 7 in Select Plus, most announcements of new products).

When the librarians of Folsom Library at Rensselaer Polytechnic Institute accepted the challenge of downsizing the print reference collection to about 25% of its spring semester 2005 size, there was little in the way of philosophical or practical guidance. A renovation of the main service floor of the library had been planned for several years, and it was anticipated that in order to accommodate the proposed changes, the reference collection would have to be (a) downsized or (b) moved to another floor. Because there was no room on another floor, so when the renovation project was approved and funded, a "leaner, meaner" reference collection became our goal.

Using several data sources that included re-shelving data for the print titles, usage statistics for the online titles and for reference pages on the library web site, as well as individual librarian experiences, a plan was formulated. The project involved, in addition to the reference staff, the public services and the technical services staff, as well as student assistants and a library school intern.

Rensselaer Libraries made a commitment to digital formats eight years ago, and had already replaced many print journal titles with electronic versions and opted for electronic books in several areas (e.g., information technology, humanities, and social sciences) instead of print. With the availability of an increasing number of electronic reference sources, a transition to electronic seemed the next logical step for our situation.

As we evaluate the success of this project, we will focus on two questions:

- Did we correctly identify the print titles to remain in the active reference collection?
- Have we subscribed to useful and usable electronic alternatives for other reference titles?

Instruction by Immersion:
Using a Quest Game Model to Teach Library Skills

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Abstract

Games absorb students in immersive, interactive experiences. Ask them and they can expound at great length about the intricacies of their favorite titles. Walk by public computers in your library and you will see them checking email and chatting, reading news, looking up information (sometimes badly), and playing online games. Students are engaging in the activities that The Digital Future Report found to be the most prevalent uses of the Internet. Many students also spend a significant amount of time on game systems such as PlayStation. With these facts in hand, we can identify a potentially explosive market for engaging students in learning concepts that sometimes leave them bored and uninterested.

Our Library Instruction Program teaches both basic and class-specific, advanced sessions. While basic instruction is often helpful, students who come to classes with a background in basic information literacy can benefit best from personal interaction with an information professional. We reasoned that if we could find ways to deliver effective, measurable online instruction for basic concepts, we could alleviate some of the instruction burden and develop more content for advanced learning.

Toward this end, we have written tutorials and point-of-need instruction on the library website. We have developed real-time online deployment of class-specific handouts to supplement assignments. To counteract the scourge of well-intentioned scavenger hunt assignments, we have created a web-based system that guides professors through a series of choices and generates a generic library assignment based on the options they choose. All these measures have helped move basic library instruction toward an online presence. We wanted to go to the next level and integrate our online tour of the library, the information from our FAQ's, and the information and interactivity from our tutorials.

Our solution was to build a first-person game. While the ultimate format would have been a realistic, 3-D rendering of an alternate library universe with unrestricted navigation, professional voice acting and movie-quality cut scenes, we had to recognize the limitations of our time and programming expertise. We opted for an adventure-game format using photo scenes with clickable areas and objects for navigation, a database to generate conversations, and a system to track users and points. We used a combination of Flash, ColdFusion and DHTML to build the game. We describe our fledgling effort as "so beta that it's gamma!" but we think we're onto something big.

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Seeing the Invisible User: Support for the Virtual Patron

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Abstract

Email reference loses all of the humanity that makes an interview work. It's not possible to really teach anyone anything in a chat reference session. Online patrons are often lazy, rude, or not part of our primary patron population. These responses to the move towards online reference service are both common and understandable. Nothing replaces the ability to see, hear, and even feel the tension ease out of a patron during the course of a really good reference interview. A hand on the shoulder and a warm smile comfort the patron and provide deep personal satisfaction to the reference staffer who offers them. So how do we give that same support and develop that same satisfaction in an entirely online encounter? How do we enhance training, alter standards, and revise evaluation to include this chat/email/online aspect of our most personal service? By building on what we already know about our patrons and by keeping our professional goals in clear view, we can make this a smooth and effective enhancement of our long-valued services. In this session we'll use the standard stages of the reference interview, from opening to closure, as our basic structure. We'll identify and discuss examples of five common problems in online communication. Each of those problems will be matched with an array of solutions which can be used in different situations and contexts. Finally, we'll consider how to incorporate knowledge of these problems and solutions into staff training, performance standards, and evaluation.

The Evolving Nature of E-Journal Usage Data: An Institutional Comparison

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Abstract

E-journal usage data is an exciting and relatively new development for librarians. However, there are many issues to consider prior to utilizing these for collection development application and consideration. One of the primary issues is data standardization across vendors. Is the data reliable and valid? Is it compliant with the COUNTER (Counting Online Usage of Networked Electronic Resources) initiative standards? When data varies by source, is it possible to combine the aggregate into an accurate reflection of patron usage?

At Southwest Missouri State University Libraries, a local data collection system has been in place for four years. This system has provided a good snapshot of both database and single title usage. However, the implementation of the TDNet Journal Manager as the primary e-journal title finder has necessitated alternative methods of evaluation. TDNet has its own usage statistics system, which offers more extensive options including by vendor and by publisher collection usage, and also COUNTER compliant statistics. Additionally, we have been examining other proprietary package usage data such as Science Direct, Emerald, and Wiley InterScience.

At the University of Missouri-Kansas City, the main focus of usage data has been at the database level but there is a growing need to track specific e-journal titles. With the variation in usage data reporting among vendors, how does one decide what to collect and how to put it all together? Serials Solutions provides click-thru data for both collections and specific e-journals but how reliable is that data? Does it provide an accurate snapshot of the e-journal usage in the large e-journal portals such as Wiley InterScience and SpringerLINK? Can e-journal access tools such as Serials Solutions provide a centralized resource for e-journal usage data? Will the ERM products looming over the horizon provide a means to facilitate usage data gathering from the vendors themselves?

Variation has been the norm for usage data reporting, but the COUNTER standard promises to be a key to creating basic benchmarks that libraries can use across databases and e-journal collections. It is the presenters' hope that this standard can be utilized by library software vendors to facilitate the collection, aggregation and internal reporting of e-journal usage data.

RefXpert: A Simple Knowledge Management Application for the Reference Desk

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Abstract

RefXpert is a locally developed web application that provides a means of storing and retrieving expert reference tips. It was conceived while observing the cyclical nature of certain reference interactions where 20-30 students from the same class asked similar questions about the same topic over a short period of time. These same questions seemed to surface a year later or a semester later as the professor reissued the assignment to a new class. Often times a subject specialist in the library would send out a heads-up email to provide some guidance for answering these questions. These emails were only useful if staff remembered to print them out and take them to the desk during their shift. The repetitive emailing of the same tips year after year and the lack of timely availability of those tips at the point of need became the impetus for the local development of a specialized knowledge management application that would provide a web-based interface for storing, discovering, and retrieving these expert tips. The end result was RefXpert.

The home page for RefXpert displays an "Alerts" section, as well as a "Recent Additions" section. The "Alerts" section contains items that are currently relevant and the "Recent Additions" section contains the 5 most recently added entries. Users have the option of adding or editing entries as well as browsing by submitter, short-title, or date. The individual alerts expire based on a time period set by the submitter, but can be reactivated as needed. A user who is submitting an entry can chose to have an email message containing the text of the new entry sent to the reference staff automatically to notify of the new addition to RefXpert. The application is built using php, mysql, apache, and sendmail and has been in use since 2001.

Introduction

RefXpert is a locally developed web application that provides a means of storing and retrieving expert reference tips. It was conceived while observing the cyclical nature of certain reference interactions where 20-30 students from the same class asked similar questions about the same topic over a short period of time. These questions seemed to surface the following semester or a year later as the professor reissued the assignment to a new class. Oftentimes a subject specialist in the library would send out a heads-up email to provide some guidance for answering these questions. These emails were only useful if staff remembered to print them out and take them to the desk during their shift. The repetitive emailing of the same tips year after year and the lack of timely availability of those tips at the point of need became the impetus for the local development of a specialized knowledge management application that provides a web-based interface for storing, discovering, and retrieving these expert tips. The end result was RefXpert.

Background

During the 1999-2000 school year, the Reference Department handled 25,091 reference questions from students, faculty, staff, and visitors. Many of the questions were related to individual research projects or interests, but a portion of the questions came in the form of specific assignments requiring that each student within a class perform a series of research steps related to his or her topic. In practical terms this meant that, in a given two day period, the reference service points might have seen 25-35 people asking the same or similar questions. In addition, a number of these assignments recurred at regular intervals, sometimes every semester and sometimes every year.

In anticipation of these assignments, a librarian specializing in a particular subject field would send an informative e-mail to everyone who staffs the reference desk letting them know some details of the assignment and pointing out some research steps and resources that would lead to successful completion of the assignment. This was invaluable to those reference desk staff who may not have been experts in a particular subject area or a specific information resource. The success of these e-mail notifications was somewhat limited in that it required individuals to remember to print off and carry that information to the Reference Desk during their shift at the desk. Since many of these types of assignments recurred every semester, there was a need to store these tips and to retrieve them on demand.

An example of these recurring assignments comes from a chemistry class. Organic chemistry students descended on the library for a couple of weeks each year with a slip of paper containing a named chemical reaction. The assignment required the students to track down citations using "Chemical Abstracts" after they had first identified the named reaction using a different source. This assignment was affectionately referred to by the science librarian as the "Beilstein assignment" due to the need to use a German language source written by Friedrich Konrad Beilstein and commonly known to chemistry students by his last name. Students doing this assignment invariably ended up in the science librarian's office due to its complexity. Since the assignment was recurring, the science librarian began to send out a heads up as he became aware that the chemistry students were on their way. The email message included sufficient instructions for helping staff at the reference desk get students started on the assignment. Although this assignment no longer comes to the library since the professor has left the university, it is representative of many other assignments.

Development of RefXpert

RefXpert was developed as part of a summer grant program at the University of Northern Iowa. This program was offered through the provost's office and provided a stipend to each successful grant application to encourage research and/or development activities on special short term projects. This particular grant awarded a 2 week stipend which proved to be enough time to gather requirements and to develop a simple prototype.

The first step for designing the application was to identify the end-users' expectations for the finished product. A standard tool used for this purpose in software engineering is the Software Requirements Specification (SRS). The SRS is a document consisting of sections that record

requirements for the functionality, internal and external interfaces, data, security, privacy, and platform constraints as well as many other project details for the finished product. The SRS ultimately provides a guide to building the application and a means of proving that original requirements were met in the completed project. It also helps to control extra last minute requirements that often hold up or even derail software projects once development is under way.

The requirements that are recorded in the SRS are very specific. Each requirement is written as single task that end users can perform with the finished product. The requirements are developed in consultation with the stakeholders of the project--in this case the reference desk staff who will also be the end users of the product. Following are the core requirements that were identified for RefXpert:

- End users can browse the records alphabetically.
- End users can browse the records by subject.
- End users can browse the records by categorizations.
- End users can search by keyword.
- End users can add new records.
- End users can update old records.
- End users can delete old records with the proper authorization.
- End users can limit browse and search results by subject.
- End users can optionally have the system send out an email notification of new content by tagging the record to be added with a “send email notice” tag.

Once requirements had been established, work on a prototype began with building the database. The database design consisted of a single table made up of the fieldnames and data types listed in Table 1. The *info_id* field is the primary key field for the database and is automatically generated as records are placed into the database. The main information for each record is stored in the *title*, *submitted_by*, *date_added*, and *description* fields. These fields should be self-explanatory. The *alert* and *alert_expires* fields are logic and time dependent variables that make records show up in the alerts section of the interface depending on the values they contain.

Table 1
Infoblurbs, Data Fields and Types

Field	**Type**	**Null**	**Key**	**Default**	**Extra**
info_id	int(8)		PRI	NULL	Auto_increment
title	varchar(50)		MUL		
submitted_by	varchar(50)				
date_added	date			0000-00-00	
description	text	YES		NULL	
alert	int(1)			0	
alert_expires	date	YES		NULL	

At the time RefXpert was developed, the library used a Microsoft IIS web server, so web application development was done utilizing MS SQL server as the database engine and ASP as the web scripting technology. A few years ago the library switched to the Linux operating system

and moved all of its web applications to open source components with MySQL as the database engine, PHP as the web scripting technology, and Apache as the web server. RefXpert was originally developed with the name Ref Portal. At the time of its creation, portal was a fashionable term and was not as clearly understood as it is now in the domain of web applications. As the application was transferred to an open source platform, it was renamed to Refshare, and most recently it was renamed to RefXpert due to the existence of a commercial product with the name Refshare.

RefXpert Interface

From a technical point of view, the interface for RefXpert consists of 11 PHP files, 1 html file and 15 image files. Each PHP file handles a specific action in the interface that is accessed via a link or button on the interface. The html file is the form for adding new records to the database.

From an end users point of view, the interface for RefXpert consists of a home page containing a set of actions for the user to interact with the knowledge base. Users can add new or edit existing entries as well as browse the knowledge base by submitter, short-title, or date. The home page displays an “Alerts” section, as well as a “Recent Additions” section. Items that display in the “Alerts” section are submissions that were deemed highly relevant or timely by the submitter. The individual alerts expire based on a time period set by the submitter, but can be reactivated as needed. The last five non-alert items that were added to the RefXpert display in the “Recent Additions” section. A user who is submitting an entry can chose to have an email message containing the text of the new entry sent to the reference staff automatically to notify them of the new addition.

Figure 1 shows a snapshot of the home page. The content is dynamic, so on any given day the titles that are listed under the header “RefXpert Alerts” and under “Recent additions to RefXpert” will change. If there are no alerts in the knowledge base, a message will display stating “No alerts at this time”. By clicking on the title of an entry the user sees the full text for that entry. One convenient feature to note is that any URLs that are contained in the full text description will automatically show up as clickable hyperlinks. This makes it easy to submit a quick note about a particularly useful web site for an assignment without having to duplicate the content of the website.

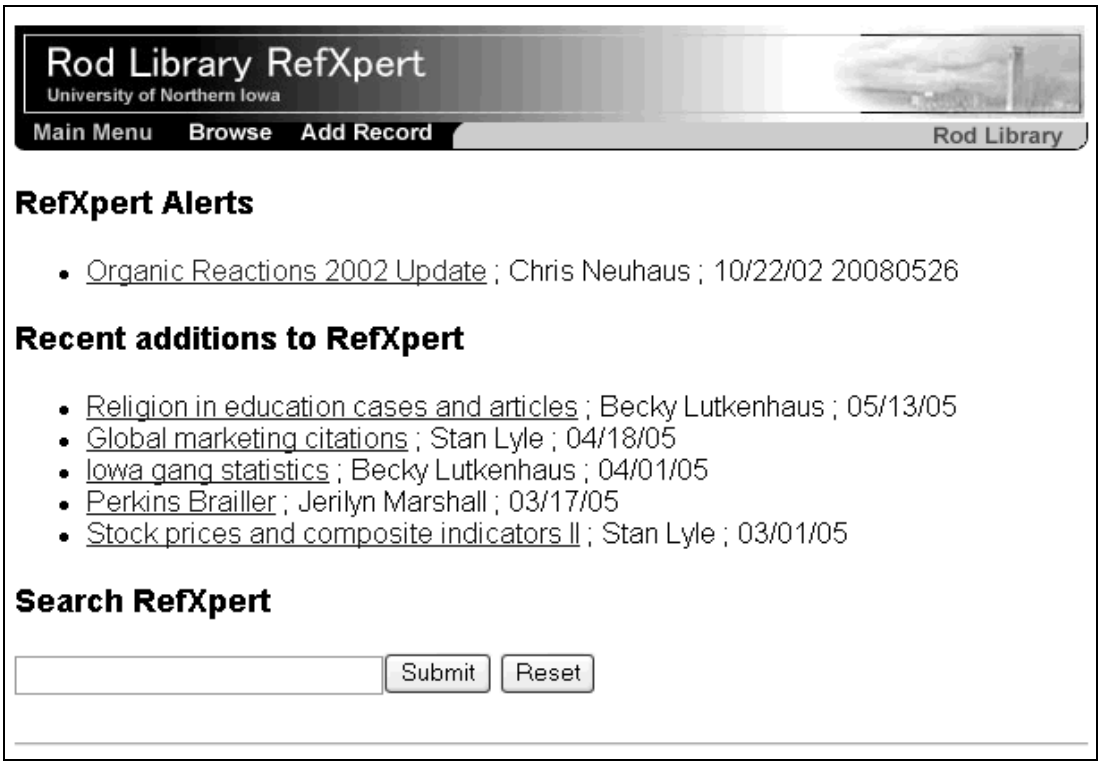

Fig. 1. RefXpert home page

A functioning demo of RefXpert can be found at http://dev.lib.uni.edu/wynstra/refXpert_demo/index.php. The demo contains a small subset of the original RefXpert entries. The content can be edited and new entries can be added since the demo will reset every night to its initial knowledge base.

Observations and Conclusions

RefXpert has been a useful addition to the reference department's information tool chest for providing high quality and timely reference service to students and staff. A number of benefits have been realized from this project. The main benefit has been the creation of a knowledge base which is continuously updated with new information by individuals who serve at the reference desk. This expertise is available 24-7, but more importantly it is available at the point of need which directly impacts the quality and timeliness of the delivery of reference services to our students. Another benefit has been the creation of a model knowledge management application that serves as a blueprint for similar applications. The specificity of this application does not exclude its broader and more generalized use in similar situations. A third benefit was continuation of the practice of leveraging new technology to meet the information needs of students. These benefits enable the library to provide a higher level of service to students as we engage them in their quest for knowledge.

To Be or Not To Be: International Students and Language Preferences in Library Databases Use

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Abstract

Library service to international students is often a challenge because many of them do not have complete fluency in English nor a previous similar library experience in American higher institutions. Some library databases, such as Ebsco's Academic Search Premier, OCLC's WorldCat and NetLibrary, CSA's Education: A SAGE Fulltext, and JSTOR offer language features (Spanish, French, Chinese, Japanese, and Korean) to assist international students searching for materials.

Librarians may wonder how effectively these language features are used. Should librarians point out these features to international students in bibliographic instruction sessions? Do international students or others whose first language is not English prefer to use their native language when using online databases? Are they familiar with English library jargon often used in database search options? A survey of international students at Central Missouri State University and St. Louis University will help provide answers for these questions. Topics covered include the use of multilanguage features, bibliographic instruction given in the students' home countries, and issues with the literal translation of terms and searches.

Survey results provide information about international students' language preferences and difficulties they encounter when using databases. Based upon survey results, librarians are able to tailor their instructions to this population in order to meet their database searching needs.

The Convergence of Reference:
A Bird's Eye View of Changing Sources, Services, and Venues

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Abstract

Innovations, including databases such as Reference Universe and the Google Print project, second generation library opacs and homepages, and the wireless environment, further integrate traditional and digital reference sources. These innovations converge and compact information into one-stop shopping and promise greater interaction for both users and librarians, changing the way we work with sources forever. But are they a good thing or a nightmare? Will these innovations deliver and what does this future hold for reference librarians? Certainly the future is by no means settled! After detailing both Reference Universe and the Google Print project and showing innovative library opacs and homepages from around the country, the presenter will offer Michael Gorman's editorial "Google and God's Mind: The Problem Is, Information Isn't Knowledge" (B15) as well as the blog reactions to the editorial as handouts and think pieces. At the end, she will discuss the possibilities and summarize the best ideas with the audience.

Introduction

In the last 25 years, constant change has become a driving characteristic in libraries as changing technologies and often decreased funding have driven librarians to seek new and often unusual solutions to the challenge of providing better services utilizing the latest technologies with less. The electronic library was born in this environment and continues to evolve and come of age. Critics, often to their demise as they could be considered Luddites or otherwise marginalized, have said that electronic innovations, even at our most prestigious academic institutions, continue to come at the expense of buying books. Certainly the many sessions at this Brick and Click Libraries Symposium enthusiastically detailing applications of technologies stand as evidence of this trend. Change marches on.

What innovations are presently transforming our reference areas and where are we, as academic librarians, going with them? Certainly we all have basic services and technologies in our modern reference areas, which, in this day and age, consist of internet-friendly networked terminals both for us and for our patrons showcasing our web-based public catalogs with open-link print resources and databases as well as our print reference collections and ready reference collections. In most cases we are available ourselves face-to-face during stated business hours. We have been available for our patrons for years remotely by phone and by email. As of late, and maybe a little less enthusiastically nationwide, we begin to embrace a chat venue, through our webpages. How are new technologies, new service paradigms, and outsourcing possibilities contributing to our overall decision making?

The ideas in this session reflect my experiences and view as a reference manager a Washington State University Libraries, a medium-sized land grant institution. Like many of you, I look

forward to attending the Brick and Click Libraries Symposium to learn how other academic librarians are coping with challenges that confront us all. Although I promised a "bird's eye view" in the title of this session, as a single human being in a single space and time, I can't produce it and so I ask all of you to help by considering the innovations in your own libraries. We all need to contribute to the bird's eye.

Convergence of Reference

I titled this session "The Convergence of Reference" because I *have become aware in the last few years that at my reference desk I can see several convergences happening generally.* These include [1] the convergence of service points generally (coupled with our patrons' expectations that we know more details about everything), [2] an acknowledgement, and even an encouragement of our patron's one-stop shopping preferences through the Libraries' homepage, and, [3] a convergence of library, and even general information resources (outside the library) happening generally. Innovations at my library that I offer as evidence include a wireless environment (primarily designed to divert traffic away from our 84 aging public terminals by encouraging people to bring laptops although we have yet to solve the print problem, or how to get our Pharos printing software to interact with laptops in a wireless environment), post-OPAC generation library homepages (ours is third generation but includes commercial software, *SFX* and *Metalib,* designed to improve upon our locally-created database and electronic resource lists and manage open-link URLs more effectively), the database, *Reference Universe,* designed to provide online indexing for our print reference collection, and the *Google Print Library* project, an in-the-works project among five universities (University of Michigan, Harvard University, Stanford University, The New York Public Library, and Oxford University) to scan all or portions of their collections and make those texts searchable on *Google.* How did this convergence happen at Washington State University Libraries? I will discuss these convergences separately before offering some conclusions.

Service Points

At the Washington State University Libraries, two factors dovetailed to result in a broader range of questions fielded by librarians and information assistants at the Holland reference desk. These two factors include [1] more discrete information available over the Libraries' homepage for librarians and patrons to view coupled [2] with the necessity of eliminating other service points after dwindling resources necessitated the situation of concentrating personnel. After a media center, a distance degree library services office, and an interlibrary loan office were downsized or eliminated, the Holland reference desk essentially became the "front-end" for the Holland/New Library building.

As in every change, there are costs and benefits, losses and gain. Our librarians have become much more knowledgeable about esoteric library policies, teaching departments, and university minutiae. And, they became more comfortable with guiding and exploring web pages alongside patrons. But, as we all know, there are limits to this. One good example involves our Manuscripts, Archives, and Special Collections (MASC) department. Behind closed doors for years, it now employees a graphics staff and has a beautiful web page so voluminous that our reference staff cannot keep current. Whereas in the old days we referred patrons to MASC

straight away for all northwest history, Washingtoniana, rare books, or University questions, we now try to field questions over their webpage and need to remember that we cannot deliver the ultimate word about their holdings. Ditto questions about holdings in other libraries; e.g., Owen Science Library or Health Sciences Library.

One-Stop Shopping Over the Libraries' Homepage

Washington State University Libraries has had an innovative OPAC for many years (Ha! It is both an Innovative Interfaces catalog and it has innovations). "Griffin" was web- based early on and went beyond bibliographic records to include images, holdings for other institutions, and other non-bibliographic data in the main OPAC. "Griffin" was considered also a gateway to other licensed databases and electronic resources. Whether to segregate bibliographic records from the records in licensed databases or whether to deliver them straight up is still an unsettled matter in many libraries. Advocates of delivering everything on a topic argue the importance of a patron's information literacy skills in deciphering the tangle. Although our present *Metalib* interface is presently only a replacement for a locally-created electronic resource A-Z and subject lists, I feel like one front-end "crawler" for the entire Griffin gateway is in our future.

What do patrons want? In 2003, my students characterized themselves as the "Sesame Street Generation" and characterized themselves as "having a 30-second attention span, an appreciation for the rapid cuts in commercials, a facility with videogames, interactivity, and 3-D motion, an appreciation for good sounds, and more willingness to take risks vs. pondering the rules." Certainly, offering patrons a one box, one-stop shopping point with access to all the resources on the Libraries' homepage gateway dovetails with these students' interests. But does it deliver the best intellectual understanding about what the Libraries offer and is it in the best interest of our educational mission at large? Certainly even Amazon.com has "stores."

Direct interactivity with the Libraries' records is another interest of students that goes beyond such interactivity as "chat with a librarian" or "ask a question" and includes opportunities for patron reviews, patron rating of the resources, and patron blogs. My students have been very enthusiastic over these prospects and feel that such patron interactivity would enhance the quality of the catalog. I have yet to hear of this done in an academic library.

Convergence of Library and General Information Sources

As a reference manager, information about downsizing or moving a print reference collection online are of great interest. Last year, I became aware of *Reference Universe*, a database enthusiastically billed as "the missing link," that will provide indexing from 5100 reference books from over 260 publishers. Approximately 150 titles are to be added to the database each month. A great feature allows an institution to tailor the database to reflect just their holdings, enabling distance students and other off-site patrons some access to the contents of the library's reference collection. Patrons search *Reference Universe* by keywords using Boolean operators; the search terms come from article titles or the indexes.

Although off-site library patrons searching the Libraries' online resources including *Reference Universe*, have a better remote look at reference resources than ever before, many of my students

feel that a browsers' "find on page" option, provides the best "nonlinear access" available. In the course I teach Spring semesters, English 356, we compare indexing and "find on page" and share ideas and insight.

What is non-linear access? In class, we read J. J. O'Donnell's, *Avatars of the Word*, an excellent longitudinal account of libraries and culture. In the book, O'Donnell explains the emergence of "non-linear access points," first in scrolls, and then in book and on terminals. These navigation helpers include page numbers, chapter headings, section headings, and tables of contents as well as indexes. Although "non-linear access" on the web is evolving, full text "find on page" is a powerful option (64-70).

Since students are most enthusiastic about "find on page," they also are enthusiastic about the Google Print Library Project at http://print.google.com/googleprint/common.html#1, a plan among five universities (University of Michigan, Harvard University, Stanford University, The New York Public Library, and Oxford University) to scan all or portions of their collections and make those texts searchable on Google. Certainly this amounts to another behemoth front ended by a text box, but my students insist that information literacy means making a decision about getting along with only the reference versus getting and reading the whole book . They insist that is how they read books in the present day. I can't help wonder what some of you think of the project.

In class we read Michael Gorman's *LA Times* editorial, "Google and God's Mind", his *Library Journal* article, "Revenge of the Blog People!", as well as some of the blog commentary (e.g., MemeStreams at http://www.memestreams.net/users/nw/blogid4689829/Revenge of the Blog People!). Overall, the reaction of students in English 356 seemed to reflect a generational divide as most did not understand Gorman's concern that books remain logically complete only to be read "sequentially and cumulatively." They insisted that deadlines and instructors demanding more made "passage reading" (as well as patch writing) a norm for students (they suspected that their instructors might do the same thing). In a few instances, *Google* came off as a "big corporate baddie" to students, who insisted that *Project Gutenberg* had been doing the same thing for years.

Will the single search box become the norm in library catalogs (if the entire world's information isn't ubiquitously available over the internet) when students come of age and start making decisions? Only time will tell…

Conclusion

In my 25-year career, reference work has evolved from desk hours and a rather intense contact with a print reference collection to guiding patrons through a universe of information available in all formats, on-site and off, over the internet, and through our human contacts. We have also learned to impart sophisticated searching skills to our patrons. The introduction of technology in libraries certainly has ratcheted up everyone's expectations as to what we can do for patrons and also as to what we can learn about our business. Our world is complex.

There are more possibilities in reference work than ever before. Considering all the possible technologies, service paradigms, and most importantly, outsourcing possibilities is hard. And, I say, outsourcing possibilities most importantly, because commercial companies that provide digital reference services, assessment services, or collection development assistance, enable us to extend ourselves without having always to remake the wheel.

It has been most useful to isolate each of the things we have introduced at Washington State University Libraries in order to consider the conundrum of "How to do it well" versus "Is it well to do?" I have found that as a practitioner I consider "How to do it well" much more easily than "Is it well to do." Of course, I can't tell you how our Libraries' homepage and gateway will evolve in the future. And, of course, I may well be working with a single text box, for all I know. But, in this and in all changes, it helps to remember that there are costs and benefits, losses and gains.

I hope that each one of you finds something here that strikes a chord, or enables you to think differently about your technologies, your collections, your services… something you offer. Perhaps you have an idea about how to do something better. If so, I hope you share it. Perhaps, I'll hear from you.

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