Brick & Click Libraries

Proceedings of an Academic Library Symposium

Editors:
Connie Jo Ury
Frank Baudino
Sarah G. Park
Northwest Missouri State University

Maryville, MO
November 2, 2007

Brick and Click Libraries

An Academic Library Symposium

Northwest Missouri State University

Friday, November 2, 2007

Editors:
Connie Jo Ury
Frank Baudino
Sarah G. Park

Technical Editors:
Kathy Ferguson
Jerin Adcock

Cover Design:
Wesley Hardee

Northwest Missouri State University
Maryville, Missouri

Brick & Click Libraries Team

Editors:
Connie Jo Ury
Frank Baudino
Sarah G. Park

Director of Libraries:
Robert Frizzell

Co-Coordinators:
Carolyn Johnson
Kathy Ferguson

Web Page Editors:
Lori Mardis
Vicki Wainscott

Technology Coordinators:
Sarah G. Park
Hong Gyu Han

Executive Secretary & Check-in Assistant:
Beverly Ruckman

Union & Food Coordinator:
Pat Wyatt

Web & Print Designer:
Wesley Hardee

Table of Contents

Introduction

Connie Ury
Library Outreach Coordinator
Northwest Missouri State University

Frank Baudino
Head Librarian for Information Services
Northwest Missouri State University

What makes the Brick and Click Libraries Symposium unique? Perhaps it is the wide range of subjects covered in one day of presentations. The brush that paints the picture for the day is guided with broad strokes, but the details create a detailed portrait. The papers and abstracts in this volume provide a picture of a full range of library services, resources, problems, and solutions. Some portions of the library appear to claim the foreground at times, but even those in the background provide more than shadows, as their clear focus provides opportunities for reflection and a lens for scrutiny.

While information literacy, reference, technical services, and collection management continue to be strong images in the landscape of Brick and Click; other areas are well represented in the 2007 image. Digitization, wikis, humor, course management systems for training student employees, electronic government information, student ambassadors, and disaster planning are just a few of the new topics that define the picture.

The name Brick and Click defines the unique perspective of the symposium. The view is not only from an online or a print perspective. The picture painted is one that captures today's libraries as it is—a hybrid of the two mediums through which patrons receive service which best meets their individual needs.

It's also interesting to note what kind of librarians present at Brick and Click. We don't have titles like "Print Collection Development Librarian" or "Online Instruction Coordinator" that limit the scope of our professional activities. Rather, our profession blends our roles and deployment of services so that we provide the appropriate assistance that best matches the needs of the students, faculty, staff, and community members we serve.

Perhaps the most important part of the portrait is the librarian. Many have predicted that click libraries will discard librarians altogether. Ury and Ury published a study entitled "Online, On-Ground, What's the Difference?" The presentation compared the performance of students enrolled in an online course to the performance of students enrolled in the same course in a traditional classroom. The statistical analysis of student grades found that students in the online course did not perform as well as the traditional students on a library assignment unless they were required to interact on a regular basis with librarians. When the students interacted regularly with a librarian throughout the learning process, their performance on the library assignment was equal regardless of the type of classroom they attended (Ury and Ury 2). This

study, as well as many of the papers in this Proceedings, point out the integral role of the library in the worlds of bricks and clicks. The picture is only complete when the librarian is included.

Works Cited

Ury, Gary and Connie Ury. "Online, On-Ground: What's the Difference?" Proceedings of the 21st Annual Conference on Distance Teaching & Learning, August 2005. Madison, WI: University of Wisconsin-Madison, 2005. 1 July 2007 <http://www.uwex.edu/disted/conference/Resource_library/proceedings/05_1794.pdf>.

Often Overlooked: Database Users with Disabilities

Chris Le Beau
Clinical Instructor
University of Missouri-Columbia/Kansas City

Rebecca Power
Reference Librarian
University of Missouri-Kansas City

Abstract

Many libraries striving to provide accessible resources to patrons with disabilities stop at the door of the omnipresent database. Given the extent of database use today, the presenters question whether we shortchange our patrons if we don't examine the accessibility of these electronic resources, provide the most accessible versions, and encourage database vendors to improve their products.

Vendors are moving at varying speeds toward serving the needs of users with disabilities. While some have made great strides, others still report "we're working on it." This presentation looks at some of the major vendors including EBSCO and ProQuest to assess how they are improving accessibility.

Libraries have also moved at different speeds in the provision of accessible databases to patrons with impaired vision. Some offer text-based database interfaces, while others have never heard of them or have specifically decided against them. The presenters review the issues involved in offering text-based interfaces including access points and publicity, and examine a selection of ARL libraries to determine how many are offering text-based interfaces and how they are addressing some of the issues involved.

This session introduces accessibility issues inherent in database use, examines how the major database vendors are progressing toward accessibility, and reports on how well a select group of libraries addresses the needs of database users with impaired vision.

Are ebooks the Greatest Thing Since Sliced Bread? We Think So, Why Don't They?

Julia F. McGinnis
Technical Services Librarian
California University of Pennsylvania

William M. Meloy
Public Services/Collection Manager for Serials Librarian
California University of Pennsylvania

Abstract

Over the last 3 years, the Manderino Library at California University of Pennsylvania increased its focus on electronic journals and e-books. Students immediately took to the electronic journal format, almost to the point of refusing to use print journals. However, during the same period our increased emphasis on e-book collections appears less successful.

E-book collections, such as ebrary and Netlibrary, provided an economical opportunity to fill gaps in our print collection. With an institutional focus on distance education, e-books seemed to provide the obvious solution for how to serve users who will never come to campus. With our traditional users taking to e-journals immediately, we thought e-books would be a win-win solution. However, use statistics indicated that our e-book collections remain underutilized. Reference desk interactions started to indicate that perhaps a disconnect existed. Students seemed reluctant to use them; faculty sometimes advise them not to; and some librarians found them difficult to navigate. We suspected that part of the problem rested in misperceptions of what they are and how to use them, while at the same time we recognized real technical and interface limitations.

Before purchasing additional collections or pursuing individual titles in favor of print copies, we decided to investigate e-books from the perception of students and faculty. Working through a combination of surveys and focus groups, we hoped to discover ways to make e-books a viable resource and to better define their appropriate role.

Introduction

With enrollments in completely online programs increasing dramatically and a widening proliferation of online components to traditional courses, the Manderino Library began increasing its focus on electronic journals and ebooks in 2005. Students immediately took to the electronic journal format almost to the point of refusing to use print journals. However, during the same period, the increased emphasis on ebook collections appears less successful. Ebook collections such as ebrary, Netlibrary, and Knovel provide an economical opportunity to fill gaps in the print collection. Futhermore, with an institutional focus on distance education, ebooks seem to provide the obvious solution for how to serve users who will never come to campus.

With traditional users taking to e-journals immediately, ebooks were thought be a win-win solution. However, use statistics indicate that current ebook collections remain underutilized. Reference desk interactions between librarians and students suggest that perhaps a disconnect exists. Students seem reluctant to use them; some faculty sometimes advise against their use; and some librarians find them difficult to explain and navigate. The suspicion developed that part of the problem rests in misperceptions of what ebooks are and how to use them. In addition, the recognition of real technical and interface limitations, including printer and reader requirements indicates other potential obstacles to use. Before purchasing additional collections or pursuing individual titles in favor of print copies, the researchers decided to investigate ebooks from the perception of students and faculty. Specifically the goal was to discover:

- Do students know ebooks exist?
- Under what circumstances do they chose to use or not use an ebook?
- When do they prefer a physical book over an ebook?
- Have their professors discouraged them from using ebooks?
- If they have not used an ebook what would increase the likelihood that they would use one in the future?

The answers to these questions will serve as a starting point for a more targeted survey of a larger body of students and faculty. In the meantime, initial survey results indicate a growing awareness and use of ebooks, but suggest a need for instruction, documentation and publicity.

Literature Review

Not surprisingly, researchers have approached ebooks from a variety of perspectives. One of the early and most comprehensive articles is Lucia Snowhill's 2001 report of the Ebook Task Force of the California Digital Library, in which she finds "considerable development of standards, technologies and pricing models needed to make the market for e-books viable and sustainable." Justin Littman and Lynn Connoway compare usage of titles available both in print and electronically, as well as the impact of ebooks on overall circulation, at Duke University. Barbara Blummer surveys special, academic, and public librarians about level of adoption of ebooks, their popularity among library users, as well as any technological problems or issues with digital rights (1-13).

Safley and Gibbs are examples of studies that use publisher supplied usage statistics to reveal acceptance rates and patterns of usage of ebooks (Safley 445-457, Gibbs 22-26). Through a survey at the University of Denver, Michael Levine-Clark discusses users' awareness, frequency of use, and methods of use of titles from numerous collections ("A Circulation Analysis" 7-14). He follows up this article with further analysis of survey results as they relate specifically to the humanities ("Electronic Books" 285-299).

Ebooks at Cal U--Sliced Bread or Burnt Toast?

Although the library purchased a Netlibrary collection in 2002, title records were not added to the online catalog until 2004. One frustration with the Netlibrary platform was the "single user, check out the book" model which does not serve multiple users. Limitations on printing,

including having to print one page at a time further frustrated users. In December 2005 the Library investigated the ebrary product and was impressed with the interface and ability for an unlimited number of users to access a title at any one time. In January 2006, records for ebrary titles were added to the online catalog, Pilot, and links to the ebook collection were placed on the Library's webpage. At the same time, to fill a critical gap in our scientific, computing and applied engineering print collection, we subscribed to Knovel. In July 2006, the Library subscribed to Netlibrary's Academic Essentials Collection which allowed for unlimited simultaneous users. In August 2006, records for a shared Netlibrary collection available through AccessPA were added, although these materials continued to be single user. For the last 3 years the focus remained on ebook collections rather than the acquisition of individual ebook titles. In addition, full MARC records for each ebook title were added to the Library's online catalog with ezproxy links to ensure access from off campus. The number of titles varies by ebook collection (see Table 1).

Table 1
Number of Titles by ebook Collection at California University of Pennsylvania

Collection	Number of Titles
EREF	2
ROUTLEDGE	34
EBRARY	28,740
KNOVEL	1,011
OXFORD	166
ACCESSPA	10522
NETLIBRARY	2417
NETLIBRARY2	8805

With ebook volume counts quickly reaching 50,000, expectations were high that we were meeting the needs of students and faculty effectively.

One benefit of the ebrary product rests in the ability to see usage by title, subnet, and subject. Informal reviews of this information began to suggest that users were not responding as expected. With a growing focus on distance education where students never come to campus, we expected a high proportion of usage to come though our proxy server. However, in the January-May 2007 time period, only 37.1% of the usage came from off campus. During this same time period, 21.1% of the usage occurred in the library, 8.9% in academic buildings, 5.4% on the campus wireless network, 11.8% in dorms, and the remaining 15.7% elsewhere on campus. While the high percentage of on-campus, but not in the library, usage suggests that users may be using ebooks for their convenience, off campus usage was expected to be higher.

An analysis of the titles accessed in the January-May 2007 time period suggests a direct relationship between class assignments and ebook usage. Five of the 6 most used ebrary titles are required readings or suggested topics for coursework (see Table 2).

Table 2
Top Titles Used from the ebrary Collection at California University of Pennsylvania[a]

Title	Category	Sessions	View	Copy	Print
Black Elk Speaks: Being the Life Story of a Holy Man of the Oglala Sioux	Religion	27	1376	6	236
Taking the Field : Women, Men, and Sports	Social Science	20	262	0	0
Nursing School Entrance Exams	Medical	17	333	0	278
Seven Myths of the Spanish Conquest	History	15	804	0	230
Debating the Death Penalty: Should America Have Capital Punishment?	Social Science	12	244	9	20
Hidden Victims : The Effects of the Death Penalty on Families of the Accused	Social Science	12	157	3	19
Our School : The Inspiring Story of Two Teachers, One Big Idea, and the School That Beat the Odd	Education	11	36	2	0
Crusade Propaganda & Ideology : Model Sermons for the Preaching of the Cross	Religion	9	88	2	194
Terrorism, Asymmetric Warfare, & Weapons of Mass Destruction : Defending the U. S. Homeland	History	9	177	0	253
Careers in Nursing	Medical	8	56	2	0
Cyber-Threats, Information Warfare, & Critical Infrastructure Protection	Computers	8	146	1	0
Sexual Rights in America : The Ninth Amendment and the Pursuit of Happiness	Political Science	8	74	1	0
Steal This File Sharing Book : What They Won't Tell You about File Sharing	Computers	8	142	8	6

[a]Library owns a print copy of titles in bold; underlined titles also available from NetLibrary.

In addition, many of the heavily used titles from Netlibrary during the same time period also related to course assignments (see Table 3).

Table 3
Top Titles Used from the NetLibrary Collection at California University of Pennsylvania[a]

Accesses	Title	Subject
142	**Gender Differences at Work: Women and Men in Nontradtional Occupations**	Social Sciences
60	Slavery, Propaganda, and the American Revolution	History
38	**Stem Cell Research: Medical Applications and Ethical Controversy**	Medicine
33	Emancipation: The Making of the Black Lawyer, 1844-1944	Law
33	Phospholipids Handbook	Biology
28	Killing Dance	Literature
28	Mathematics of Financial Modeling and Investment Management	Business
25	Rethinking the Sales Force: Redefining Selling to Create and Capture Customer Value	Business
22	Alex Haley & Malcolm X's the Autobiography of Malcolm X	Political Science
22	SPIN Fieldbook: Practical Tools, Methods, Exercise, and Resources	Business
21	Burnt Offerings	Literature
21	Implementing Private Networks	Networking
21	Lunatic Café	Literature
20	Human Embryonic Stem Cell Debate	Philosophy

[a]Library owns a print copy of titles in bold; underlined titles also available from ebrary.

Preliminary analysis suggests that students used these materials due to a requirement and may have chosen the ebook format because that is what was readily available. These title usage reports also illustrate a critical problem. With hundreds of students enrolled in online only graduate programs in Athletic Training and Law and Public Policy, one would expect heavy usage in these areas. The use statistics fail to demonstrate this use. Clearly a disconnect exists between distance education students and available ebook materials.

Though the process has been unsystematic, librarians have also learned about student perceptions and usage of ebooks by direct interaction with students. First, most have noticed a preference for print books among students they are helping at the reference desk. Besides the lack of concrete data, there are many variables that make these experiences less than solid evidence. Some of librarians resist ebooks themselves and they therefore may be overanxious to read the same in student reactions. Print books and call numbers are familiar territory and for some it may just be easier to hand students a call number than actually teach them to use and get back into an ebook. Also, the students who actually come to the desk, particularly the ones who need basic help in searching for books, may not be the ones most likely to experiment with a new medium. These

scenarios present overly pessimistic views of reference interactions and provide a warning not to take these reports as representative of student opinions about ebooks.

The more interesting of the interactions with students regarding ebooks have occurred in classroom settings. For example, students were polled students in first-year library orientation sessions (by simple hand-raising) about their willingness to use ebooks. Almost without exception, all classes expressed strong skepticism of the format and showed preferences for traditional print books. This was a surprise, as these were the youngest of our students and supposedly the most comfortable all things digital. Undaunted, instructors adapted how they asked the questions. In case the students were imagining a scenario in which they would be reading their favorite novel cover-to-cover online (in our view, not representative of the promise of ebooks) instructors tried to warm them up to the idea. For example, "suppose you have a research assignment, and there is a book that has a good *chapter* on your topic. Would you want to use a print or electronic book to access the content?" Still, ebooks were consistently outvoted. To dig a little deeper in this informal assessment, instructors actually forced students to use ebooks. These were the same students, but this time in follow-up group training sessions consisting of 5 students focusing on using the library catalog. In general, they were intrigued by ebooks (in this training, students were guided from the library catalog to a title in ebrary), but took some time to digest the format. Was this really a regular book fully available online? The students were then asked to get to page 50. Some could handle it, some could not. So, in all, the librarians too were intrigued about ebooks. What would it take to get students to use them? Is it too big of a jump to consider a book as something electronic, even for our tech-savvy freshmen?

The Survey that Leads to More Questions

The Library's survey, "Ebook Awareness and Usage at California University of Pennsylvania," was administered through SurveyMonkey.com and delivered to enrolled summer students through campus email accounts. 168 attempted the survey, providing 149 valid responses. Undergraduate students made up 51.2% of the identified respondents and 48.2% identified as graduate students, many of whom are enrolled in online-only programs in programs including Law and Public Policy, Health Sciences, and Education. In fact, 39.3% of the respondents are enrolled in online-only programs, 50.9% in combination on campus and online programs, and just 9.8% take courses on campus only. The highest program disciplines reported were Education (31.3%) and Health Sciences and Sport Studies (23.3%), followed distantly by Business and Economics (7.4%), Applied Engineering and Technology (6.8%), and Justice, Law, and Society (6.1%).

Awareness and Usage: The Basics

Not surprisingly, more students reported using electronic journals (82.2%) than ebooks (50.3%). Somewhat surprisingly though, more students have used ebooks (50.3%) than those that were aware that Manderino Library offers access to "subscribed ebooks that are NOT available for free to non-Cal U users?" (32.5%). The first, and most obvious, question from this is just what ebooks are students using if they are not even aware the Library was providing access to them? Are they using freely available ebooks through sites such as Project Gutenberg or Google Book

Search (either free parts of restricted access books or full versions of freely available ones)? Or, do they assume that ebooks linked to from our catalog or proxied ebook sites are free to anyone?

Students responded at a low rate to a question regarding ebook access and interface issues (see Table 4).

Table 4
Survey Question Responses Regarding ebook Access and Interface Issues at California University of Pennsylvania[a]

If you have used ebooks before, then how did you access them?		Response Percent	Response Count
Via Google or other search engine		40.5%	34
Via Pilot (the Library's catalog)		38.1%	32
From the Library webpage		**45.2%**	38
From a link within courseware (Blackboard, e-college, etc.)		19.1%	16
view Other (please specify)		8.3%	7
	answered question		**84**
	skipped question		**89**

[a]Other: other libraries (4), purchased them (2)

Once again, it is impossible to know what students are actually using when they supposedly access an ebook through Google. At best they are using the *library search*, powered by WorldCat in Google Book Search and finding their way back to the Library catalog and into an ebook in one of the Library's collections. Additionally, the path taken by users who selected *From the Library Webpage* as an access point remains elusive. Is this overlap with access through PILOT, or are they going directly to ebook collection front pages and searching there?

Only 8 respondents selected an interface preference, while 38 said the interface was unimportant to them. Here again, it is hard to trust these results and perhaps it is more likely that students are unaware of interface differences. All but one respondent rated their experience using ebooks as somewhat satisfactory or better. Just over half (53.3%) of students think it "very likely" they will use an ebook again and just 5.2% see it as unlikely.

What Makes Them Choose ebooks?

Research/paper assignments was the overwhelming (84.6%) reason students used ebooks, followed by “assigned class reading” (43.6%), and, surprisingly, “recreational reading” (34.6%). In response to why they chose to use an ebook, users rated a general preference for online sources highest (64.1%), followed by the convenience of not having to come to the library (44.9%). The first response is surprising considering our assumption, based on experiences with students which seemed to indicate that in general they prefer print books over electronic.

The researchers also wanted to know what it would take for reluctant ebook users to decide to use them. Being teachers, we thought maybe they just need some basic instruction on how to use ebooks, but only 13.6% said a tutorial would make a difference to them. Instead, findings suggest students to be more practical, selecting the following responses (see Table 5) with more frequency:

Table 5
Would You Consider Using an ebook under any of the Following Circumstances?

If you said "unlikely" or "very unlikely", would you consider using an e-book under any of the following circumstances? (choose all that apply)			
		Response Percent	Response Count
It is a resource you need and it is not available in print.		**62.5%**	15
You could access a tutorial that explained how to use e-books.		12.5%	3
You could use the ebook version of a textbook and not have to purchase a copy.		50.0%	12
You could easier cut and paste text into a research paper and a cititation was automatically generated.		45.8%	11
You could do all your research without having to come to the library.		58.3%	14
	answered question		**24**
	skipped question		**149**

Finally, the survey was used to pull out student preferences for electronic or print books under different circumstances (see Table 6).

Table 6
Student Preferences for Electronic or Print Books under Different Circumstances

Based on the circumstances described below, select whether you would choose to use an e-book or print book.			
	I choose the print book	I choose the e-book	**Response Count**
e-book is one click away and the print book is in the library on the shelf	37.3% (31)	**62.7% (52)**	83
print book is in my hand and the e-book is a click away	**77.6% (66)**	22.4% (19)	85
It's a 200 page novel you want to read cover to cover, and it's available in the library in print and as an e-book	**81.5% (66)**	18.5% (15)	81
It's a 200 page novel you want to read cover to cover, and you would have to wait up to 7-days to get it from another library in print or access it right away as an e-book	30.9% (25)	**69.1% (56)**	81
You need to use a chapter or two a book and a print copy is in the library and it's available as an e-book	14.6% (12)	**85.4% (70)**	82
		answered question	**82**

Clearly, the majority of students prefer print over electronic books if they actually have the book in hand. With the exception of fiction though, convenience quickly outweighs this preference. While 77.4% seem to be saying they would rather use paper, only 36.3% say they would if it meant actually going to the library to get it. This percentage gets considerably lower (13.6%) when they would envision just using part of a book for a paper.

Conclusion

Unfortunately, this initial survey of student use of ebooks at the Manderino Library of California University of Pennsylvania raises more questions than it answers. Clearly a large number of students have not used the ebook collections. Those that have used them had varying levels of success. Many expected academic disciplines have not shown heavy or even moderate use of ebook resources. The Library ebook collections support these disciplines and in some cases provide better and more current coverage than the traditional print collection. Usage statistics indicate how many “users” have accessed materials, but they do not indicate how many of these

users are repeat visitors. A dramatic difference exists between the ebrary and Netlibrary interface. Librarians have directly experienced the difficulties patrons face in each and yet this did not seem to bother the surveyed students.

To delve more deeply into ebook usage at California University of Pennsylvania the researchers will redesign the survey questions and target a broader audience of students and faculty during the early part of the Fall 2007 semester. In particular, the faculty survey will investigate perceptions of ebooks as a research tool for faculty as well as their perception of student use of ebooks for research. In addition, the Library will focus its efforts on better documentation, training, and advertising of ebook resources.

Works Cited

Blummer, Barbara. "E-Books Revisited: The Adoption of Electronic Books by Special, Academic, and Public Libraries." Internet Reference Services Quarterly 11.2 (2006): 1-13.

Gibbs, Nancy. "eBooks Two Years Later." Against the Grain 13.6 (2001/2002): 22-26.

Levine-Clark, Michael. "Electronic Book Usage: A Survey at the University of Denver." Portal: Libraries and the Academy 6.3 (2006): 285-299. Project Muse. Johns Hopkins University Press. Manderino Lib., California, PA. 28 May 2007.

Levine-Clark, Michael. "Electronic Books and the Humanities: A Survey at the University of Denver." Collection Building 26.1 (2007): 7-14.

Littman, Justin and Lynn S. Connaway. "A Circulation Analysis of Print Books and e-books in an Academic Research Library." Library Resources and Technology Services. 48.4 (2004): 256-262. Academic Search Premier. EBSCOhost. Manderino Lib., California, PA. 15 June 2007.

Safley, Ellen. "Demand for E-Books in an Academic Library." Journal of Library Administration 45.3/4 (2006): 445-457.

Snowhill, Lucia. "E-books and Their Future in Academic Libraries." D-Lib Magazine 7.7/8 (2001). 28 May 2007 <http://www.dlib.org/dlib/july01/snowhill/07snowhill.html>.

Are We Having Fun Yet? Putting Fun into the Workplace!

Joyce Meldrem
Library Director
Loras College

Abstract

Is it possible to have fun at work and still get your tasks accomplished? This session will cover benefits and disadvantages of having fun at work.

In today's libraries, where librarians are trying to cope with providing resources and services in person and also online, often short-handed and under-funded, having stress relievers and a sense of camaraderie is necessary in the workplace so that ideas flow and people work better together. Incorporating fun, humor, celebrations, and recognition opportunities into the workplace are all ways to improve the work environment. Fun doesn't have to just be for the library staff for it to improve the work environment! It can include student employees, students on campus, faculty, administrators, friends of the library and more!

Often times having fun at work is seen as disruptive or a time-waster, but if carried out appropriately, the end result can build a sense of camaraderie, lower stress, improve service, improve productivity, and make work a place that people want to come to every day.

Overview

What makes a job fun? How can you incorporate humor into your everyday work life? Does laughter make a difference to your health? Doesn't having fun detract from the work you're supposed to be getting accomplished? Do you have to be a stand-up comedian to have fun at work? Do you always have to take time out from your "real job" to include fun?

During the past fifteen to twenty years, there has been a lot of research conducted on the subject of having fun at work. The majority of the research shows that creating a fun work environment is beneficial in numerous ways for both the employer and the employee. According to Michael Kerr, fun "reduces stress levels, increases creativity, improves morale, strengthens teamwork, facilitates open communication, builds trust between management and employees, reduces employee absenteeism and turnover rates" (You 9-10). Hemsath and Yerkes say that fun "is a social glue: It fosters relationships between individuals in teams; it develops the trust necessary for high-performance teamwork; it soothes the natural tensions that arise when people work together" (158). Frank and Monica Boruch have found that "[h]umor ranks among the most powerful of management tools and serves many functions; it can be a coping mechanism, a negotiation facilitator, a communication instrument, a cognitive tool, a motivator, a creative force, a survival device and much more."

Throughout a normal lifetime, people work an average of forty hours per week or about 1,840 hours per year taking out 240 hours for holidays and vacations. So if you work for forty-five

years, you've worked 82,800 hours. Do you really want those hours to be in anything but a fun work environment? Why work for forty hours just to get to the weekend? Why not have fun during the week while you're at work? Buxman states that "taking yourself too seriously can have some nasty side effects: U.S. workers consume fifteen tons of aspirin a day. One in four workers suffer from an anxiety-related illness. Companies are spending nearly half of their bottom line on employee health costs. Soon job stress will be the No. 1 reason for worker's compensation." A report on Good Morning America indicated that the "total health and productivity cost of worker stress to American business could be as high as $150 billion a year" (T. Johnson).

According to Urquhart, "children laugh an average of 400 times a day and that number drops to only 15 times by the age of 35." In addition, she states that "[l]aughing increases oxygen intake, thereby replenishing and invigorating cells. It also increases the pain threshold, boosts immunity, and relieves stress." Paul McGhee notes that laughter "helps you reduce muscle tension, release anger, improve your ability to keep panic and anxiety under control, keep a more positive frame of mind, deal with the unexpected, keep your perspective, and increase your sense of control, well-being, and joy. Benefits to physical health can include higher immunity levels." The bottom line is that laughing and having fun in the workplace are good for people's health and good for the library.

Fun at Work

Fun takes many shapes and forms. It can be something that you personally find fun; it can be discussions and laughter amongst a few people; it can be jokes, comics, and stories; it can be an event for the library staff; or it can be an event for the campus. Table 1 lists 101 ways to have fun at work. There are a wide variety of ideas in the list because not everyone has the same sense of humor or finds the same things fun; but don't let that stop you from trying to have fun.

According to Kerr, if "you find it difficult to relax or take a 'humor break' for fear that you'll fall behind on the old rat race, or you simply can't afford the time, remind yourself that the opposite is true. The reality is, at those times when you are busiest and most stressed out, you can't afford *not* to take a break" (You 43). This has also been found to be true in research studies. Kerr also states that "[w]orkaholics are rarely productive in the long run. A study from the Pittsburg School of Medicine found workers' chances of a heart attack are 30% higher if they haven't taken a vacation in the last year. To be efficient, healthy and truly productive, people need regular breaks" (You 43).

If you haven't had fun at work lately, researchers have found that it might be due to time constraints, financial costs, lack of personal creativity, fear of looking silly, and perceived employee apathy. (Ford, McLaughlin, Newstrom 27) However, if fun is incorporated into the work that you do, you will be further ahead than if you just keep plowing along. Fun doesn't have to be a big event that costs a lot of money or takes a lot of time. Fun can be sharing a joke, stopping to take a couple of minutes to talk with a colleague, taking a break together, eating together, or watching a funny video clip. But fun can also be that big event that involves a lot of planning, a lot of people, and great prizes! According to Hemsath and Yerkes:

> Having fun at work should not be an endless chore or a long list of things you must do. That misses the point. Many things that you and your coworkers can do to enliven your workplace are simple, spontaneous acts. Encouraging fun in your workplace doesn't mean ignoring or neglecting organizational objectives and becoming a frivolous time-waster. Used effectively, fun can boost the energy individuals have for their work, resulting in improved performance. (184)

Leah Black and Denise Ferro at the Michigan State University Libraries state that the:

> [S]erious nature of academic research, teaching, and dissemination of knowledge does not typically produce and atmosphere of jocularity … However, libraries can and should reap the benefits of supporting humor in the workplace — better interpersonal communication, improved teamwork, and enhanced personal job satisfaction — while acknowledging the serious and vital nature of the services they provide. (169)

Fun can be incorporated into library work — and we can still be professionals.

Change the Work Environment

It is very important to realize that you can't just decide one day that you are going to have a fun work environment from that day on. Fun changes to the work environment must take place in the same fashion as any other changes that are instituted in the workplace. The other thing to remember is that changing to a fun work environment isn't a one person job. While managers should be at least supportive (preferably also directive), they can't be the only ones looking for ways to incorporate fun. One of the best ways to find fun things to do is simply ask each staff member to identify three things that they think are fun. Then create a group/team/committee to begin implementing some of the ideas. You can also take a few ideas from the list in Table 1 and try them out.

As Simonelic outlines:

> [To] create successful and lasting change, managers and leaders must do the following:
> - Create a sense of urgency
> - Recruit senior level support
> - Develop a clear and practical vision
> - Maintain frequent and consistent communication of the vision
> - Eliminate obstacles that block the vision
> - Celebrate short term wins… (20)

Changing the work environment is going to be work, even if it's changing to fun! Many people are reluctant to combine work with fun, but it is worth it in the long run if you can change those attitudes, even just a little. Changing to a fun work environment is something that must be done over time.

Conclusion

It isn't necessary to be a stand-up comedian to have fun at work. Not every "fun" thing has to be a huge event. Not every minute of every day has to be a party! To build a work environment where it is fun to get things accomplished, take time to think about incorporating fun and ensure that people understand the boundaries of fun. As Leslie Yerkes says, "When fun is integrated with work instead of segmented from it, the resultant fusion creates energy and cements relationships; it fosters creativity and results in improved performance" (47). Most libraries already have some fun at work. If you're ready to take it to the next step, take a look at some of the things you do (on your own, with your work group, with the student workers, and with the campus) and see if there aren't ways to turn something that you normally do into something that you normally have fun doing!

Table 1
101 Ways to Have Fun at Work

Loras College, Dubuque, IA

1. We hid small packets of M&Ms and Fish crackers in the stacks for student employees to find during their training session at the beginning of the semester. We didn't tell them ahead of time that there was any purpose to the treasure hunt other than getting free M&Ms and crackers but the student who picked up the most received a DVD player that we'd gotten free with a supplies order.

2. We went bowling for a birthday party and later had bowling competitions with the University of Dubuque; we also shot pool for one of our birthday parties. You can also do "goofy" bowling - bowling with the "other" hand, bowling with your eyes closed, etc. — this helps even out the playing field!

3. We wrote birthday poems for two staffers.

4. We decorated offices for birthdays — sometimes we put up post-its all around their door with the person's age written on them, sometimes we cover everything in the person's office with plastic wrap, and sometimes we post signs throughout the library announcing the person's birthday.

5. To get this past summer off to a good start, we ordered in sandwiches and played Guitar Hero.

6. We have other departments in our building so we try to have at least one building potluck each year.

7. We decorated small wooden pumpkins for Halloween and gave students and faculty a chance to vote for their favorite pumpkin — the student who won received a plastic pumpkin full of candy.

8. We decorated offices for Halloween and wore costumes; we had the University of Dubuque judge our entries and served them Halloween treats for their troubles.

9. We gave student employees materials to decorate the Check Out Desk for Halloween and Christmas.

10. We have Secret Santas with a $20 limit —instead of the "usual" list of what we'd like for Christmas, one of our librarians created this questionnaire:
    - Name & height?
    - What are your hobbies, collections, and/or addictions?
    - What is your favorite color and/or texture?
    - How do you rate your sense of humor (on a scale of 1 to 10) — be honest!!
    - Complete this sentence: "My friends would say I…"
    - Foods I love:

- Foods I hate (or that hate me, so to speak):
- Foods I love but shouldn't eat:
- Foods I love but shouldn't eat but will eat anyway:
- What is the question that you were most afraid would be on this questionnaire (but wasn't)? What is the answer to the question? ☺

11. We went to Best Buy and picked out movies to add to our collection. Several staff also went to Borders and picked out browsing and audio books. This Spring we asked our student employees to suggest DVDs to purchase.

12. We asked student employees to submit names for a newly created Check Out Desk bulletin board (giving the students a sense of ownership for something!) and for the past year it has been called the "Brett Wilson Information Center" — we chose that name based on Brett Wilson's sense of humor!

13. We had a classic cookie exchange and it was fun to see the different types of cookies that people brought.

14. Sub of the month — we give a $5 submarine sandwich gift certificate for the student who volunteers to substitute most during each month.

15. We each got to be the Deejay for a day while we worked as a group to catalog the Curriculum Library — we each chose music to work by — it made the time pass more quickly and it was fun to see everyone's taste in music — besides, studies have shown that music can help creativity and productivity!

16. Two truths and a lie meeting energizer — this one is fun, especially if you tell people ahead of time that you're going to do this — it gives them time to come up with some whoppers! You tell two truths and one lie and have the other people in the group guess which is which.

17. Put humor into newsletters, e-mails, memos, etc. — comics, jokes, articles, clipart, etc. — our weekly newsletter is called TGIM — Thank Goodness it's Monday.

Cornell College, Mount Vernon, IA

18. Have monthly brown bag lunches where the librarians take turns choosing an article from the library literature to discuss (Iber).

19. Have student employees dress up in Halloween costumes and have people vote on the best costume, then give away a prize (Iber).

20. Provide Halloween treats for student employees with brain Jell-O, shortbread "fingers," and a whole spread of ghoulish treats and decorations (Iber).

21. Send letters of appreciation to the parents of an exemplary student employee at Thanksgiving (Iber).

22. Have a reception to honor graduating student employees (Iber).

23. Serves ice cream during the new student orientation in the fall — Cool @ Cole is the slogan for the orientation — and gives other prizes for students who go through the library to deposit their names in jars that are strategically placed around the library where they want the students to stop and learn something (Iber).

24. Use librarian trading cards instead of traditional business cards (Iber).

25. Used Napoleon Dynamite characters to put on a skit to teach Resident Assistants a few library basics (Iber).

26. Give events "interesting" names — for example, during Crafting @ Cole, they had a session on "Road Kill Art" and it was a session to make decorative pins out of pheasant feathers (Iber) — just using a bit of imagination makes something sound like more than it might be!

27. Donate a luncheon for the annual Mortar board student organization auction. One year the theme was Greek — and it was "Café Bibliotheca"; one year it was Japanese and "Kafe Toshokan." The meal was themed, a special menu created, and entertainment provided (Iber).

College Misericordia, Dallas, PA

28. "We try to do some outreach activities that are fun-oriented. The entire staff participates so this builds camaraderie. We have a pre-school on campus and once a month provide some entertainment for the pre-schoolers. This gives us a great opportunity to pretend we're kids again—at Easter, we had an Easter Bunny and an egg hunt; at Christmas, Mrs. Claus read to the students." (Burd)

29. "At Halloween we all dressed up as covers of our favorite children's books" (Burd).

30. "Last fall we did an open house with a Pirate Theme. During the day we had activities to introduce students to the library; in the evening we had a murder mystery play that involved faculty and staff dressed as pirates" (Burd).

31. "During National Library Week we have activities all week long. The highlight this year was a book cart race. We try to offer special speakers and educational activities, as well as just some fun events" (Burd).

32. "Department heads had a 'high tea' to honor staff for Library Workers' Day" (Burd).

33. "We also do READ posters of faculty and staff for NLW [National Library Week]" (Burd).

Hollins University, Roanoke, VA

34. "For our library's 5th birthday, we sent out postcards inviting people to our birthday party (a hand announcing 'we're this many!'). We had people over for cake, ice cream, croquet on the lawn, door prizes (on the door prize slips people were asked what they liked best about the library — what affirming fun!), and we also announced 'tours of the library's hidden super secret spaces!' Those secret tours were far more popular than we anticipated — people loved the HVAC rooms and seeing one of the founder's death masks in archives. Who knew? Door prizes were from local restaurants, the bookstore, food services, a roll of quarters to be used in our new vending machines, and a librarian action figure. It was a blast." (Ruelle)

35. "At the end of the Fall term, the last day before the holiday break, the library staff feel like the only people on campus (it is possible we are?). We have a staff movie that afternoon, one person (sometimes one of us, sometimes an intrepid volunteer from elsewhere on campus) staffs the desk with a walkie-talkie to call for help if needed, and the whole library staff watches a movie together. We feel like we're playing hooky and having fun, rather than feeling dread about being the last souls on campus." (Ruelle)

36. "Last month I came in to find my office full of balloons, and streamers, and general silliness to celebrate my birthday. A colleague just graduated, so we're going to similarly attack her work area for her return tomorrow" (Ruelle).

37. "We have gag gifts — that are given to honor somebody for going above and beyond (a hideously ugly dog statue, but it is mightily coveted). At one point someone's action figure (there are a number of them here) was kidnapped by another department, and they playfully had a few weeks of ransom notes and invasions to secure her safe return" (Ruelle).

38. "We have a library team that participates in different campus fund-raiser events — Olympiads that involve 3-legged races, best cheer, etc. We almost beat the soccer team in the campus kickball tournament last year — we were so proud" (Ruelle).

39. "To advertise our extended hours with snacks during exams, one of our sillier staff members decided that she would dress up in a Twinkie costume, and roller skate around campus distributing Twinkies that had a piece of paper with the hours taped to each. Another staff member dressed up as a Starbucks barista for Halloween and served coffee from behind the reference desk." (Ruelle)

40. "Basically, as long as it doesn't interfere with our work and customer service ethic, we try to encourage fun around here. We use the FISH philosophy, which promotes fun and play at work and find that it helps us build rapport with members of our campus community. I should note that this only works because we have a top notch staff — they are very, very good at their jobs and work very hard. So the silliness is a nice release, and in no way diminishes the campus respect for their work and accomplishment. Also, we all like to smash those librarian stereotypes." (Ruelle)

Mount Saint Mary College, Newburgh, NY

41. "[T]ake time out to share some special meals throughout the year — a Library Assistants Day lunch that the librarians put on, Christmas party, an ice cream party in the heat of the summer" (Petruzzelli).

42. "We celebrate National Library Week in April and try to get as many staff as possible involved — activities range from simple things like hanging balloons up everywhere to more involved events like lectures, but we also try to schedule some student performances — this year we had the step team — which generally create a sense of something fun happening in the library." (Petruzzelli)

Dartmouth College, Hanover, NH

43. "When I was in Special Collections at Dartmouth College, there was the tradition of each staff member (about 15 of us in the department), voluntarily, writing and submitting the first chapter of a murder mystery. The mysteries were typically set within the libraries at Dartmouth. Submission was sometime before the Ides of March. On the Ides, late in the day, we'd gather for food and drink. One staff member, who had a drama background, would give a colorful reading of each submission. A few folks from outside of Special Collections would join us. We'd vote on the best piece, but more importantly we just had fun." (Daily)

Luther College, Decorah, IA

44. "We have had fun here this semester with the ALA READ poster software. We worked during spring semester to make posters of faculty, staff, and students which we would display during National Library Week. It turned into a really fun event since we had a committee in the library put the entire initiative together. The committee helped set up the photos in a make-shift 'studio' in one corner of the library. We also did the scheduling, arrangements, publicity, and final installation. The results were truly 'fun' experiences for the subjects of the photos who got a great kick out of posing with their favorite books, newspapers, or other props that were significant to them! We had a wonderful reaction to them, too, with lots of people coming in to the library to see their friends, co-workers, etc. We did 25 posters with individuals, classes, small groups, and combinations of two people. I highly recommend any library that wants a fun project to consider acquiring this software." (Kemp)

University of Wisconsin — Platteville, Platteville, WI

45. "On a quarterly basis the 'social committee' selects a date for a potluck. The pot luck is held in our staff lounge and begins about 10 am and clean-up begins about 2 pm. Everyone is encouraged to bring some kind of food item. The male staff members always bring the chips! Two of these quarterly gatherings focus on student library workers. We call it student appreciation. Librarians provide the treats and food while student workers are welcomed to come and eat!!!!" (Berg)

46. "Once a year we all gather at the director's home for a holiday celebration. The director provides the main course and beverages. The rest of the staff with spouses bring the rest of the food" (Berg).

St. Ambrose University, Davenport, IA

47. "I save up all the 'free samples' I get (pens, post-it notes, calculators, etc.) and use them as prize drawings at staff meetings. Everyone who attends the meetings puts their name in a box and I give away 4-5 things each time. If you don't attend the meeting, you don't get in the drawing" (Heinzman).

48. "When a staff member has a 'Zero Birthday' (age that ends in '0', 30, 40, 50, etc.) we all go out to eat for lunch at a place that the birthday person chooses" (Heinzman).

49. "About three or four times a year, we order in pizza for all staff for a lunch treat" (Heinzman).

50. "If the temperature gets above 90 degrees outside, I buy ice cream for everyone" (Heinzman).

51. "During National Library Week, we have our annual paper airplane contest off the third floor balcony. Anyone can construct a paper airplane and then we all launch them at the same time. Three of the library staff serve as judges, and award prizes for the longest time in the air, longest distance, and most creative" (Heinzman).

Northwest Missouri State University, Maryville, MO

52. "We try to change the Bulletin board in Technical Services (by seasons) to keep a smile on the staff faces ☺ The bulletin board 'Baby Faces' as we waited for a staffer's new baby to be born was a big hit! We pleaded with staff to bring a baby picture of themselves without their names on it. Once the bulletin board was created, staff spent many minutes trying to figure out who was who. It was a blast! And for those staff that didn't bring picture we cut out their faces from recent pictures and attached them to baby cut outs from magazine." (Duff) "We also create vacation bulletin boards where we share where we went for summer vacation." (C. Johnson)

53. "White elephants — every year we have a white elephant gift exchange — the rules — nothing new can be brought — the last couple of years a staffer has written a poem to read as we keep the gifts circulating" (Duff).

54. "For one staffer's 50th we found red hats at Wally World [Wal-Mart] for $1 — so even though some of us weren't 50 we all joined in and wore a red hat on her birthday — even a bust of James Joyce joined us that day!" (Duff)

55. "We had Queen for a day when one staff member retired" (Duff).

56. "We have filled mailboxes with rolled up newspapers in honor of 40th birthdays!" (Duff)

57. “As the meeting leader for one meeting, I came prepared with a roll of toilet paper in a bag. The team members just stared at me and I passed it to the person on my right and said take what you need and pass it around. With some prodding, kidding and reminding them I was a recreation major I finally got everyone to play the game with me. Once they had passed it around and everyone had some toilet tissue in front of them I then told them they had to report one thing from their area for each square they took. It worked! Everyone started to talk and report on what was going on!” (Duff)

58. “We take some of our breaks at the University coffee shop” (C. Johnson).

59. “We draw names for birthday gift giving” (C. Johnson).

Holy Family University, Philadelphia, PA

60. “Every year the library hosts a Halloween party for the entire campus, and HR joins in by judging costumes and awarding prizes. Our campus doesn't have that many purely social events so this is one way we all have fun and get to mingle with each other as well as the rest of the university. We used to make it pretty elaborate — everyone made homemade dishes, etc. but now we keep it simple: hotdogs, salads, chips, cookies, and so forth. It's easier to manage and that way we don't feel like it's more work than it's worth. And everyone has a great time!” (Schwabenbauer)

61. “We also have an annual Staff Development Day in which we close the library to spend the day together, with breakfast and lunch provided” (Schwabenbauer).

62. “We've done various things - gone off campus to visit historical libraries or binderies; had speakers in to talk about technology, communication, and other topics; and occasionally we do something purely fun. For instance, one year we had a surprise wedding shower for one of our librarians in place of the "scheduled" video on personality types.” (Schwabenbauer)

University of Dubuque, Dubuque, IA

63. “We have a committee in charge of fun for library staff, including student assistant/library staff graduation parties every semester, treat summer students to lunch parties, birthday parties for all staff, bridal showers (two last summer!). This year, they put together a game afternoon during spring break when we played the game Scene It.” (Knefel).

64. “Sometimes fun just occurs serendipitously. For example, we purchased Dance, Dance Revolution for a Student Study Break we were sponsoring during the last week of classes and decided to hook it up before the staff meeting to be sure it worked. (Actually, two of us just wanted to try it out but that sounded too silly.) So, another staff member and I got up and danced to Video Killed the Radio Star while everyone was coming to the meeting. Soon, everyone wanted a turn. The staff meeting was a success because almost all of us gave it a shot. Just what we needed at the end of a very intense semester!” (Knefel)

Others

65. "Distribute one playing card from a special deck to each person who comes on time to each department or committee meeting. Give another to all those who are there at the end. After three meetings, (six deals) let them discard one card and then 'lay down' their cards. Award a prize for the person with the best poker hand." (Newstrom)

66. "Use or adapt any one of a broad number of TV or board games to elicit member interest in a topic you are presenting or to serve as a review of key points after a training session. A bit of creativity will allow you to use game formats such as Pictionary, Scattergories, Bingo, Family Feud, or Wheel of Fortune as structured ways to involve the players and accent relevant material. Be sure to award prizes." (Newstrom)

67. Toss a ball for brainstorming — as someone catches the ball, they say their idea then toss the ball on to another person — just make sure everyone gets the ball at least once! You can also use this technique for mentioning something you think you do well, something about your childhood, your favorite movie, etc.

68. Post a joke of the day in a visible place.

69. Have an employee or student worker of the day/month/semester/year.

70. Present a traveling bouquet for a work anniversary or as a thank you.

71. Start each meeting with a meeting energizer. Meeting energizers allow the group to "warm up their minds and share a little bit about them before getting down to the business of generating possible solutions to a problem" (Newsome). They also allow people to switch gears and get their minds off of the work they had been doing before the meeting started. There are many meeting energizers on the internet and in books including:

Title	URL
Free Ideas, Activities, and Office Toys to Add FUN to Customer Service Training, Meeting Planning….	http://www.businessfundamentals.com/HaveFun.htm
Creative IceBreakers, Introductions and Hellos for Teachers, Trainers, and Facilitators	http://www.businesstrainingworks.com/Icebreakers.PDF
Ice Breakers	http://uoleadership.uoregon.edu/exercises/ice_breakers
IceBreakers & Energizers: a.k.a. Activities that Are Just Plain Fun	http://www.kimskorner4teachertalk.com/classmanagement/icebreakers.html
Energizers	http://www.johnsleigh.com.au/energizers.htm
Icebreaker Collection: Icebreakers, Brain Teasers, and Exercises to Energize Your Sessions	http://www.mwls.co.uk/icebreakers/

Selected Bibliography

Big Book of Icebreakers by Edie West (McGraw Hill, 1999)

Quick Team-Building Activities for Busy Managers by Brian Cole Miller (Amacom, 2004)

Quick Emotional Intelligence Activities for Busy Managers by Adele B. Lynn (Amacom, 2007)

Ten-Minute Trainer by Sharon L. Bowman (Pfeiffer, 2005)

101 Activities for Teaching Creativity and Problem Solving by Arthur B. VanGundy (Pfeiffer, 2005)

72. Award prizes — for whatever — first evaluation turned in, first e-mail of the day, first to sign up as a volunteer, last to complain about the heat in the building, whatever!

73. Tape a candy bar into the middle of a long memo and suggest your reader take a break (Stauffer).

74. "Decorate the forklifts and have a parade in the factory" (Miller). (Oops — wrong line of work!)

75. Submit favorite recipes around holiday times and make a recipe box or recipe book.

76. Create a joke board in the staff lounge — allow all to put up their favorite jokes, comics, etc.

77. Take group photo portraits during the year and during events. Post them where everyone can see them — they don't have to be serious photos! Put them into a photo album or scrapbook that people can look through later.

78. Meet in a remote location just to get different creative juices flowing.

79. Read funny books, joke books, comic books, and articles about fun at work.

80. Try the Fish! Philosophy for a while — Play, Be there, Choose your attitude, and Make their day are their basic lessons.

81. Celebrate — even the small successes!

82. Use Ms. Dewey <http://www.msdewey.com/> to search the internet for your research (use it too long and you'll get totally annoyed, but she's fun for a while!☺)

83. Use different colored paper or decorative paper for your agendas, use different fonts, and/or add pictures/clipart that are relevant to the agenda items — it keeps the people guessing rather than always bringing in that white agenda with Times New Roman font! Have a theme for your agenda — use movie titles to describe agenda items (Kerr 130).

84. Bring in a popcorn maker, a chocolate fountain, something that makes a treat fun!

85. Create a joy/social/fun committee and call it something fun — one library calls theirs the Sunshine Committee.

86. Hire someone to come in and give neck/head massages or reflexology on the hands.

87. We use games in the middle or latter part of the program to allow people to apply what they just learned in a lecture," says Rebecca Gmeiner, continuing education supervisor of a San Diego hospital. "We play a Jeopardy game to review general safety. We created a chart and divided it into categories: fire safety procedures, hazardous materials, disaster codes. . . Then each group picks a category for 100, 200, 300 points. Underneath Post-It notes are the questions and, if they give the correct answer, they get points. (Tyler)

88. Go to your local dollar store — there are tons of prizes just waiting there — buy a set of erasers to give to someone who scored low in bowling so they can "erase their score"; buy a scissors for someone who has to "cut the budget"; buy an extension cord for someone who "needs more power"; etc.

89. Personalize your holiday cards by taking pictures on your travels (Way).

90. Put board games, puzzles, Silly Putty, Slinkies, etc. into the break room; organize lunch hour tournaments.

91. Personalize your work space — pictures, toys, posters, etc. — anything that says you like to have fun.

92. "'If something is funny, people will pay attention to it. If you stand up and lecture, people will fall asleep,' says Roger Schank, director of the Institute for the Learning Sciences at Northwestern University. 'Put people in situations that are fun, but that relate very strongly to the enterprise.'"

"Jan Williams agrees. As a nurse educator for a San Diego hospital, she knows from experience that games entice learners. 'People are more likely to listen. Their attention span is longer. They remember a lot more.' A few years ago Williams faced the challenge of increasing course enrollment. 'We needed to educate staff on cardiac risk factors because they had to teach patients, but they didn't want to come to in-services [sessions held during work hours],' says Williams. So she created Cardiac Casino, a collection of casino games that teach employees about stress, smoking, body fat and other health issues."

"'Each person is given $120 in fake money to play with,' explains Williams. 'Then at the cholesterol station, for example, they answer questions about foods high in cholesterol. . . At the end of the casino they are awarded buttons like 'I crapped out at the Cardiac Casino' based on how much money they have left.' The 15-minute in-service has become so successful that all employees — not just the cardiac staff—attend."

"Games can be used to illustrate problems, practice solutions or test knowledge." (Tyler)

93. Sign up for Mike Kerr's Hump Day Humor Gram, a weekly newsletter that brings articles, quotes, ideas, and tips of the week to incorporate humor into your workplace to your email box. <http://www.mikekerr.com/cms/index.php/subscribe-to-the-hump-day-express-ezine/> Mike Kerr is the founder of the Humour at Work Institute.

94. Send a note of appreciation to someone else — it makes them feel good and in turn makes you feel good

95. Hand out Kudos bars for a job well done, Lifesavers for someone who has been a real lifesaver, a PayDay for someone who deserves a raise (but probably isn't going to get it), a $100,000 bar to let someone know just how much that favor they did for you was worth!

96. Have a "Battle of the Books where staff select and purchase single copies of books and then wait to see whose choices circulate most often" (Connole).

97. Try something different when creating tutorials and online learning, create a Peep Research page like the librarians at Millikin University must have had fun doing!

98. One library, who wished to remain anonymous, has traveling Christmas parties and each department decorates their area according to the chosen theme and provides treats for the rest of the staff.

99. Create your own Book Cart drill team (Marin County).

100. Check out the fun library videos on YouTube — especially these:

Library	URL
Betty Glover Library Workout Tape Ad	http://youtube.com/watch?v=_k8BKX2eQ0Q
We love our NJ libraries	http://youtube.com/watch?v=ZeQI25n8qPQ
Come See What's WOW! NOW! @ Your Library	http://www.youtube.com/watch?v=EvF6C41zMkk
Interval Library	http://www.youtube.com/watch?v=Ns314ZNaJb4

101. And last but not least — food — whatever form and wherever you serve it, fruit, donuts, chocolate, pizza, cake, candy, just food, food, food — give people a treat!

Works Cited

Avery, Susan and Jennifer Masciadrelli. Peep Research: A Study of Small Fluffy Creatures and Library Usage. 25 Apr 2003 Millikin University. 12 June 2007. <http://www.millikin.edu/staley/peeps/>.

Baker, Dan, Cathy Greenberg, and Collins Hemingway. What Happy Companies Know. Upper Saddle River, NJ: Pearson Prentice Hall, 2006.

Bakke, Dennis W. Joy at Work: A Revolutionary Approach to Fun on the Job. Seattle: PVG, 2005.

Berg, John Leonard. “RE: Fun at Work.” E-mail to Joyce A. Meldrem. 1 June 2007.

Black, Leah and Denise Forro. “Humor in the Academic Library: You Must be Joking! or, How Many Academic Librarians Does it Take to Change a Lightbulb?” College & Research Libraries. 60 (1999): 165-172.

Boruch, Frank and Monica Boruch. “Your Work can be Child’s Play.” HR Magazine 40.8 (1995): 60-. Business Source Elite. EBSCOhost. Loras College Library, Dubuque, IA. 12 June 2007.

Burd, Barbara. “RE: Fun at Work.” E-mail to Joyce A. Meldrem. 22 May 2007.

Connole, Dan. Building Staff Morale. Winter 2001. Virginia Polytechnic Institute and State University. 12 June 2007 <http://scholar.lib.vt.edu/ejournals/VALib/v46_n4/cannole.html>.

Daily, Daniel. “RE: Fun at Work.” E-mail to Joyce A. Meldrem. 22 May 2007.

Duff, Sara. “Fun, Fun, Fun.” E-mail to Joyce A. Meldrem. 24 May 2007.

Ford, Robert C., Frank S. McLaughlin, and John W. Newstrom. “Questions and Answers about Fun at Work.” Human Resource Planning 26.4 (2003): 18-33. Business Source Elite. EBSCOhost. Loras College Library, Dubuque, IA. 12 June 2007.

Heinzman, Mary. “RE: Fun at Work.” E-mail to Joyce A. Meldrem. 23 May 2007.

Hemsath, Dave and Leslie Yerkes. 301 Ways to Have Fun at Work. San Francisco: Berrett-Koehler Publishers, 1997.

Iber, Mary. “RE: Fun at Work.” E-mail to Joyce A. Meldrem. 23 May 2007.

Johnson, Carolyn. “RE: Fun at Work.” E-mail to Joyce A. Meldrem. 23 May 2007.

Johnson, Tory. Take Control: Take a Summer Vacation. 5 Jun 2007. ABC News. 14, June 2007 <http://abcnews.go.com/GMA/TakeControl/story?id=3242307&page=1>.

Kemp, Jane. “RE: Fun at Work.” E-mail to Joyce A. Meldrem. 22 May 2007.

Kerr, Michael. 130 Ways to Put Humor to Work. 2002. Safety Codes Council. 12 June 2007 <http://www.safetycodes.ab.ca/Conference/130_Ways_to_Put_Humour_to_Work1.pdf>.

---. You Can’t be Serious! Putting Humor to Work. Alberta, Canada: Michael Kerr, 2001.

Knefel, Mary Anne. “RE: Fun at Work.” E-mail to Joyce A. Meldrem. 1 June 2007.

McGhee, Paul. “The Key to Stress Management, Retention, & Profitability? More Workplace Fun.” HR Focus 77.9 (2000): 5-6. MasterFILE Premiere. EBSCOhost. Loras College Library, Dubuque, IA. 12 June 2007.

Marin County Free Library Book Cart Precision Drill Team. 7 June 2003. Marin County Free Library. 12 June 2007 <http://www.co.marin.ca.us/depts/lb/main/drillteam.cfm>.

Miller, Mark S. How to Make Work Fun. 2006. PROJECTmagazine. 12 June 2007 <http://projectmagazine.com/content/view/274/44/>.

Newsome, I. A Climate for Creativity. 2007. Innovation Focus. 12 June 2007 <http://www.innovationfocus.com/articles/articles.asp?title=aclimateforcreativity>.

Newstrom, John W. “Making Work Fun: An Important Role for Managers.” SAM Advanced Management Journal 67.1 (2002): 4-8, 21. Business Source Elite. EBSCOhost. Loras College Library, Dubuque, IA. 12 June 2007.

Petruzzelli, Barbara. “RE: Fun at Work.” E-mail to Joyce A. Meldrem. 22 May 2007.

Ruelle, Joan. “RE: Fun at Work.” E-mail to Joyce A. Meldrem. 22 May 2007.

Schwabenbauer, Lori. “RE: Fun at Work.” E-mail to Joyce A. Meldrem. 23 May 2007.

Simonelic, Ken. “Successfully Managing and Executing Change.” Journal of Business Forecasting 25.3 (2006): 20-21. Business Source Elite. EBSCOhost. Loras College Library, Dubuque, IA. 12 June 2007.

Stauffer, David. “Let the Good Times Roll: Building a Fun Culture.” Harvard Management Update 4.10 (1999): 4-6. MasterFILE Premiere. EBSCOhost. Loras College Library, Dubuque, IA. 12 June 2007.

Tyler, Kathryn. “Simon says ‘Make Learning Fun’.” HRMagazine 41.6 (1996): 162-. MasterFILE Premiere. EBSCOhost. Loras College Library, Dubuque, IA. 12 June 2007.

Urquhart, Jody. Creating a Fun Workplace When Hokey Pokey is “What it’s All About”. Feb. 2003. leadingtoday.org. 12 June 2007 <http://www.leadingtoday.org/Onmag/feb03/ju-feb03.html>.

Way, Harold. “Holiday Letter.” E-mail to Joyce A. Meldrem. 7 March 2007.

Weinstein, Matt. Managing to Have Fun: How Fun at Work Can Motivate Your Employees, Inspire Your Coworkers, Boost Your Bottom Line. New York: Fireside, 1996.

Yerkes, Leslie. “How to Create a Place Where People Love to Work.” The Journal for Quality & Participation. 26.4 (2003): 47-50. Business Source Elite. EBSCOhost. Loras College Library, Dubuque, IA. 12 June 2007.

Outsourcing Outreach: Developing a Student Ambassador Program

Kristin J. Whitehair
Biomedical Librarian
University of Kansas Medical Center

Abstract

How can libraries reach incoming and first year undergraduates? This is a difficult question for many libraries. Incoming and first year undergraduates are often unfamiliar with academic libraries and the services they offer. Promoting library collections and services to this group in a meaningful manner is necessary and challenging. Interestingly, a student employee provided a solution to this problem at K-State Libraries. The solution is forming a student group to promote library interests to incoming and first year undergraduates.

Motivated by this innovative idea, K-State University Libraries developed a student Ambassadors program. This paper discusses planning, implementation, and evaluation processes used by the Student Ambassador group. Additionally, strengths of the group and difficulties encountered will also be examined.

The student ambassador group, in conjunction with the faculty advisor and several other library staff, works to identify opportunities to reach both incoming and first year undergraduates. The student ambassador group designs flyers, display boards, and other promotional materials for events. The students' creative approach to promotional materials led to the creation of a display board promoting the libraries through a large comic strip. This comic strip highlights library collection and services. Moreover, the student ambassador group serves an additional purpose by offering feedback to ideas and potential policy changes for the user-centered K-State Libraries.

Introduction

Effectively marketing academic libraries to students, particularly undergraduates, is difficult. Communicating the value of the library collections, services, and resources in meaningful terms to students poses a challenge, particularly with students unfamiliar with academic libraries. Generally, the point of view of library staff toward library services, collections, and resources is quite different from that of undergraduate students. In order to address this problem Kansas State University Libraries developed the Libraries Ambassadors student group. This group focuses on promoting Kansas State University Libraries and offers the potential of providing feedback to library staff regarding library operations, policies, and other issues as needs arise.

Review of Literature

Little literature is available regarding student library ambassadors, marketing, or advocacy groups for college and university libraries. The majority of professional activities on this topic have taken the form of regional conference presentations based on specific programs regarding

their successes and difficulties. For example, representatives of Emporia State University Libraries and Archives has presented at several conferences regarding the creation of Empowered Students for University Libraries and Archives (ESULA). Additionally, there is little literature available on friends of the library student groups. Usually the missions of student friends of the library groups focus on fundraising and exploring topics related to libraries such coordinating tours of archives and special collections. Their focus is not on marketing the library to other students. Given the lack of literature on this topic, Hasty provides critical insight on the importance of promoting the library through ambassadors, describing the process, successes, and challenges of training student library employees to act as public relations ambassadors for the library (31-40). Numerous resources are available regarding ambassador and student advocacy groups on college and university campuses. The majority of this literature focuses on student groups promoting specific academic programs or extracurricular activities.

Providing evidence for Astin's theory, Edelmann describes the success of student ambassadors for a private K-12 school (518-529). Edelmann notes the benefits for individual students involved as ambassadors and the marketing success of the ambassadors promoting the school (66-69). Moreover, available literature argues that student involvement enriches the academic environment and benefits overall student success. Astin argues that students' involvement within academic environments is associated with higher levels of academic success compared to uninvolved peers (518-529). Educational institutions are not alone in developing student ambassador groups for marketing purposes. Microsoft developed a marketing group to reach specific campuses as reported by the *Daily Trojan*, the University of Southern California newspaper. This marketing initiative aimed to reach undergraduate students (Han).

Overall, the literature concludes that student ambassador groups benefit both students and institutions they promote. Additionally, student involvement provides opportunities to create an environment fostering student success. Student ambassadors possess a huge potential in regard to marketing and advocacy.

Process

Interestingly, the idea for student driven outreach at Kansas State University Libraries was generated by an undergraduate student. The student ambassador program is the product of an idea discussed between a library staff member and a student at the reference desk during the spring semester of 2006. After discussing the potential program with other staff members an interest survey was developed. Student employees at Kansas State University Libraries were emailed this electronic survey. The goal of the survey was to gauge interest in a student ambassador program and receive constructive feedback to be used in the development of the program.

In the summer of 2006 library staff involved with the ambassador project began to recruit library student employees for the pilot of the student ambassadors group. The program was initially introduced as a pilot program to determine the viability of the group and to allow for adjustments and refinements as needed. After analyzing survey results applications for the student ambassador group were given to all library student employees. The application includes information about campus and community involvement, leadership activities, a resume, and five

brief essay questions used to gauge interest in the group. The application process was modeled after several other student ambassador programs on the Kansas State University campus. Library student employees were chosen as the initial target recruitment group because they were already highly familiar with the library. Additionally, the limited pool of potential applicants was not problematic because of the pilot status of the student group.

Library Ambassador Applications were evaluated based on the potential for involvement and desire to promote the library. Notably, all applications were accepted. The application requirement including a resume and essays acted as a self-selecting measure. The time commitment and thought regarding library topics necessary for the application required significant motivation to complete. Initially recruitment was very slow. However, staff members involved in the project who also supervise student employees have been instrumental in identifying potential applicants.

Beginning in the fall 2006 semester, the Kansas State University Libraries Ambassadors actively participated in outreach activities. The Library Ambassadors promoted the library to both current students and prospective students attending events at the Kansas State University Manhattan campus. The Library Ambassadors developed displays and handouts describing services, resources, and collections of Kansas State University Libraries from their student perspective. Additionally, the Ambassador program's recruitment effort expanded beyond current library student employees by opening the program to all Kansas State University students.

As the Student Ambassador program gained momentum and strength they began to develop relationships with other library related groups such as Friends of the Library and assisting with the Kansas State University Libraries Public Relations Team with activities. Additionally, they have created unique displays and handouts that are both attention grabbing and informative. Inspired by the comic *HellBoy* the Ambassadors created a poster that recounts the experiences of the fictional HaleBoy researching in Kansas State University's Hale Library. The HaleBoy adventure creatively highlights services, resources, and collections available in Hale Library. With momentum from activities in spring of 2007, officers were elected. Currently the Ambassadors group is largely student driven with library staff providing support and resources.

Conclusions

The Kansas State University Libraries Ambassador program has created innovative displays and promotional materials. Ambassadors have effectively communicated with their peers about the resources, services, and collections offered by Kansas State University Libraries. Collaborating with library staff on larger outreach projects has been a positive experience for both ambassadors and staff members. As the group has developed and become more self-driven, it has created more fulfilling experiences for members. Although the ambassador group was originally organized by library staff, the election of officers is evidence of substantial progress toward becoming student driven. Beyond providing marketing and outreach goals, several ambassadors are considering a career in libraries. The ambassadors group provides valuable experience relevant to career goals and further academic studies decisions.

In addition to communicating with individuals outside the library, the ambassadors are a

potential source of feedback and information to the library staff. These highly involved and academically focused students also are an excellent resource for feedback regarding library services, resources, and collections from a user perspective. Beyond feedback directly from the ambassadors as a group, they are poised to effectively recruit students who are not already library users to provide feedback. This is an area where the Kansas State University Library Ambassadors are looking to expand their role.

While the Kansas State University Ambassadors have been successful, recruitment remains difficult. Most potential applicants are not familiar with the group or its goals because the group is new and relatively unique. Recruiting applicants requires educating students on the background of the organization and about the opportunities and responsibilities of becoming a member. Upcoming efforts will focus on expanding recruitment efforts.

Overall, the Kansas State University Ambassadors effectively communicate the value of the library from a student's point of view to current and prospective students. In the future the organization is focusing on growing and further defining its mission in order to increase the impact of its marketing efforts.

Works Cited

Astin, Alexander W. "Student Involvement: A Developmental Theory of Higher Education." Journal of College Student Development 40.5 (1999): 518-529.

Edelmann, Terry Burnes. "School Ambassadors Become Marketing Marvels: Students Promote Their School and Develop Personal Skills in the Process." Momentum Sept/Oct (2005): 66-69.

Han, Young Michael. "Microsoft Hires USC students to Promote its Software." Daily Trojan 15 Nov. 2005. 584 words. News. LexisNexis Academic. Hale Library, Manhattan, KS. 11 June 2007.

Hasty, Douglas F. "Student Assistants as Library Ambassadors: An Academic Library's Public Relations Initiative." Technical Services Quarterly 18.2 (2000): 31-40.

Representing eJournals in the Library Catalog: Trying to Fit a Square Peg in a Round Hole?

Kelly Smith
Serials and Electronic Resources Librarian
Eastern Kentucky University

Abstract

Academic library catalogs as they currently exist are essentially static databases—they are searchable versions of card catalogs. Even the display in many systems resembles the old-fashioned card. By contrast, eJournals (and websites and eBooks, for that matter) contain dynamic information. URLs change, platforms change, vendors change, the same title is hosted on multiple changing platforms, and so on. Is it possible with the library catalog as it exists today to effectively present metadata for online formats when each change must be input manually? Can the catalog truly represent a complete listing of our holdings in this dynamic and largely unstable electronic publishing model?

At Eastern Kentucky University (EKU), prior to 2006, there was a mixed approach to representing electronic journals in the catalog (which was an Endeavor Voyager system). In some cases, when electronic access was available for an existing print title, an 856 link to a URL had simply been added to the print bibliographic record. In other cases, catalogers had attached a separate electronic holdings record to existing print bibliographic records. In other cases, completely separate bibliographic records had been imported individually from OCLC. For aggregated databases, bulk records were imported from vendors, creating an additional layer of separate (and less full) records.

In an effort to be more consistent, the Electronic Resources Librarian began discussions with public services librarians about the possibility of moving to a separate record model. There was some resistance to this idea based on the belief that it is easier for patrons when everything is on one record. However, this was not necessarily the most patron-friendly option for several reasons. As long as records for aggregator databases were included in the catalog, there would be at least one separate record for those titles—there was no way to incorporate those into existing print records. On the records that had both print and electronic holdings attached to the bibliographic record, patrons would have to do extensive scrolling to see the entire display. In the end, the public librarians agreed that separating the print and electronic records and connecting them by displaying the 776 linking field would be an acceptable option.

This led to a much cleaner display in the catalog, but it did not solve the problem of keeping up with ever-changing eResource metadata. To address this problem, the library needed to look for answers outside of the catalog. EKU Libraries integrated features offered by its open URL link resolver into the cataloging records. They also began discussions about the necessity of including aggregated database records in the catalog. The low quality of the records and the inherent instability the titles led to many errors in the catalog since most patrons accessed these titles via searching directly in the databases and not in the library catalog. The evolution of the library display at EKU is ongoing, as librarians try to adapt this outdated technology to the needs the 21st century.

At the "Point-of-Need": Usage Patterns of Streaming Video Tutorials

Jack M. Maness
Assistant Professor / Engineering Librarian
University of Colorado at Boulder

Abstract

In an effort to provide instruction to both distance and traditional students at their points of need, the Gemmill Engineering Library at the University of Colorado at Boulder has been providing instruction via streaming video tutorials since 2005. Videos are produced in cooperation with the Center for Advanced Engineering and Technology Education (CAETE) using Tegrity software, a web-based instructional platform. Their content currently ranges from four introductory tutorials (searching the catalog, e-databases, interlibrary loan, and advanced search techniques), seven overviews of discipline-specific resources, four resource-specific tutorials, and three recordings of full-length, in-class lectures.

These videos are posted throughout the University Libraries websites: resource-specific tutorials are found next to links to the resources themselves in subject guides; discipline-specific videos are located at the top of corresponding subject guides; and introductory tutorials and all other videos are also centrally-located on a page within the Engineering Library pages.

This session analyzes the access patterns of over 2,000 uses of these 18 videos. The usage rates of types of videos are compared, and where several points of access of a single video are provided, the access points are compared. And, to the extent possible, on and off campus access is compared.

By understanding where users access what sort of content in virtual instruction, reference and instruction librarians responsible for virtual services can provide that instruction where it appears to be most needed. This session will conclude by suggesting what instructional content should be provided, and where within a library's web-presence it should be provided. The presenters will attempt to clarify the point of need in virtual instruction.

Introduction

In an effort to provide instruction to both distance and traditional students at their points-of-need, the Gemmill Engineering Library at the University of Colorado at Boulder has been providing instruction via streaming video tutorials since 2005. Videos are produced in cooperation with the College of Engineering and Applied Science's Center for Advanced Engineering and Technology Education using web-based instructional platform software that streams audio and visual data of the classroom with instructors' computing terminal. The content of the videos in this analysis ranges from four introductory tutorials, seven overviews of discipline-specific resources, four resource-specific tutorials, and two recordings of full-length, in-class lectures delivered at instructors' requests.

These videos are posted throughout the University Libraries websites: resource-specific tutorials are found next to links to the resources themselves in subject guides and alphabetical resource lists; discipline-specific videos are located at the top of corresponding subject guides; and

introductory tutorials and all other videos are also centrally-located on a Learn to Use the Library page within the Engineering Library pages (see Appendices).

The intent of this analysis is primarily to measure the worth of providing videos for library instruction based on usage statistics, but also to begin an empirically based understanding of what type of content in virtual instruction is most used, and where and how it is most often accessed. This paper will attempt to clarify the "point-of-need" in virtual instruction, with respect to both content and delivery, and can provide a framework for the production of streaming video tutorials.

Defining "Point-of-Need"

In a previous study, the author conducted an extensive review of library literature on the use of streaming video technologies to provide instruction. While some disciplines, such as education, had begun analyzing video instruction's efficacy, little had been done in librarianship with respect to this assessment. The study found that when compared to face-to-face students attending the same lectures, distance students' satisfaction with the videos of the lectures, and their self-reported learning levels, justified the production of such videos (Maness). This data seemed to suggest to the Library that it should produce stand-alone videos to instruct users in the use of resources throughout its website.

But pedagogical decisions then existed regarding what content to teach in the videos and where within the Library's web-sites the videos should be provided. These decisions are often couched in the literature as pertaining to a user's "point-of-need," but this term is not defined with a great deal of specificity in the library literature, or any body of work. Ferguson and Ferguson summarize others quite concisely, and suggest the term is often described as providing not only what a students needs with respect to their motivating factors, but also when and where it is needed (52). In terms of when the instruction is needed, streaming videos have the obvious advantage of being available almost without limit. But in terms of the content taught and location of that content in library web-pages, there is little written regarding this specific technology and service.

When exploring content—what is needed—there are a great many paradigms to follow, many of which conclude what is perhaps best expressed by Tancheva: "Online tutorials should be assignment or at least discipline-based, i.e. it should be anchored" (3). Pursuant to this statement, the current study will follow a framework provided by Southwell and Brook. It is a hierarchical construction termed "four levels of library instruction" that guides this analysis of the videos in a sufficiently structured manner (6-7). In this framework, the authors assert that library instruction is closest to the point-of-need as it becomes more germane to specific tasks and moves along a continuum from Level 1 to Level 4:

1) Library and Information Resources Level -- General library overview and orientation.
2) Discipline Level -- Overview of resources specific to the discipline or subject area.
3) Course Level -- Brief overview and specific to the course.
4) Assignment/Task Level -- Specific to assignment/point-of-need. [L]ibrary instruction is usually more effective when delivered at this 'point-of-need.' (6-7)

It is also worth noting that the value of Level 4 instruction enjoys some empirical validity (Malefant and Demers). Level 4 instruction is desirable, but the fact remains that instruction librarians do not always have access to course and task levels of students' points-of-need, especially when producing online instructional tools, and they provide content in Levels 1 and 2 as best they can. This paper intends to help direct decision making processes in this regard.

With respect to delivery—where the instruction is needed—there is little investigation into where video tutorials are best provided in a library's web-site, nor what content is most popular with users. It has been shown that centrally-located "help" pages, where all tutorials and reference services are provided, are heavily used (Arnold, Csir, and Sias; Trump and Tuttle), but libraries also provide videos on other sorts of pages, such as subject guides, assignment guides, and other pages that are sometimes considered closer to users' points-of-need. And again, anchoring the instruction to the course's or assignment's web-page or course management system is optimal, but not always possible. Librarians are still often left with web-design decisions in how they deliver their instructional content.

Using the Southwell and Brook paradigm, this paper analyzes the use of different levels of content from different levels of referral pages to clarify "point-of-need" with respect to library instruction delivered via streaming video. It primarily intends to focus on Level 2 instruction—how it can be anchored and where it can be provided.

Description of Data

There are four types of videos and three points of access whose usage is under analysis. The first category of video, introductory videos, includes four tutorials ranging from four to thirteen minutes in length. The first is an introduction to the Libraries' online catalog (Chinook). The second is an explanation of navigating e-resources in the Libraries collection (e-Resources). These two videos are longer and considered the most basic, and are followed by an "advanced searching" tutorial that describes the use of Boolean operators, truncation symbols, and other search techniques (Advanced), and a video describing interlibrary loan services (ILL). These videos are only available on the Engineering Library's Learn to Use the Library page, and a page that contains links to all videos, as well as other instructional materials, such as print handouts. In the Southwell and Brook paradigm, these videos and their referral page would be Level 1 instruction: they are overviews and orientations to the library.

The second type of video is discipline or subject-specific (these terms are here used interchangeably). These tutorials average around eight minutes in length and are designed for intermediate users. They introduce basic citation and full-text databases in a given discipline, and also provide tips and techniques for finding often-requested materials that can be difficult to find, such as conference proceedings and technical papers. The disciplines targeted by these videos are aerospace, civil, mechanical, and architectural engineering, as well as engineering management (EM) and interdisciplinary telecommunications (ITP). Statistics on the referral pages for these videos is from the Learn to Use the Library page and several discipline-specific subject guides. In the Southwell and Brook paradigm, they would be Level 2 instruction and their referral pages would be both Levels 1 and 2: they are anchored to disciplines but are provided in pages that are both discipline-oriented and introductory.

The third video group is resource-specific. These videos include intermediate and advanced techniques for accessing and using citation indexes, full-text databases, and a bibliographic management software. Engineering Village (EV), Web of Science (WoS), IEEE Electronic Library (IEL), and RefWorks are the resources described in them. These videos are available at many referral pages throughout the Libraries web-pages, including a complete alphabetical list of all Libraries-provided resources (Resource List), subject guides, and Learn to Use the Library. In the Southwell and Brook paradigm, they would be Level 2 in content and both Levels 1 and 2 in referral page.

The final type of video is recordings of full-length classroom lectures delivered by the author at instructor request. Two are for graduate level courses in interdisciplinary telecommunications (TLEN) and two are for engineering management (EMEN) courses at the same level. The content is similar to the ITP and EM videos, but is much more extensive and anchored to the assignments in the respective courses. These videos were required viewing for many distant students enrolled in the courses at the time of their production, but the usage under analysis does not include those required viewings. It includes only those associated with access from the Learn to Use the Library page, and because they are sequential, the usage for the two TLEN videos and two EMEN videos are combined with one another. In the Southwell and Brook paradigm, they would be both Level 3 and 4 instruction, but their referral page under analysis only Level 1.

The statistics gathered were the viewers' IP address, browser, the referring website, and the date and time of the view. Where the browser information indicated the view was from an automated "spider" or "bot" and not an actual viewer, the data was disregarded. The author's IP address was also eliminated from the analysis to ensure as much of the views as possible were actual viewers, whether patrons or colleagues within the Libraries. While it may have been possible to eliminate Libraries faculty and staff, it was decided that their views are legitimate enough to be included in the analysis, as they are often used to train student assistants within the Libraries.

Results

General Results

Between April 28, 2006 and March 3, 2007, these 17 videos are viewed on 2,280 occasions, an average of 175.38 times per video. Adjusting for the number of weeks each video was available the average view per video per week was 4.48. Conservatively assuming an average video length of ten minutes, the instructional contact hours provided by these videos was 572 contact hours. Extrapolating this data to a twelve-month calendar year, almost 624 contact hours per year were provided by them. These gross usage numbers were significant to the Engineering Library as they proved the concept of providing these videos. Using videos to reach students, then, is now a proven concept.

It also appears that on- and off-campus use of these videos were both significant. The majority of the views, 64%, were off-campus, but a significant one-third was on-campus. A random sampling of the location of off-campus users revealed viewers from many American states, as well as several locations in Europe and India, possibly due to the international nature of some of the College's programs. With respect to providing instruction at the point-of-need of students geographically, the videos succeeded.

Types of Videos

Expecting that users would view videos closest to their points-of-need along the hierarchy described above, some expectations were confirmed by disaggregating the gross usage and frequency of use data by type of video, and some were not (see Table 1).

Table 1
Video Usage by Type

Video	Total Views	Per Week
Introductory Videos		
Chinook	201	4.48
e-Resources	84	1.94
Interlibrary Loan (ILL)	105	2.43
Advanced Searching	59	1.51
Average Per Video	***112.25***	***2.59***
Resource Videos		
Engineering Village (EV)	237	5.35
Web of Science (WoS)	519	11.72
IEEE Electronic Library (IEL)	124	2.86
RefWorks	210	4.84
Average Per Video	***272.5***	***6.19***
Subject Videos		
Civil	66	2.44
Architectural	36	1.36
Aerospace	98	2.89
Mechanical	57	2.2
Telecommunications (ITP)	73	3.06
Engineering Management (EM)	36	1.52
Environmental	46	1.94
Average Per Video	***58.86***	***2.2***
Course Videos		
EMEN	107	4.51
TLEN	222	9.36
Average Per Video	***164.5***	***6.94***

The high use of the course level videos (Levels 3 and 4) confirmed the notion that this type of content is closest to the point-of-need. Though they are only available in the central help page, and therefore have the least amount of access points, students are frequently referred to them by the instructors that taught the courses. Introductory tutorials (Level 1) had much lower use, which would also fit with expectations.

However, that resource level videos were used almost as frequently as course level videos, and that discipline videos were used the least, was surprising. Assuming that both these videos are at Level 2 instruction, the only difference between them is that one is an overview of many resources (discipline videos) and the other of single resources in the discipline (resource videos). It seems that "point-of-need" is more complicated than often suggested, specifically in Level 2 instruction.

Removing WoS from the equation as an aberrant, outlying figure, resource videos still double the per-week use of subject videos (4.35, 2.20 respectively), and views per point of access also corroborates the trend (average views per month per number of access points is 1.56 and 0.67 respectively). From all perspectives, it appears that resource videos are closer to some users' points-of-need than are discipline videos; that the discipline level of instruction can be anchored and delivered in significantly different ways.

Referral Pages

An analysis of where in the web-sites users accessed these Level 2 videos shows that there are significant differences in access patterns. Again, this trend in the data continues to be true even when the WoS video is removed from the data as an outlying figure. The subject videos were accessed primarily from the Level 1 referral page, whereas the resource videos were accessed from subject guides, decidedly Level 2 pages (see fig. 1.).

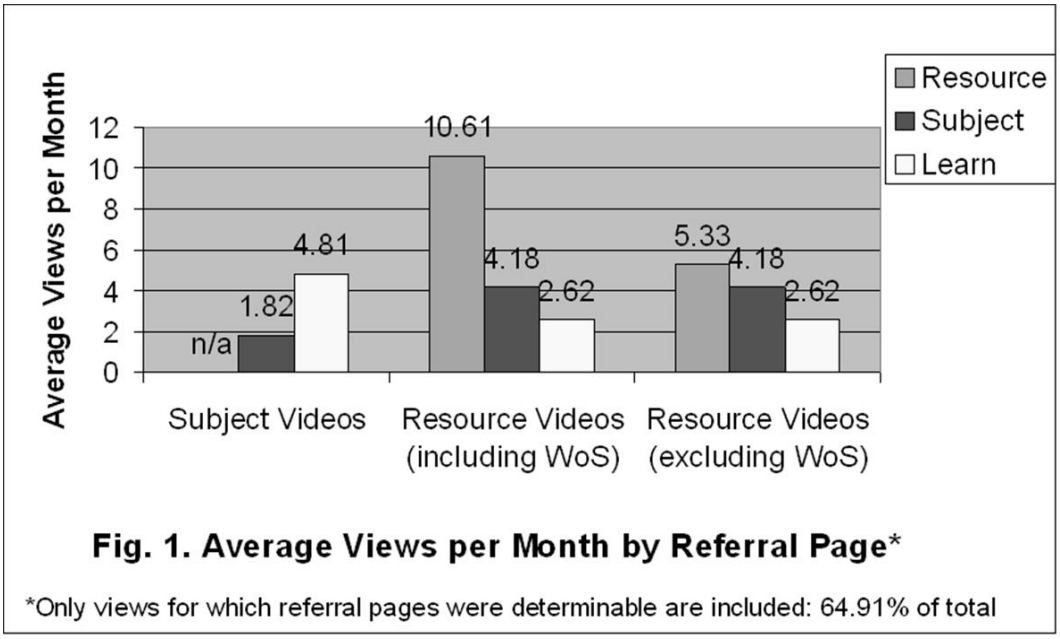


Fig. 1. Average Views per Month by Referral Page*

*Only views for which referral pages were determinable are included: 64.91% of total

A possible explanation for this is that point-of-need varies by user experience and learning style. Less skilled users click on Learn to Use the Library for Level 1 instruction (see fig.2), and navigate to the subject videos as orientations of resources in their discipline (see fig. 3). Though these videos are certainly Level 2, they may be more introductory than the resource videos, and better suited for users needing Level 1 instruction.

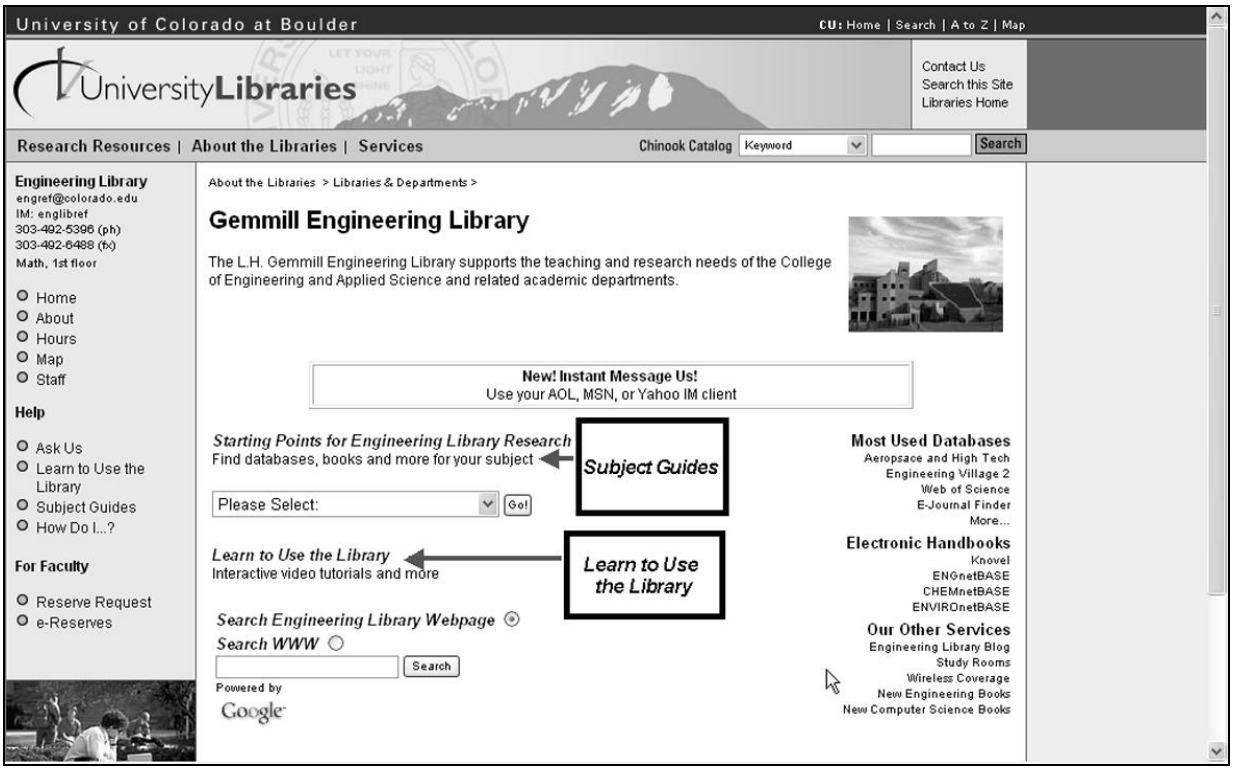


Fig. 2. Access points for Learn to Use the Library and subject guides from Engineering Library Homepage

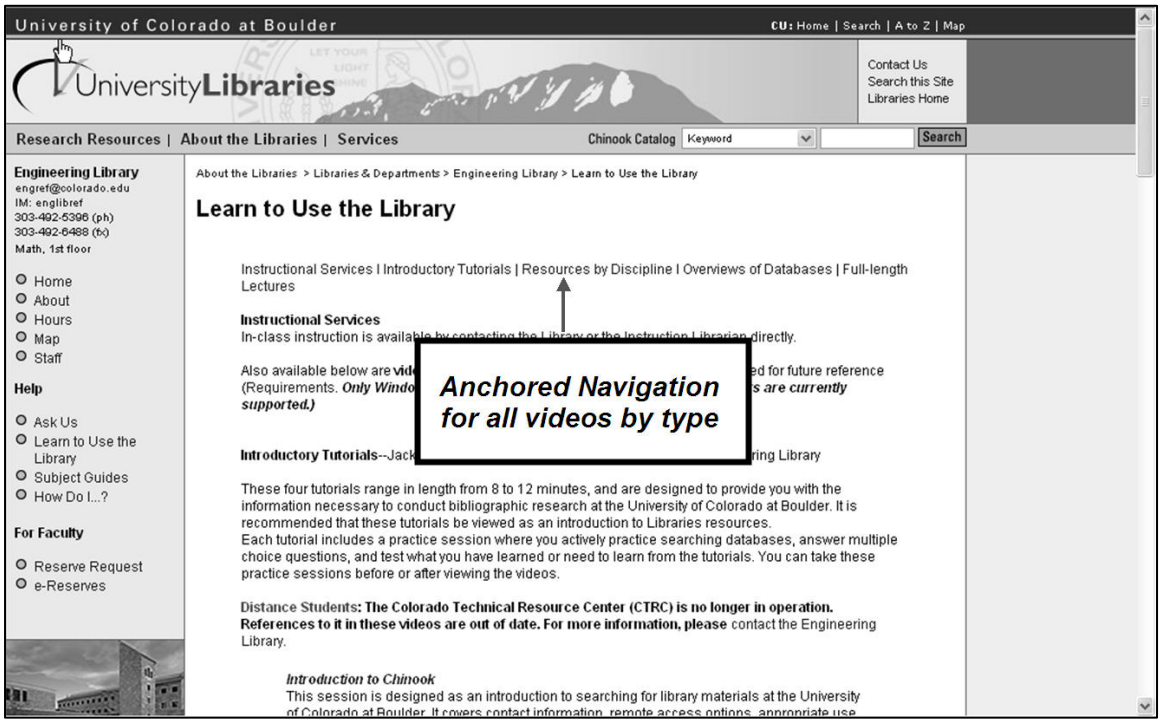


Fig. 3. Learn to Use the Library page

More intermediate users, who feel they know how to use the library, use subject guides or the resource list to find resources of which they may already be aware (see fig. 4); and when they

use subject guides, they pass over the discipline videos and use videos specific to those resources (see fig. 5). Some discipline-based instruction, then, is more introductory and some more advanced.

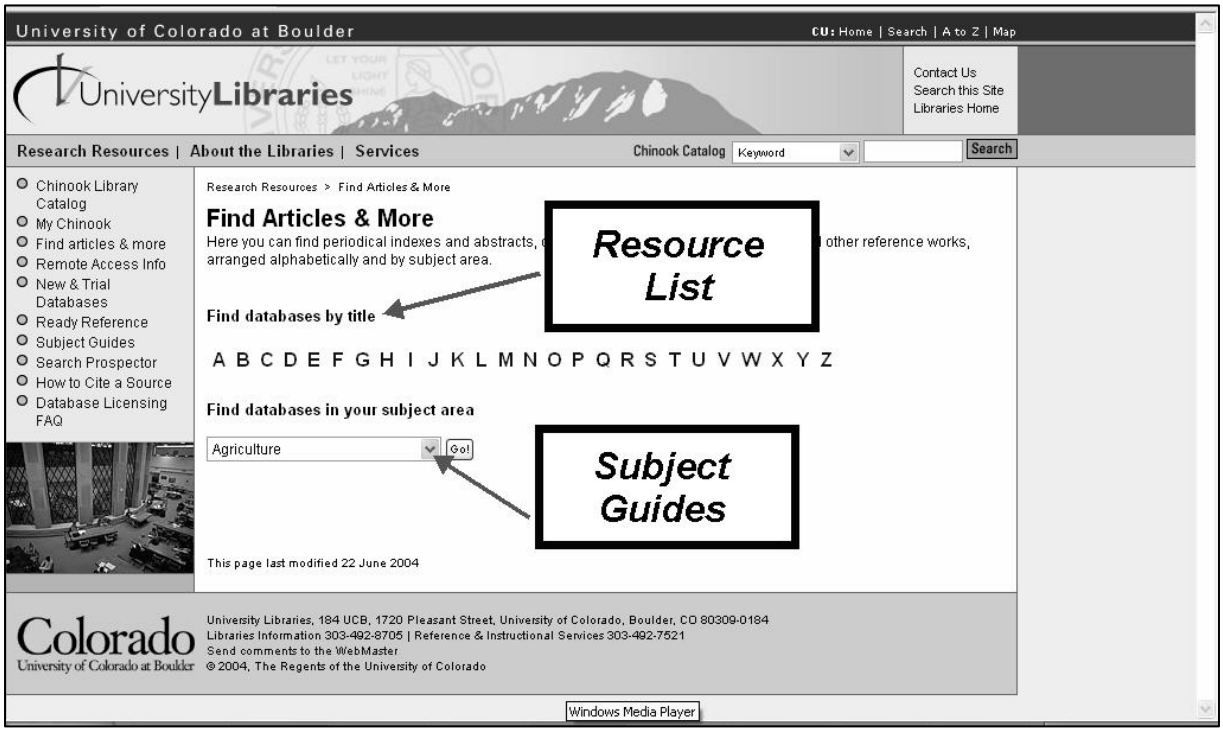


Fig. 4. Further access to subject guides and the resource list

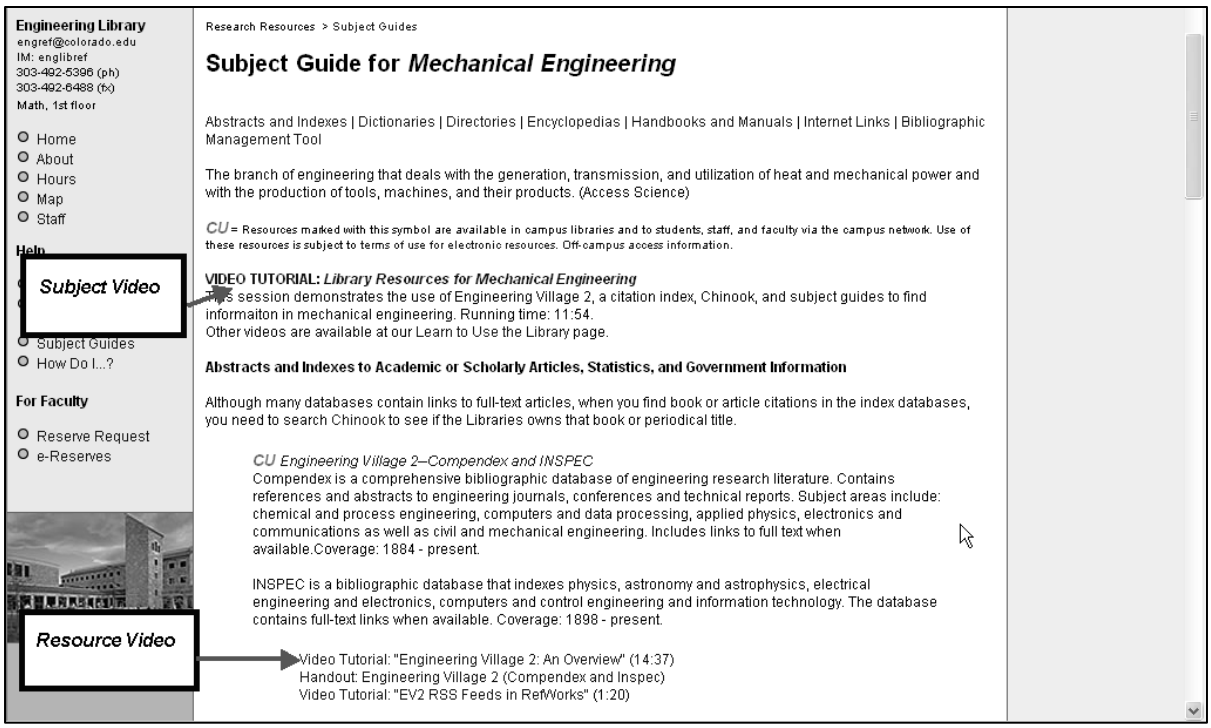


Fig. 5. Sample subject guide with links to subject and resource level videos

It could also be that resource-specific instruction is closer to the student's task in that it is more conducive to their learning style, and that the location of the resource videos is a matter of good timing: "Given the pragmatic nature of science and engineering students, timing of this resource-specific instruction to an assignment in hand is far more effective than 'just-in-case' instruction that touts general search skills without a context in which to use them" (Bracke and Critz 104). In this context, Learn to Use the Library is "just-in-case," and subject guides are more at the point-of-need because students are searching for a specific resource. Tools trump process in this pedagogy, and Level 2 instruction is for most users best tailored to specific resources and not discipline-based overviews of them. Future qualitative analysis of such patterns would be necessary to verify such a speculation.

Conclusions

The use of the videos was significantly high, validating the resources spent in producing them. Geographically, the videos were accessed both on and off-campus quite frequently, verifying that virtual instruction in general is to some degree at users' points-of-need.

Assuming that users' access of videos is at least to some degree indicative of their need for them, the point-of-need of these videos seems to be of at least two natures: content and location. Content point-of-need agreed to some extent with conventional expectations. Videos whose content was directed at courses and assignments were the most used, and orientation and introductory tutorials were the least used. But videos specific to subjects and disciplines, and those specific to resources for those disciplines, had significantly different usage and access patterns.

With respect to location, to where the content is delivered in web-pages, the data furthers an understanding of this aspect of "point-of-need." Discipline-based instruction anchored to the discipline itself is accessed from web-pages more likely to be used by novice users, and discipline-based instruction anchored to specific resources is accessed from web-pages intended for more intermediate users. But this discrepancy could also be explained by learning styles of engineering students. At the very least, it appears that "point-of-need" instruction is a more complex and customizable theory than most current literature suggests.

"Point-of-need" in virtual video instruction then, is not only about content, but form, not only pedagogy, but web-design. It may also vary by user and environment, and any framework for employing its tenets should be adjusted accordingly. Anchoring instruction not only to types of content, but to place, skill level, and learning style truly reaches the user's point of need.

Works Cited

Arnold, Judith M., Floyd Csir, and Jennifer Sias. "Does Anyone Need Help Out there? Lessons from Designing Online Help." Internet Reference Services Quarterly 9.3/4 (2004): 115-34. Library Literature & Information Science Full-Text. WilsonWeb. Norlin Library, Boulder, CO. 5 June 2007.

Bracke, Marianne S., and Lori J. Critz. “Re-Envisioning Instruction for the Electronic Environment of a 21st Century Science-Engineering Library.” Science &Technology Libraries 20(2/3): 97-106. Library Literature & Information Science Full-Text.WilsonWeb. Norlin Library, Boulder, CO. 5 June 2007.

Ferguson, K. Stuart, and Alice Ferguson. “The Remote Library and Point-of-Need User Education: An Australian Academic Library Perspective.” Journal of Interlibrary Loan, Document Delivery & Information Supply 15.3 (2005): 43-60. Library Literature & Information Science Full-Text. WilsonWeb. Norlin Library, Boulder, CO. 5 June 2007.

Malenfant, Chuck, and Nora Egan Demers. “"Collaboration for Point-of-Need Library Instruction.” Reference Services Review 32.3 (2004): 264-73. Library Literature & Information Science Full-Text. WilsonWeb. Norlin Library, Boulder, CO. 5 June 2007.

Maness, Jack M. “An Evaluation of Library Instruction Delivered to Engineering Students via Streaming Video.” Issues in Science and Technology Librarianship. Number 47: (Summer, 2006). 25 May 2007 <http://www.istl.org/06-summer/refereed.html>.

Southwell, Karen, and Judith Brook. “Embedded Assignment Guides - Point-of-need Instruction on the Web.” Georgia Library Quarterly 41.1 (2004): 5-8. Library Literature & Information Science Full-Text. WilsonWeb. Norlin Library, Boulder, CO. 5 June 2007.

Tancheva, K. “Online Tutorials for Library Instruction: An Ongoing Project Under Constant Revision.” Learning to Make a Difference: Proceedings of the ACRL 11th National Conference, April 10-13, 2003, Charlotte, North Carolina. Ed. Hugh A. Thompson. Paper delivered at the Eleventh ACRL National Conference. Chicago: Association of College and Research Libraries, 2003. 20 May 2007 <http://www.ala.org/ala/acrl/acrlevents/tancheva.PDF>

Trump, Judith F., and Ian P. Tuttle. “Here, There, and Everywhere: Reference at the Point-of-Need.” The Journal of Academic Librarianship 27.6 (2001): 464-6. Library Literature & Information Science Full-Text. WilsonWeb. Norlin Library, Boulder, CO. 5 June 2007.

The Impact of Usage Statistics

Bob Schufreider
US Sales Manager
ScholarlyStats (MPS Technologies)

Ed Goedeken
Collections Coordinator
Iowa State University

Abstract

With the increasing dominance of online journals and databases, libraries are being provided with an ever-increasing amount of usage statistics, reported by a large number of vendors in a variety of different formats.

This usage data is of immense value to libraries and allows them to analyze trends in user behavior, identify training issues, easily provide management with usage reports, and more. By evaluating this information, libraries are able to base budgeting decisions upon real usage, and therefore to better optimize the resources they provide to their users.

While the statistics offer an excellent opportunity to libraries, it is only possible to effectively analyze the information if the data from different vendors is in a standard, comparable, format. Over the last two years MPS has worked with libraries, as well as with the COUNTER and SUSHI initiatives, to make this data available to institutions in a clear and standard format.

This presentation will share some of these findings, providing practical feedback about how libraries are using usage statistics (and integrating these statistics into other library data) to push content out to users, and to make informed decisions about subscriptions.

Government Information in the All-Electronic Age and the Implications for Libraries

Laura Sare
Government Information Librarian
Texas A&M University

Abstract

Like a lot of medium sized academic depository libraries, our library gets our bibliographic records for federal government documents through Marvice. Back in the late 90s we would import the monthly record load and a cataloging librarian would double-check each record, noting problems and sending those problems to the documents department to be resolved. The cataloger would also create a holding record for electronic only bibliographic records to show a linkable URL in the OPAC.

In the past few years, as more and more items were available online, it became a full time job for one cataloger to create electronic holdings in our OPAC. Something had to be done because our cataloging department could not have one librarian completely devoted to government documents. What our library developed was a two part system to deal with our monthly record loads. First, a programmer at our consortia leader Texas A&M created a script that would automate the creation of electronic holdings. The second part of our system was completed by our acquisitions librarian who created various reports to help us locate the problem records the cataloging librarian was finding and sending to the documents department.

Between the script and the reports, the man hours devoted to documents fell so much that cataloging librarians now have time to work on retrospective cataloging, making more government documents available though the library catalog than before.

Introduction

In 1976 the Government Printing Office (GPO) began creating MARC records for items distributed to depository libraries in the Federal Depository Library Program (FDLP). The company Marcive is a vendor of various bibliographic services that many libraries use, including West Texas A&M University's (WTAMU) Cornette Library, to help manage these records from GPO. Around the turn of the 21st century, federal agencies began to publish their information in online-only formats in significant numbers, and GPO adjusted accordingly by providing records for these electronic documents.

In this paper, I want to focus on a specific problem the Cornette Library faced a few years ago when managing these electronic format documents began to overwhelm personnel and procedures. First, some background information. The library uses Ex Libris' Voyager integrated library system. This catalog consists of bibliographic records, holding records, and item records. The Documents Department purchases the Marcive record service to provide shipping list, full, and authority records for government documents. The shipping list records are temporary records that are used to attach tangible items to holding records as soon as they are received so

government documents can be made available to find and check-out as quickly as possible. These temporary records are overlaid monthly by the full records, which are complete bibliographic records.

History

When the library migrated over to Voyager in 2000, the cataloging staff decided to continue the practice of manually creating holding records for electronic-only documents. Back in the late 1990s, the imported monthly full record load was double-checked by a cataloging librarian who looked at each record, noted problems and sent those errors to the Documents Department to be resolved. The cataloger also created a holding record for electronic-only bibliographic records to show a linkable URL in the OPAC.

For records to display in the Voyager OPAC, local library cataloging rules require holdings records be created for electronic-only documents. The previous Documents Librarian and I both believe that it is important to have electronic-only items cataloged in the library OPAC because some patrons are not familiar enough with the federal government to search government web sites for information. Also, patrons may not know or care if the information is coming from a government agency. Having government documents in the catalog attracts patrons to the documents unit, showing them that the department has more to offer than "boring" Congressional hearings and debates.

Most of the physical processing of government documents is completed in the Documents Department. One student worker handles the shipments from GPO, stamping, labeling, making claims, etc. Another student worker manually creates holding and item records for tangible documents in the catalog. These are double-checked by the Library Tech.

Problem

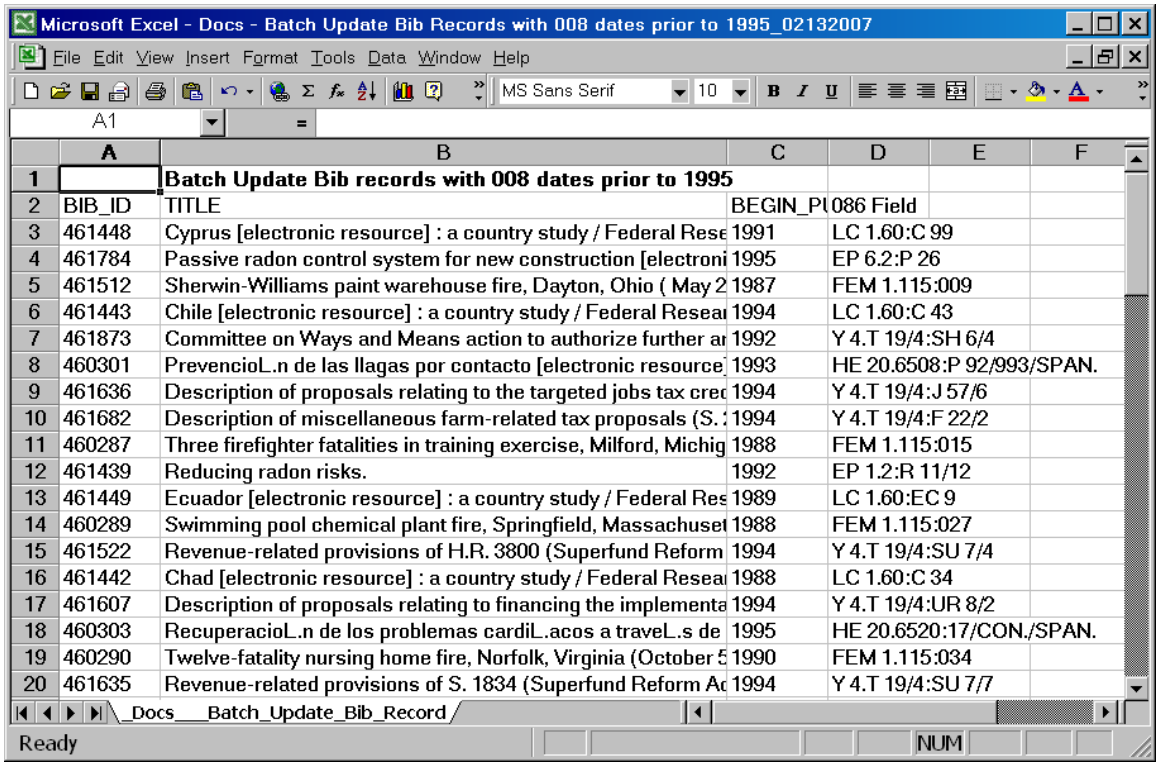
As the 21st century progressed, more electronic-only documents were being produced by federal agencies and made available through records created by GPO. By the fall of 2003, there were so many new bibliographic records with an 856 field in the Marcive loads, it was becoming too much work for the cataloging librarian to manually create the necessary electronic holdings records.

Solution

Based on statistics from GPO (Administrative Notes), I knew that the amount of documents in electronic format was only going to grow and I started looking for automation options. There was no reason to manually create holding records for electronic items, since they did not require barcodes and item records attached to them like the tangible documents. Researching the issue started drawing attention to the Marcive loads. The staff at Marcive was eager to help and provided several options for dealing with electronic documents. Unfortunately their suggestions involved changes to our profile that I did not want to do because I already had several special set-ups in the profile. Since a Marcive solution was not available, I decided to include the acquisitions librarian on this problem. After I told her what steps had to be completed and rules to be followed, she thought we could use the library's consortia ties to get help.

As a member of the Texas A&M (TAMU) consortia, she contacted a system librarian in College Station and told them about this problem and the goals we wanted to achieve. TAMU's programmers came up with a Perl script to run after receiving the full record Marcive load every month. The script automatically creates an electronic holding record for each bibliographic record with an 856 field. For updated bibliographic records sent from Marcive, the script will automatically delete the previous electronic holding record and create a new one based on the updated bibliographic record. The script does not affect holding records for tangible documents. Those are corrected manually, since someone usually has to update the SuDoc label on the item.

Now that the automation of electronic holdings issue was taken care of, I still wanted a way to be notified of all the problem records the cataloging librarian used to provide for the department. I told the acquisitions librarian about the types of record clean-up problems the monthly loads produced. I also explained what fields of the bibliographic record needed attention, such as the 086 Government Document Classification Number field. Based on this information she created several monthly reports to catch the errors for tangible and electronic items. These reports are run after TAMU runs the Perl script and are detailed below.


Microsoft Excel - Docs - Batch Update Bib Records with 008 dates prior to 1995_02132007

File Edit View Insert Format Tools Data Window Help

MS Sans Serif 10

A1 =

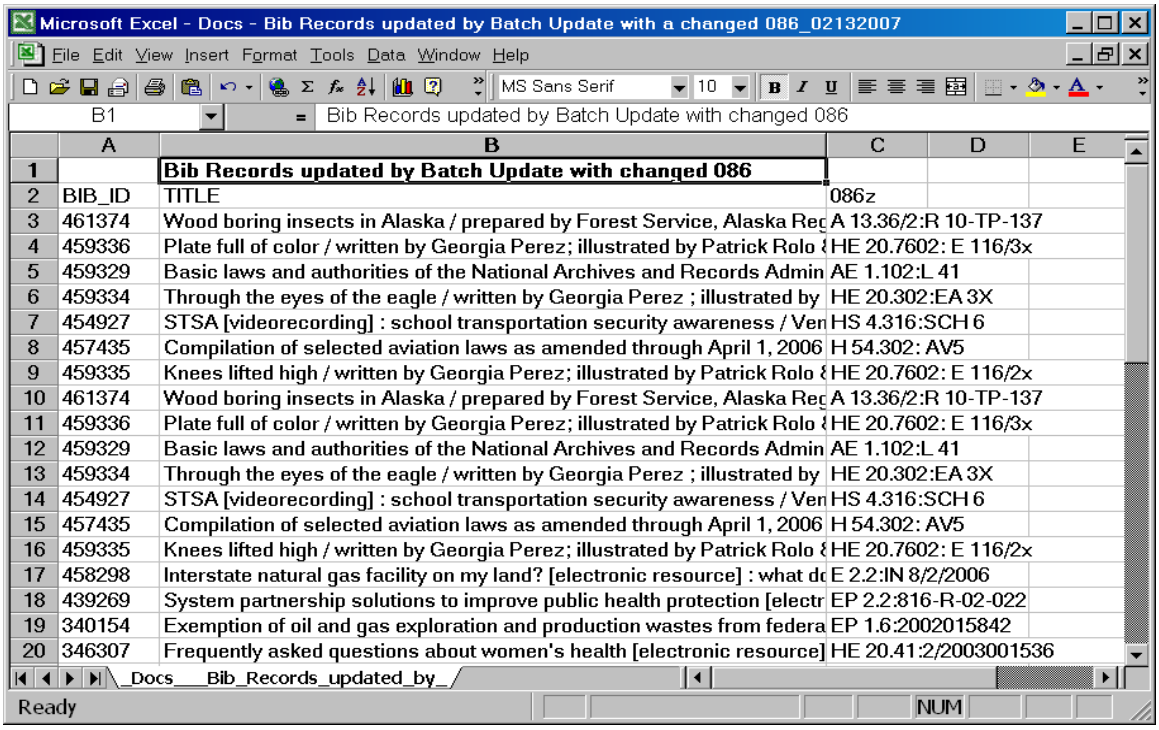
	A	B	C	D	E	F
1		**Batch Update Bib records with 008 dates prior to 1995**				
2	BIB_ID	TITLE	BEGIN_PU	086 Field		
3	461448	Cyprus [electronic resource] : a country study / Federal Rese	1991	LC 1.60:C 99		
4	461784	Passive radon control system for new construction [electroni	1995	EP 6.2:P 26		
5	461512	Sherwin-Williams paint warehouse fire, Dayton, Ohio (May 2	1987	FEM 1.115:009		
6	461443	Chile [electronic resource] : a country study / Federal Resea	1994	LC 1.60:C 43		
7	461873	Committee on Ways and Means action to authorize further ar	1992	Y 4.T 19/4:SH 6/4		
8	460301	PrevencioL.n de las llagas por contacto [electronic resource]	1993	HE 20.6508:P 92/993/SPAN.		
9	461636	Description of proposals relating to the targeted jobs tax cred	1994	Y 4.T 19/4:J 57/6		
10	461682	Description of miscellaneous farm-related tax proposals (S.	1994	Y 4.T 19/4:F 22/2		
11	460287	Three firefighter fatalities in training exercise, Milford, Michig	1988	FEM 1.115:015		
12	461439	Reducing radon risks.	1992	EP 1.2:R 11/12		
13	461449	Ecuador [electronic resource] : a country study / Federal Res	1989	LC 1.60:EC 9		
14	460289	Swimming pool chemical plant fire, Springfield, Massachuset	1988	FEM 1.115:027		
15	461522	Revenue-related provisions of H.R. 3800 (Superfund Reform	1994	Y 4.T 19/4:SU 7/4		
16	461442	Chad [electronic resource] : a country study / Federal Resea	1988	LC 1.60:C 34		
17	461607	Description of proposals relating to financing the implementa	1994	Y 4.T 19/4:UR 8/2		
18	460303	RecuperacioL.n de los problemas cardiL.acos a traveL.s de	1995	HE 20.6520:17/CON./SPAN.		
19	460290	Twelve-fatality nursing home fire, Norfolk, Virginia (October 5	1990	FEM 1.115:034		
20	461635	Revenue-related provisions of S. 1834 (Superfund Reform Ac	1994	Y 4.T 19/4:SU 7/7		

Docs___Batch_Update_Bib_Record

Ready NUM

Fig. 1. The Pre-1995 Report.

WTAMU's Cornette Library started barcoding government documents to be included in the online catalog in 1995. With all the retrospective work being done by other libraries, Marcive sends out many records for items previous to 1995. This report notes all pre-1995 records so that the Documents Department may search for these items in its collection that are not barcoded and add them to the OPAC.



Microsoft Excel - Docs - Bib Records updated by Batch Update with a changed 086_02132007

File Edit View Insert Format Tools Data Window Help

MS Sans Serif 10

B1 = Bib Records updated by Batch Update with changed 086

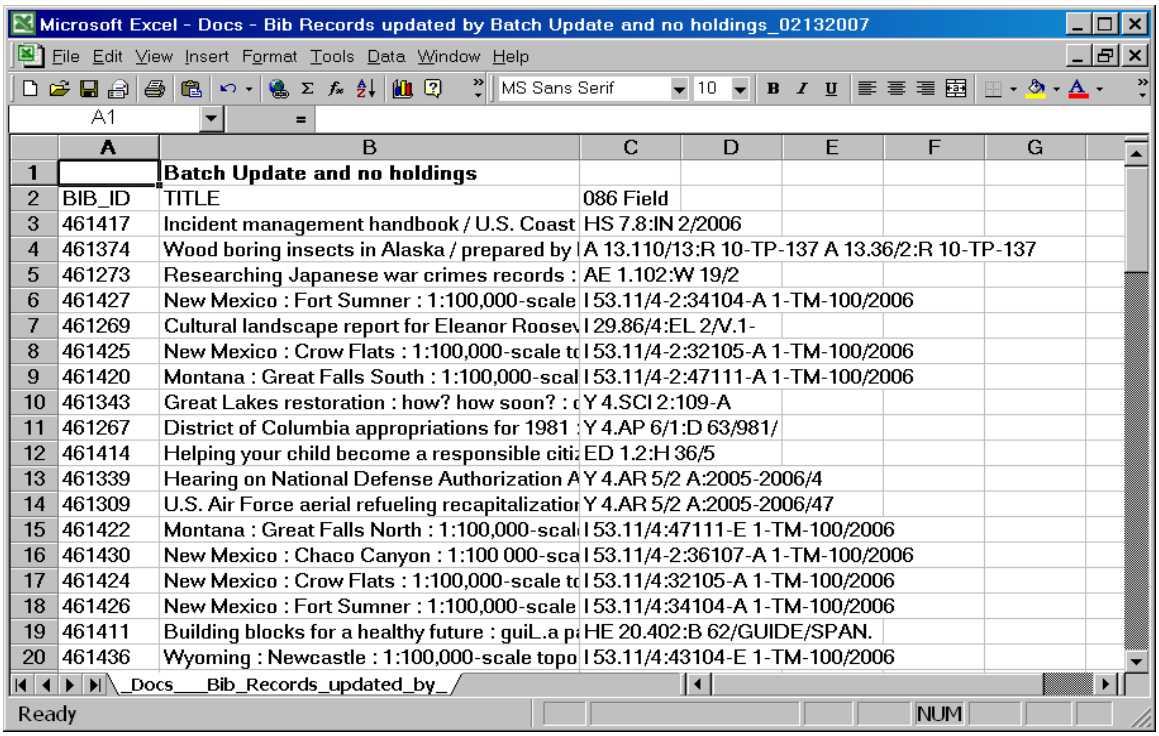
	A	B	C	D	E
1		**Bib Records updated by Batch Update with changed 086**			
2	BIB_ID	TITLE	086z		
3	461374	Wood boring insects in Alaska / prepared by Forest Service, Alaska Reg	A 13.36/2:R 10-TP-137		
4	459336	Plate full of color / written by Georgia Perez; illustrated by Patrick Rolo {	HE 20.7602: E 116/3x		
5	459329	Basic laws and authorities of the National Archives and Records Admin	AE 1.102:L 41		
6	459334	Through the eyes of the eagle / written by Georgia Perez ; illustrated by	HE 20.302:EA 3X		
7	454927	STSA [videorecording] : school transportation security awareness / Ver	HS 4.316:SCH 6		
8	457435	Compilation of selected aviation laws as amended through April 1, 2006	H 54.302: AV5		
9	459335	Knees lifted high / written by Georgia Perez; illustrated by Patrick Rolo {	HE 20.7602: E 116/2x		
10	461374	Wood boring insects in Alaska / prepared by Forest Service, Alaska Reg	A 13.36/2:R 10-TP-137		
11	459336	Plate full of color / written by Georgia Perez; illustrated by Patrick Rolo {	HE 20.7602: E 116/3x		
12	459329	Basic laws and authorities of the National Archives and Records Admin	AE 1.102:L 41		
13	459334	Through the eyes of the eagle / written by Georgia Perez ; illustrated by	HE 20.302:EA 3X		
14	454927	STSA [videorecording] : school transportation security awareness / Ver	HS 4.316:SCH 6		
15	457435	Compilation of selected aviation laws as amended through April 1, 2006	H 54.302: AV5		
16	459335	Knees lifted high / written by Georgia Perez; illustrated by Patrick Rolo {	HE 20.7602: E 116/2x		
17	458298	Interstate natural gas facility on my land? [electronic resource] : what do	E 2.2:IN 8/2/2006		
18	439269	System partnership solutions to improve public health protection [electr	EP 2.2:816-R-02-022		
19	340154	Exemption of oil and gas exploration and production wastes from federa	EP 1.6:2002015842		
20	346307	Frequently asked questions about women's health [electronic resource]	HE 20.41:2/2003001536		

_Docs___Bib_Records_updated_by_

Ready NUM

Fig. 2. Changed SuDoc Number Report.

This report pulls all the bibliographic records with a subfield z in the 086 field. The subfield z signifies the SuDoc number has been changed and that the documents label on the item and the tangible holding records in the catalog needs to be updated manually.



Microsoft Excel - Docs - Bib Records updated by Batch Update and no holdings_02132007

File Edit View Insert Format Tools Data Window Help

MS Sans Serif 10

A1 =

	A	B	C	D	E	F	G
1		**Batch Update and no holdings**					
2	BIB_ID	TITLE	086 Field				
3	461417	Incident management handbook / U.S. Coast	HS 7.8:IN 2/2006				
4	461374	Wood boring insects in Alaska / prepared by	A 13.110/13:R 10-TP-137 A 13.36/2:R 10-TP-137				
5	461273	Researching Japanese war crimes records :	AE 1.102:W 19/2				
6	461427	New Mexico : Fort Sumner : 1:100,000-scale	I 53.11/4-2:34104-A 1-TM-100/2006				
7	461269	Cultural landscape report for Eleanor Roosev	I 29.86/4:EL 2/V.1-				
8	461425	New Mexico : Crow Flats : 1:100,000-scale to	I 53.11/4-2:32105-A 1-TM-100/2006				
9	461420	Montana : Great Falls South : 1:100,000-scal	I 53.11/4-2:47111-A 1-TM-100/2006				
10	461343	Great Lakes restoration : how? how soon? : c	Y 4.SCI 2:109-A				
11	461267	District of Columbia appropriations for 1981 :	Y 4.AP 6/1:D 63/981/				
12	461414	Helping your child become a responsible citi	ED 1.2:H 36/5				
13	461339	Hearing on National Defense Authorization A	Y 4.AR 5/2 A:2005-2006/4				
14	461309	U.S. Air Force aerial refueling recapitalizatior	Y 4.AR 5/2 A:2005-2006/47				
15	461422	Montana : Great Falls North : 1:100,000-scal	I 53.11/4:47111-E 1-TM-100/2006				
16	461430	New Mexico : Chaco Canyon : 1:100 000-sca	I 53.11/4-2:36107-A 1-TM-100/2006				
17	461424	New Mexico : Crow Flats : 1:100,000-scale to	I 53.11/4:32105-A 1-TM-100/2006				
18	461426	New Mexico : Fort Sumner : 1:100,000-scale	I 53.11/4:34104-A 1-TM-100/2006				
19	461411	Building blocks for a healthy future : guiL.a p	HE 20.402:B 62/GUIDE/SPAN.				
20	461436	Wyoming : Newcastle : 1:100,000-scale topo	I 53.11/4:43104-E 1-TM-100/2006				

_Docs___Bib_Records_updated_by_

Ready NUM

Fig. 3. Bibliographic Records with no Holdings Report.

This catches shipping list/full record overlay problems and items that come only in full level records such as maps.

Conclusion

The benefit of automating the creation of electronic holding records is saving time. An added benefit for the library was the opportunity to reorganize staff. Documents work dominated almost all the time of a cataloging librarian when she created holding records manually. That librarian has since left the library and the cataloging unit is not going to replace her position in that department. The position will be moved to one of the public service desks. The monthly acquisitions reports are catching all the problems needing corrections and the online catalog database is maintained accurately.

But there are drawbacks:

1. Knowing the collection: One drawback is that since the electronic holding records are created automatically, no one is "seeing" what types of documents are being added to the OPAC. It was easy in the tangible document days to just peruse the new publications coming in and get a feel for what was available. Now to get a good perspective of the new items coming into the collection, I have to find time to browse the New Electronic Title list (http://catalog.gpo.gov/F/?func=file&file_name=find-net&local_base=NEWTITLE), but that covers all government documents in the FDLP program, and the library only select about 60% of that.
2. Staff work: Another problem with the reports is that they need a library staff member to sort them out. The Bibliographic Records with no Holdings Report needs someone knowledgeable to study each record and decide what the problem is and fix it. The only task student workers can do is to find the documents needing barcodes and item records or SuDoc labels changed.
3. Statistics: Many of the items received now are in electronic format only. Unless I work with a patron doing research, I do not know what types of electronic-only documents and information users are wanting from the documents collection. I do not get any item-level data like I do when tangible items are circulated. I also do not get usage statistics. Part of the reason for this is as a member of the Texas A&M system, the OPAC sits on a TAMU server. Therefore, we cannot rely on the statistics from the PURL referral service from GPO (http://www.access.gpo.gov/su_docs/fdlp/coll-dev/referrals/index.html). The referrals are attributed to the consortium, and it is impossible to tell which referrals came from individual libraries. Therefore, the only hits we get from this service are when I link a PURL from a web guide posted on WTAMU's university server.

These drawbacks are minor issues. Between the script and the reports, the man hours devoted to documents decreased so much that another cataloging librarian now has time to work on retrospective cataloging documents, making more government information prior to 1995 available though the library catalog than before.

Works Cited

United States. "Library Programs Service FY 2002 Annual Report." Administrative Notes 23.13 (2002): 10.

Thinking inside the Box:
Applying Design Principles to Your Physical Library

Denyse K. Sturges
Reference Librarian & Bibliographer
University of North Dakota

Abstract

The library's built environment sends signals to everyone entering its doors and creates expectations in those who enter. What does your physical library say to the people walking through its doors?

This presentation explores the signals and signs that emerge from the built environment, specifically the library. A checklist of visual attributes and their uses will be devised based on literature drawn from architecture, aesthetics, sociology, and space planning. Examples drawn from the built environment will help demonstrate the expectations these features raise in anyone who encounters them. This presentation will also explore how unmet expectations of library patrons can influence their perception of the library in general as well as the library building in particular.

Because physical libraries are expensive to remodel, this presentation will suggest some workarounds that can help solve or diminish common library problems. Attendees will have the opportunity to discuss how their libraries currently address and solve cognitive disconnects as well as how these challenges might be addressed in the future.

Keeping on Track

Lori Mardis
Information Librarian
Northwest Missouri State University

Lisa Jennings
Acquisitions Specialist
Northwest Missouri State University

Kathy Ferguson
Electronic Serials Specialist
Northwest Missouri State University

Sara Duff
Coordinator of Technical Services
Northwest Missouri State University

Abstract

Information overload isn't just restricted to the web. With the proliferation of electronic resources, increased instruction, limited staffing, static budgets, and constrained time, it's easy to get lost in the details. Presenters will open the session by asking what common details attendees are currently trying to manage and soliciting from the audience issues that have been solved from locally developed or purchased systems.

Multiple units within B. D. Owens Library have also made forays into information management systems by creating or adapting approaches to streamline work processes. Examples that will be shared include:

- Electronic Resource Management Database
- Planning Calendars and Decision Trackers
- Electronic Journal Subscription Tracker (subscriptions)
- Training Scheduler
- RefPole
- Instruction Pole
- EReserve Tracker

The benefits of using these systems include organization of workflow, prioritization of tasks, establishment of standards, reduction of workload, data analysis, facilitation of information sharing across library teams, and identification of inconsistencies. This presentation will showcase tools that have benefited Access Services, Collection Management, Information Services, and Technical Services (which includes Acquisitions, Cataloging, and Serials). Presenters will also share the history, alternatives, detriments, administration, optimization aspects, maintenance, and collaboration process. In conclusion, presenters will discuss future improvements and possible initiatives into other information management systems.

Designing YouTube Instructional Videos to Enhance Information Literacy

Robert Monge
Instructional Services Librarian
University of South Dakota

Abstract

“How come you don’t clap for me?” asked a Speech 101 instructor after a library instruction session. A student leaned over and whispered, "Because you don’t show us videos." YouTube style videos can do more than entertain students. They have the power to reinforce valuable information literacy lessons raised in class. This paper will discuss the importance of incorporating visual material based on experiential learning theory; how to design short videos that reinforce the Association of College and Research Libraries Information Literacy Standards; and how to implement these videos in traditional classroom instruction, online and distance education classes, and web based tutorials. In particular, the paper will focus on why it is important that librarians work to actively create original content instead of relying on what is posted on the Internet. The paper will include several scripts from videos specifically created for instruction at the University of South Dakota.

Introduction

“How come you don’t clap for me?” asked a Speech 101 instructor after a library instruction session. A student leaned over and whispered, “Because you don’t show us videos.” Despite all the excitement about new media and Web 2.0, the academy has been slow to adapt to this new wave of digital applications. In particular, visual information has been disparaged in the academic community or at best is thought of merely as a gimmick and not a legitimate means of engaging students.

> It is no longer possible to think about literacy in isolation from a vast array of social, technological, and economic factors. Two distinct yet related factors deserve to be particularly highlighted. These are, on the one hand, the broad move from the now centuries-long dominance of writing to the new dominance of the image and, on the other hand, the move from the dominance of the medium of the book to the dominance of the medium of the screen. (Kress 1)

Visual literacy is a challenge to how knowledge and information is created and transmitted. This is the heart of the academic resistance. Lecture and text are still important, but they are now only part of the picture and not the only means of conveying knowledge. When we embrace the medium of the image along side the more traditional methods of instruction, we empower ourselves with a whole new way of teaching.

What is Visual Literacy?

"Visual literacy in its broadest sense will be understood as the process by which images are constructed, organized, and expressed to communicate meaning, as well as the competencies associated with these processes" (Nelson 66). The key element from this definition is the idea that images are used to communicate meaning. Visual literacy is not about eye candy. It is about knowledge. While most experiential learning theories (from Kolb to Dunn and Dunn) incorporate some form of visual learning theory in their models, Dr. Allan Paivio's (University of Western Ontario) dual-coding theory highlights precisely why instructors need to pay attention to visual as well as verbal/written methods of instruction. "Paivio's dual-coding theory (1990) proposes that rather than just one sensory memory, one short-term memory, and long term memory, as might be implied in information processing theory, there are actually separate memory systems for different types of information: one for verbal information and one for imagery information" (Lohr 37). Verbal information consists of both written language and the spoken word while imagery information consists of non-verbal (taste, touch, smell) and visual objects (Paivio 57). Verbal and imagery codes work independently of each other as a means of recall but come together to create meaning (see fig. 1). But, as the verbal has been favored in classroom instruction, it is important to look at ways in which we can add and enhance our instructions with visual information because it increases the chance of memory recall. Visual literacy is not meant to replace lecture and text but to be presented equally or at least have a raised profile in library instruction (see fig. 2). It is important to note that visual literacy is not merely the transfer of verbal/text based information into visual form (i.e. the text heavy PowerPoint lecture). Images must be created and designed separately with the specific intent of presenting concepts in a visual format.

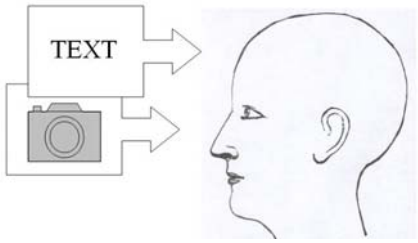


Fig. 1. Paivio's Dual Coding Theory from Monge, Robert. Cartoon. 2007.

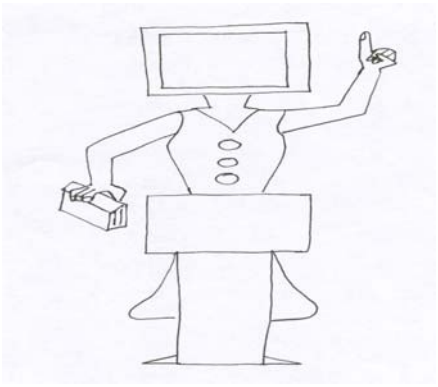


Fig. 2. Text-Lecture-Visual Instruction from Monge, Robert. Cartoon. 2007.

Why YouTube?

Don Hertzfeldt's "My Spoon is Too Big I'm a Banana" segment portion of the Rejected video on YouTube is a cult favorite among YouTubers, but it isn't exactly a highly intellectual visual experience. (The video consists of a stick figure with an oversize spoon and a small bowl simply stating "My spoon is too big" and then a drawing of a banana walks in and says, "I'm a Banana"). In fact, most of YouTube is for entertainment and not education. Why would librarians want to go slumming in such a low-class neighborhood? Access and convenience are the biggest reasons. "Without much fuss and no required registration, you can quickly…click on the videos you want to watch, and, within a matter of seconds, have them appear on screen" (Arditio). Students don't have to download any software or type in any passwords to get access to content. Plus, students

can easily return to YouTube to watch the video again or share it with a friend. There is no need to download or save videos.

What is the appeal of YouTube for librarians? Students do not arrive on campus with the necessary skills to effectively negotiate the library. Instructional videos posted on the library homepage run the risk of being ignored because they can't be found or students don't know where to look. Today's students are comfortable with technology but that doesn't translate into being comfortable with all forms of technology. Students are simply comfortable with the technology they use in their daily lives. Instructional videos should lead back to the library; however, they should start with mediums with which students are familiar (see fig 3). Librarians can promote valuable information literacy lessons by posting videos on YouTube without having to teach students how to access the videos or generate buy in.

Fig. 3. Learning to Use the Library from Monge, Robert. Cartoon. 2007.

Designing YouTube Instructional Videos: Content Matters

Because YouTube exists first as an entertainment venue, instructors may feel the pressure to indulge in the funny. There is nothing wrong in creating a humorous or entertaining video, but in no way, shape, or form should educational content be sacrificed for pure entertainment value. One can apply David Thurnburg's Ten x Ten Method. When assigning presentations to his design class, he told his students he would give one to ten points for visual design elements and one to ten points for educational content; then he would simply multiply the two together to get their grade. It quickly became obvious to the students that a visually interesting presentation with no educational content would produce a failing grade (Burmark 62). The same goes for library instructional videos. Visual literacy is not just about the image. It is the information that the image conveys. The image shouldn't be the spoonful of sugar that makes the text/verbal information go down. The image and the text/verbal should both be equally rich in content and meaning.

Designing YouTube Instructional Videos: ACRL and Information Literacy

An easy way to make sure library instructional videos are bursting with educational content is to link them to the Association of College and Research Libraries' Information Literacy Competency Standards for Higher Education. Consider the following scenario (see fig.1 for full script):

The scene is shot from a point-of-view angle. A group of students approach and hand over an invitation to a party. But, the invitation has a catch. In order to get into the party,

one must bring a date. There are three options to look for a date. The immediate room the viewer is in (which only has one or two desirable prospects), a common area down the hall (which has a better selection of dates), or the option to wait for three days when the person the viewer really wants to ask comes back to campus from a long weekend.

The prospective dates serve as metaphors for ways in which students can access articles from the library's databases. Students can click on the PDF's available to them immediately (the prospective dates in the room); students can click on the "search other databases" or "search print journals " links to see if the article is in another database or available in print (the prospective dates in the common area down the hall); students can submit a request for an article to interlibrary loan which typically arrives in three to five days (waiting for the person one really wants to ask to the party). In addition to the scenario video, three shorter instructional videos demonstrating each retrieval feature should be posted to provide working how-to examples. This scenario not only serves as a springboard to discuss the practical ways to access articles from a database, but also it serves to illustrate the Association of College and Research Libraries (ACRL) Information Literacy Standard One, Performance Indicator Two, Outcome b: The information literate student "Identifies the value and differences of potential resources in a variety of formats (e.g., multimedia, database, website, data set, audio/visual, book." Linking library instruction videos to the ACRL Information Literacy Standards provides a platform to discuss larger issues regarding information literacy while at the same time providing step by step tutorials for those that need them.

Designing YouTube Instructional Videos: The Classroom and Distance Education

The ever looming problem for library instruction is deciding what to include in a one-shot instruction. This often is the only point of contact with students in the classroom, so there is a tendency among librarians to overload the students with too much information. This, however, is not conducive to effective library instruction. "A more effective approach recognizes the importance of incorporating library instruction into the curriculum at the point of need. Smaller, more-focused nuggets of information, when attached to specific learning applications, typically result in deeper meaning" (Dieterle, Dipert, Jarzemsky 37-38). Keeping this in mind, YouTube instructional videos should be created in a modular format with each lesson consisting of several short video units. The modular format serves both synchronous and asynchronous learning environments because it can be divided and adapted into individual instruction lessons in multiple instructional situations and locations.

In a classroom setting, the librarian can use various units from different modules adapting each instruction to the individual needs of the class. Given enough lead time, the librarian can even design specific videos tailored to a specific class assignment (see fig. 4). Regardless of which units are used in class, the librarian should provide the full module with each unit available on YouTube. Students can

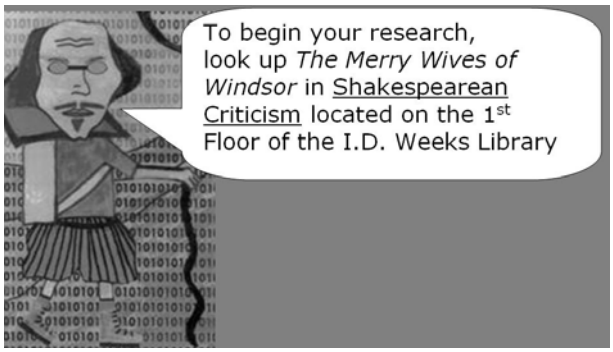


Fig. 4. Researching Shakespeare
from Monge, Robert. Screen Shot. 2007.

return to individual units for review or complete the full module if they need additional instruction. This would also allow the librarian to present supplemental material without infringing on valuable class time. Furthermore, the modular format can be embedded in courseware packets or library toolkits providing a larger presence for the library in traditional classroom settings.

The benefit for distance education is that the modular format of the YouTube instruction videos replicates the classroom library instruction with only moderate changes. Instead of blanket lessons covering general information which often are not specific enough to the class and can be overwhelming to distance education students, librarians can work with distance education instructors to develop targeted library instructions. The librarian can assist the instructor in designing discussion threads and quizzes to duplicate the interaction in a face-to-face classroom setting. YouTube instructional videos are also a benefit to distance education students because they are more accessible and easier to download than larger file videos from class or library websites.

Conclusion

It would be a mistake to dismiss visual literacy simply as a passing fancy unworthy of academic consideration. The visual medium provides another avenue for students to become information literate. YouTube provides an accessible and popular medium for librarians to deliver point of contact and supplemental library instruction. Lessons designed in a modular format and posted to YouTube allow for greater flexibility in instruction design and allow students to engage the information on their own terms. These modular lessons can easily be redesigned and repackaged to fit the needs of a traditional classroom or distance education environment. Videos posted on YouTube require no additional software downloads or special skills to use. And, perhaps the greatest advantage, librarians don't have to worry if students will come to YouTube because the students are already there. Librarians would be advised to become early adaptors in developing visual literacy instruction and embrace YouTube. The paradigm of how knowledge is delivered is shifting, and this is one revolution that will be televised.

Which Date Would You Choose?

FADE IN:

INT. CAFETERIA—AFTERNOON

STUDENT ONE and STUDENT TWO walk into the cafeteria talking and laughing. They see YOU and wave. Student two is carrying an envelope. Student One and Student Two walk over to You.

STUDENT ONE: I've never had so much fun. Mike and Kathleen throw the most amazing theme parties. They are having a 1920's dance contest next Friday. You have to get the night off.

STUDENT TWO: (hands YOU the invitation) Don't forget to bring this invitation though or you won't be able to get in. And, you have to bring a date for the dance contest.

RED SCREEN SHOT BACKGROUND

The words WHICH DATE WOULD YOU CHOOSE? are written in black.

BLUE SCREEN SHOT BACKGROUND

The words ASK SOMEONE NOW IN THE CAFETERIA are written in yellow. Three men and three women appear on screen. One man and one woman are flat out repulsive. One man and one woman are both "okay" looking—but nothing to write home about. The remaining man and woman are worth asking out.

BLUE SCREEN SHOT BACKGROUND

The words ASK SOMEONE IN THE COMMON AREA are written in yellow. Three men and three women appear on screen. One man and one woman are ugly with a capital U. One man and one woman are "okay"—but nothing to do cart-wheels over. The remaining man and woman look good.

BLUE SCREEN SHOT BACKGROUND

The words WAIT THREE DAYS UNTIL THE LOVE AND/OR LUST OF YOUR LIFE COMES BACK TO CAMPUS AFTER VISITING THEIR PARENTS are written in yellow.

One man and one woman appear on screen. They are howl at the moon, eye popping, tongue on the floor gorgeous.

RED SCREEN SHOT BACKGROUND

The words WHICH DATE WOULD YOU CHOOSE? are written in black.

Three boxes appear on screen. In box one is a picture of the men and women from the cafeteria. In box two is a picture of the men and women from the common room. In box three is a picture of the man and woman who are returning to campus.

FADE OUT
THE END

Fig. 1. Which Date Would You Choose?

Works Cited

Association of College and Research Libraries Board of Directors. "Information Literacy Competency Standards for Higher Education." Association of College & Research Libraries. 18 Jan. 2000. American Library Association. 6 June 2007 <http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.htm>.

Ardito, Stephanie C. "Social Networking and Video Web Sites: MySpace and YouTube Meet the Copyright Cops." Searcher 15.5 (2007). 5 June 2007 <http://www.infotoday.com/searcher/may07/Ardito.shtml>.

Burmark, Lynell. Visual Literacy: Learn to See, See to Learn. Alexandria: Association for Supervision and Curriculum Development, 2002.

Dieterle, Ulrike, Denise K. Dipert, and Paula A. Jarzemsky. "Designing and Implementing Web-Based Learning Modules: A Case Study from the Health Sciences." Going the Distance: Library Instruction for Remote Learners. Ed. Susan J. Clayton. New York: Neil-Schuman, 2007. 37-38.

"My Spoon is Too Big I'm a Banana." 1999. Rejected by Don Hertzfeldt. 7 June 2007 <http://www.youtube.com/watch?v=MuOvqeABHvQ>.

Kress, Gunther. Literacy in the New Media Age. London: Routledge, 2003.

Lohr, Linda L.. Creating Graphics for Learning and Performance: Lessons in Visual Literacy. Upper Saddle River: Merrill Prentice Hall, 2003.

Nelson, Nerissa. "Visual Literacy and Library Instruction: A Critical Analysis." Education Libraries 27.1 (2004): 5-10.

Paivio, Allan. Mental Representations: A Dual Coding Approach. Oxford: Oxford UP, 1986.

Communicating and Training across the Hours: Using Course-Management Software to Enhance Student Training and Build Community

Peggy L. Kaney
Access Services Librarian
Northeastern State University

Brande M. Flack
Reserve Supervisor
Northeastern State University

Donna G. Graham
Interlibrary Loan/Document Delivery Supervisor
Northeastern State University

Abstract

When the error rate began to rise and customer service concerns began to increase, the Access Services department of the John Vaughan Library of Northeastern State University began to take a hard look at the current state of their training program for student assistants. Challenges of adequately covering the service desks over an increased amount of hours with minimal increase in staffing, gaps in coverage of full-time staff supervisors, and inconsistent student training between shifts began to emerge. In response, a full-fledged re-design of the training practices seemed to be in order.

Taking advantage of resources available on campus, course management software (Blackboard) was considered as a means to provide both communication and training opportunities for the student assistants. The staff received training through the university's Center for Teaching and Learning, and a course shell was created. In addition to focusing on the technological tools via the software, the department head also was trained in online instruction techniques and best practices. It was determined that creating an online learning community of the student assistants and Access Services staff had tremendous potential for turning around the department and bringing about needed improvements.

A review of the course management software showed many potentially useful tools such as threaded discussion, text, links to files, group communication via e-mail, and assessment. Since the department had already begun to use online tutorials for training, they were imported into the course shell and activities were added to be used to evaluate new trainees as well as to provide a review for returning student workers. These assessments were added to the grade book tool, providing up-to-date training status to staff across the schedule. The discussion board was used as a place for students to ask questions that could in turn be answered by more experienced students or staff. Notices were disseminated to all student workers and staff via the announcement tool.

A new sense of connectedness developed among the staff and the students through the use of the software, and increased opportunities for peer training emerged. Experienced students began to take pride in their knowledge of job-related tasks as they were able to field questions from recent hires. Staff made more efficient use of their face-to-face time with student assistants as they were able to focus on more complex activities and procedures. While not a perfect solution to all training issues, the software turned out to be a significant element in the quest for improved library services.

Introduction

When the error rate began to rise and customer service concerns began to increase, the Access Services department of the John Vaughan Library of Northeastern State University in Tahlequah, Oklahoma, began to take a hard look at the current state of their training program for student assistants. Challenges of adequately covering the service desks over an increased amount of hours with minimal increase in staffing, gaps in coverage of full-time staff supervisors, and inconsistent student training between shifts began to emerge. In response, a full-fledged re-design of the training practices seemed to be in order.

Challenges

In order to best respond to current needs, an assessment of the challenges and strengths of the situation was undertaken. Communication between staff and students across all open hours was identified as one of the immediate challenges. Access Services is responsible for three distinct areas, housed in different parts of the library. Two of the areas are located close to the library entrances on the first floor: Circulation by the south entrance, and Reserve by the north. Both areas have public desks that must be staffed all hours that the library is open. Interlibrary Loan is located on the second floor, and is open approximately seventy-five hours per week. Over the past three years, the library extended its regular hours from eighty hours per week to one hundred hours per week. Full and part-time staff have increased from four full-time and one part-time to four full-time and two part-time staff. The remainder of the labor is provided by thirty to forty part-time student workers. Students may work with one or more supervisors over the course of a week.

Although motivated and energetic students are sought after, it is frequently necessary to hire less than highly desirable students due to the number of hours to fill. These students may need an increased level of supervision and training as they learn their job. This can be especially problematic as there are several gaps in the supervision schedule, and one supervisor may be back and forth between two areas. Some students bring in a strong work ethic and job related experience, but this is not always the case. Again, some students may need additional supervision as they learn the basics of job responsibility. Due to budgetary constraints, all student workers are paid just over minimum wage, and they sometimes express frustration at the level of expertise expected for so low a wage.

Gaps in the schedule of supervision as well as the need for increased monitoring in some cases have led to instances where a student may fall through the cracks on learning a particular

procedure or develop less than desirable work habits. Both of these situations can lead to errors that can be frustrating to patrons as well as other library staff.

Current Strengths

Despite the challenges of using student workers, strengths are also apparent. First and foremost is the benefit of lower paid student workers available to do some of the less skilled tasks in the library. Especially when the students qualify for federal work-study programs, the library can maximize its labor budget. By training the students to take care of some tasks, staff members are freed up to spend their time on the more complex processes. Student workers who have a positive job experience become advocates for the library and are able to let fellow students know of resources available. Other students appreciate being able to talk to a peer for assistance, and frequently will approach a student worker before one of the other library staff members. Students workers are frequently more familiar with other aspects of student life, and can help to field the many non-library related questions that cross the desk.

Solution

Since many of the problems could be tied to communication between library staff and student workers, a new approach to student training and communication was desired. Taking advantage of resources available on campus, course management software (Blackboard) was considered as a means to provide both communication and training opportunities for the student assistants. The staff received training through the university's Center for Teaching and Learning, and a course shell was created. In addition to focusing on the technological tools via the software, the department head also was trained in online instruction techniques and best practices. It was determined that creating an online learning community of the student assistants and Access Services staff had tremendous potential for turning around the department and bringing about needed improvements.

A review of the course management software showed many potentially useful tools such as threaded discussion, text, links to files, group communication via e-mail, and assessment. Since the department had already begun to use online tutorials for training, they were imported into the course shell and activities were added to be used to evaluate new trainees as well as to provide a review for returning student workers. These assessments were added to the grade book tool, providing up-to-date training status to staff across the schedule. This feature allowed staff to be more efficient when making work assignments based on documented mastery of a procedure.

The discussion board was used as a place for students to ask questions that could in turn be answered by more experienced students or staff. Notices were disseminated to all student workers and staff via the announcement tool. Another feature of the software allowed for the creation of sub-groups which were created to allow space for the supervisors to communicate separately from the students.

Blackboard also has an area available for individual profiles where students can share a photograph and some personal information and interests. Along with the discussion board, this

was seen as a means for individual students to get to know each other, even when their working schedules did not allow for face-to-face interaction.

Results

A new sense of connectedness developed among the staff and the students through the use of the software. The use of the individual profiles and social uses of the discussion board allowed students to get to know some of their counterparts that worked other shifts. Increased opportunities for peer training emerged as experienced students began to take pride in their knowledge of job-related tasks as they were able to field questions from recent hires.

Staff made more efficient use of their face-to-face time with student assistants as they were able to focus on more complex activities and procedures. Assumptions about student training were erased when tracked through the online assessment tools. Tasks were organized according to student strengths and skills, and were assigned dependent upon the individual's mastery of particular processes. Blackboard allowed for different individuals to enter progress on a particular project, which increased efficiency in tracking across different areas and shifts.

The discussion board also became a place for concerns and questions to be expressed, ones that might have gone unasked before. Students showed interest in assisting in each other's training by providing answers based on their experience on the job. One specific thread on the discussion board invited the student workers to respond to the question of what they would do if they ran the library. More than any other, this thread intrigued the students, possibly due to our interest in their perceptions and ideas. While not a perfect solution to all of the training issues, the software turned out to be a significant element in the quest for improved library services.

Conclusion

Although the program is still being developed, the early assessment is that Blackboard has been an effective tool for increasing communication and improving training across the library schedule. Student input will be used as we continue to improve the process. Interest has been expressed to expand the usage of the Blackboard site to one of the branch campus libraries, offering a broader opportunity to use the training materials and tapping a greater source of staff and student expertise to the potential betterment of all. As we continue to improve the quality of our student workers through training and communication, we may next look to see if this training leads to the creation of not only better student workers, but ultimately, to better students all around.

Further Reading

Baird, Lynn N. "Student Employees in Academic Libraries: Training for Work, Educating for Life." PNLA Quarterly 67.2 (2003): 13, 23. Omnifile Full Text. Wilson Web. John Vaughan Lib., Tahlequah, OK. 2 Feb. 2007.

Gerlich, Bella K. “Rethinking the Contributions of Student Employees to Library Services.” Library Administration & Management 16.3 (2002): 146-150. Omnifile Full Text. Wilson Web. John Vaughan Lib., Tahlequah, OK. 2 Feb. 2007.

McLaney, John P., Jr., Lisa E. Vardaman, and Brian D. Webb. “Training Student Workers: A Survey of Alabama Academic Libraries.” Alabama Librarian 54.1 (2004): 15-16. Omnifile Full Text. Wilson Web. John Vaughan Lib., Tahlequah, OK. 20 Feb. 2007.

Oral History in the Library: Collecting and Preserving "Voices"

Tanya Finchum
Associate Professor/Librarian
Oklahoma State University

Juliana Nykolaiszyn
Visiting Assistant Professor/Librarian
Oklahoma State University

Abstract

The Oklahoma State University (OSU) library is a creator of oral history documents as well as a repository for them. A focus of the oral history collection expansion project is to create, to assist in creating, and to collect oral history interviews with men and women who have been eyewitnesses to or participants in events of historical significance, especially in Oklahoma and related regions, for deposit in the OSU library's Special Collection and University Archives (SCUA). Interdisciplinary research using oral history methodologies on diverse and important topics to Oklahoma is encouraged and a goal is to create groups of interviews with sufficient focus as to provide a substantial body of information on a significant subject. Interviews are accessible to faculty, staff, alumni, students of the institution and to the broader research community.

So how is this accomplished? What are some of the challenges and successes of this endeavor? Who are the major players? While there had been prior oral history projects conducted by librarians at OSU, the big push to expand the oral history activities began in the summer of 2006. A librarian was temporarily assigned to develop a sound research proposal which would be approved by the Institutional Review Board and actually conduct three to five interviews; to develop procedures for transcription; and to develop a local policy for organizing and cataloging oral history collections. Additionally, this librarian was to develop a work plan for format preservation, digital conversion of analog files, and web access. Initially this was to have been accomplished within a four month time period. Those who come to this session will hear how some of this was accomplished, what was learned along the way, and where the story may go next.

Introduction

There has been an interest in oral history within the Oklahoma State University (OSU) Library for some time now, but only recently has there been a concerted effort to develop the foundation for an oral history program. In the recent past, an oral history project was completed which involved interviewing over 100 women who had experienced the Dust Bowl. These interviews were transcribed and deposited in the Special Collections and University Archives as part of the Women's Archives. At the time of this writing, access to the interviews has been limited in large part because the public service side of an oral history program remains in the developmental stage. This situation will be remedied soon as finding aids are created along with a web presence.

Oral histories are primary source documents and need to be preserved, as well as made known to consumers. The challenge to establish an official oral history program within the OSU Library was three pronged; to develop additional oral history projects, to develop a local policy and procedures manual for the underpinnings of the program, and to develop methods to access the oral histories.

New Oral History Projects

As preparation for this project, preliminary research was conducted regarding various aspects of oral history. Recording Oral History by Valerie Yow was found to be an excellent resource. Aspects of oral history from interviewing techniques to discussions of a variety of oral history projects are covered. The Baylor University Institute for Oral History web site proved also to be very helpful with an online oral history methodology workshop and other information. The listserv, "affiliated with the Oral History Association,"offers informational dialogue with other oral historians and continues to be a valuable resource (Knupfer).

Other websites that have proved helpful include the Southern Oral History Program (SOHP) at the University of North Carolina at Chapel Hill. SOHP has made available, "Oral History: A Practical Guide," through the program's website. This online resource provides information for designing oral history projects, as well as offers interviewing and transcription guidelines. The site also includes oral history bibliographies and sample forms. Louisiana State University's (LSU) T. Harry Williams Center for Oral History touches upon oral history basics on the Internet by providing an online workshop packet that discusses interviewing, equipment, and the cost of doing oral history. LSU also includes a curriculum guide, providing a look into outreach efforts at local schools.

Creating new oral history projects is perhaps the easiest of the three challenges with the understanding that while subjects may be endless, resources are not. Consideration needs to be given to the mission and scope of the oral history program, as well as what areas of the library's collection need more resources. One of the strategic goals for the library was to continue to build the Women's Archives and to continue to build a collection to compliment the Women's Studies program at OSU. As part of the initial assignment, a new oral history project was to be developed featuring women who have and currently are serving in the Oklahoma legislature. A review of the literature and a review of our current collections indicated that not much has been written about women in politics in Oklahoma and collecting the experiences of these women, in their own voices, would fill a gap.

Once the target population of the oral history project was determined, the next step was to develop a proposal to submit to the Institutional Review Board (IRB). As part of the IRB process, forms are developed that are very important such as the Deed of Gift form and the Informed Consent/Release form. Ownership and copyright issues need to be agreed upon by all parties. Preparing the IRB proposal involves such things as mapping out strategies for locating the narrators, what questions will be asked, and what becomes of the interviews once completed. To assist with developing questions that scholars and researchers would find helpful, a virtual advisory council was created. The final version of the question guide was much improved with the assistance of this group of advisors.

Once the proposal had been submitted, attention was turned to the mechanics of the project such as equipment, supplies, travel, and contact information for the potential narrators. In the case of OSU Library, the systems department conducted research and purchased equipment. When ordering equipment, it is important to consider the learning curve for working it, how it will be used, who will be using it, and who will be maintaining it. Travel costs and time for traveling to members of the target population was a consideration along with where to actually conduct the interview.

Local Policy and Procedure Manual

Developing a local policy which includes a mission statement and scope along with standard procedures regarding creating, processing, managing, and maintaining for an oral history program is paramount to a successful program. A mission statement and scope are needed to establish the parameters of the program. Developing a procedure manual serves several functions. Besides outlining what is to be done, it provides detail as to how it is to be done and by whom. After a few months of conducting oral histories it became evident that having a data management system in the form of flowcharts and tracking sheets would be very helpful. A flowchart was needed to determine when tasks were to be done and by whom. Along these same lines, the importance of having a tracking sheet for each interview was reinforced. As the number of interviews grows, it is beneficial to be able to track where each interview is in the process. A quick survey of what software other oral history programs are using revealed that, again, there is no standard but reportedly Excel, ACCESS, and FileMaker Pro are being used to varying degrees.

The assignment to develop a procedure manual that would ultimately become the infrastructure for the oral history program required research and exploration. Procedures for transcribing, for duplicating, printing, and storing, and for editing required answers to different questions and some answers led to more questions. Not wanting to reinvent the wheel, inquiries were made to several established oral history programs regarding written policy and procedures. Some had nothing written, some had manuals started, some had a guide for transcribing, and others had been managing oral histories so long that the process was engrained but not written down in a format that could easily be shared. Everyone asked was very willing to share procedures verbally, and did so.

Procedures for transcribing were developed first with the thought being that as interviews were completed, transcribing would occur timely in order that proofing could begin with both the interviewer and the narrator. Aspects to be considered include the format, how to differentiate the speakers, how to handle slang and colloquialisms, how to handle words or phrases that may be inaudible, how to handle unknown correct spellings of proper names and places, and several others.

Duplicating efforts also required consideration. Who would make copies of the recordings from the various formats including digital video, digital audio, and interviews recorded directly onto a hard- drive? How many copies of each format would be made? What is the best way to label each of the formats? Multiple copies in multiple formats require more financial support in the way of supplies, physical storage, and electronic storage.

Editing procedures are in the developmental stages and once decisions have been made they will become part of the local policy and procedures manual. A quick review of the literature and a query to various oral history programs presented options. Will the interviews be transcribed verbatim? How much editing will the narrator be permitted to do? Typically, narrators are given the opportunity to review the interview transcript with varying levels of editing allowed. It is important to have a policy in place that specifies how much an interviewee can edit. If the decision is made to edit, what style manual and dictionary will be used as the standard? What is the desired end product? Is the end product the recording or is it an edited memoir? The primary document is the unaltered recording itself with the printed version being a secondary document. According to Ronald Grele, "most archivists and many oral historians consider the tape to be the original document, and they urge researchers to consult it rather than a transcript" (577).

Access to the Oral Histories

According to Willa Baum there are three steps to oral history projects that involve librarians and they are creating, curating, and consuming (388). Creating has already been discussed above. Intellectual access and physical access through bibliographic control are important to potential consumers. Accessibility and usability are key components to a successful oral history program. "Create them and consumers will come," is accomplished only if consumers know of their existence and if there is an efficient way to locate the content they seek.

As the search for best practices and standards for curating oral histories progressed without much success, Nancy MacKay, a librarian and oral historian, published a much needed book in the early part of 2007. She had conducted a survey and determined there was an information gap between the creators of oral histories and the people who maintained and managed them after their completion. It includes a section on archives administration, transcribing, preservation, oral histories on the Internet and several other pertinent topics. There is also an appendix with examples of many of the forms used in the oral history process.

OSU's plan involves adding the oral histories to the library catalog and eventually creating a website to showcase the various collections as they are created. Cataloging guidelines will be developed and various presentation options will be explored. Subject headings, indexing, finding aids, and keyword searching will be explored as methods for accessing the oral histories. It is important to note that if a web presence is a goal, this needs to be addressed on the various forms that narrators sign. A quick Internet search will result in numerous sites featuring oral histories in several different ways. Some sites include a combination of audio, video, and text while others include transcripts only. There are no standards at this time to govern these activities.

There are many benefits when it comes to including a web presence in oral history collections as Internet search engines will be able to help guide researchers to interviews that could possibly go unnoticed. According to Mary Larson, transcripts appearing online also make consulting oral history resources easier since it takes away the need to travel to a repository site (597). Outside of promoting your collection, resources, and community outreach, an Internet presence can showcase a program's oral history efforts to a much wider audience.

Helpful Tidbits Learned Along the Way

Research, trial and error, and communication with others in the business of creating and caring for oral histories provided several small pieces of information that when taken together are proving very beneficial. It is important that the data management scheme be well thought out, is a relational database as opposed to file, and have the option for a gatekeeper function to limit access to various parts and/or the number of people who can have concurrent access to the file. When creating the network infrastructure, solicit help but know what is needed and make sure what is needed is understood. Version control, mainly for transcripts, needs to be included in policy and procedures.

When signing original forms such as Informed Consent forms or Deed of Gift forms use blue ink. This makes it easier to identify the copies from the original. Consider how assets will be managed such as supplies and equipment to be loaned. Establish relationships with others on campus using transcription software. Develop methods for accountability such as keeping statistics on number of hours of interviews, number of pages of transcripts and number of tapes. It is helpful to establish an auditing process once the transcript is created. Listening to the audio in conjunction with reading the transcript ensures quality and accuracy in the written document. Also, it is a good time to note errors in transcription or make notice of edits that need to take place down the road in the final editing process. Material added to a transcript should appear in [ ] brackets. The use of brackets denotes added material by the interviewer or editor to help with clarification purposes, but was not recorded as part of the original interview. Acronyms, regional names or unfamiliar expressions are all examples of items that may be explained through the use of brackets.

Conclusion

While oral histories are in their third phase of popularity, there is little research available when it comes to the nuts and bolts of starting a program. This is further complicated by the blossoming digital environment. After consulting with many established oral history programs, formal procedures rarely exist on paper, but more so in the heads of those involved with the operational process. Oklahoma State University is committed to not only maintaining, creating, and promoting oral histories but also serving as a repository for research with a strong focus on Oklahoma. In the near future, OSU plans on continuing to refine and finalize oral history guidelines along with creating a formal written local policy and procedure manual to help ensure preservation and access.

Works Cited

Baylor University Institute for Oral History. n.d. Baylor University. 10 June 2007 <http://www.baylor.edu/oral_history/>.

Baum, Willa. “The Expanding Role of the Librarian in Oral History.” Oral History: An Interdisciplinary Anthology. David Dunaway and Willa Baum. Nashville, TN: American Association for State and Local History, 1984. 387-406.

Grele, Ronald J. “On Using Oral History Collections: An Introduction.” The Journal of American History 74.2 (1987): 570-578.

Knupfer, Peter. H-Oralhist. 2005. H Net: Humanities and Social Sciences Online. 14 Aug. 2007 <http://www.h-net.org/~oralhist/>.

Larson, Mary A. “Potential, Potential, Potential: The Marriage of Oral History and the World Wide Web.” The Journal of American History 88.2 (2001): 596-603.

MacKay, Nancy. Curating Oral Histories: From Interview to Archive. Walnut Creek, California: Left Coast Press, Inc., 2007.

“Oral History: A Practical Guide.” Southern Oral History Program. n.d. University of North Carolina Center for the Study of the American South. 4 June 2007 <http://www.sohp.org/howto/guide/index.html>.

Southern Oral History Program. n.d. University of North Carolina Center for the Study of the American South. 4 June 2007 <http://www.sohp.org/>.

T. Harry Williams Center for Oral History: A Division of LSU Libraries’ Special Collections. 6 July 2007. Louisiana State University Special Collections. 4 June 2007 <http://www.lib.lsu.edu/special/williams/>.

Yow, Valerie. Recording Oral History: A Guide for the Humanities and Social Sciences. Walnut Creek, California: AltaMira Press, 2005.

ERM on a Shoestring

Dalene Hawthorne
Head of Systems and Technical Services
Emporia State University

Abstract

Electronic Resource Management (ERM) systems have become necessary for libraries with large collections of electronic resources. Libraries with smaller electronic collections have many of the same needs to manage their e-collections, but may not have the funding to purchase or develop an ERM system.

Emporia State University (ESU) Libraries and Archives has developed a process that utilizes tools the library already owns to manage electronic resources. ESU is using the library's integrated library system and a relatively inexpensive tool available from its subscription vendor to manage its electronic resources. Of course, some functions of a full-blown ERM system are still not available to ESU. ESU staff therefore decided to use the DLF (Digital Library Federation) Electronic Resource Management Initiative Data Element Dictionary to label data elements with the goal of being able to export the data at some future date so that it can be imported into an ERM when ESU can afford to purchase one.

Mabee Wikis Are Better:
Transitioning from Static Research Guides to Wikis

Tony Greco
Public Services Librarian
Washburn University

Cal Melick
Public Services Librarian
Washburn University

Heather Smith-Collins
Curriculum Media Librarian
Washburn University

Kelley Weber
Public Services Librarian
Washburn University

Abstract

Maintaining up-to-date research guides which accurately describe, hyperlink and lead students through the highly mutable world of Internet resources poses specific challenges. Washburn University (WU) Reference and Instruction Librarians describe the transition of research guides from static PDF web pages and paper handouts to wikis. This transition created collaborative workspaces more easily edited by the librarians and more interactive for patrons. Wikis transform the editing and composing of online content as revolutionary to basic web pages as word processing was to the typewriter. Continuous input and peer review from Library colleagues also helps maintain higher-quality content. Wikis are also capable of integrating interactive technologies; an important step toward Library 2.0.

WU Librarians delineate the process involved in assessing the information diffusion needs, comparing various technological options, and implementing the change. Considerations necessary for a small to medium-sized library to embark on a similar wiki project are outlined. WU shares copyright, archiving, procedural and training components necessary for the transition. Current evaluation measures delineate a plan to extrapolate information from librarians about wiki platforms and from students regarding research guide content.

The Old Way: What Went Wrong

Rapid and continuous change in database functionality and a realization that library instruction goals were not being met created the impetus for Mabee Reference and Instruction Librarians to explore alternatives to existing research guides. The library had sought to maintain a large number of research guides in paper format as training tools for many of the library's 90 databases. Paper handouts were also being used as guides for citation styles and other research

methodologies. As the demand for online help increased, the paper format was duplicated in static PDF files listed on a "research guides" Web page. With growing sophistication of internet usage among students and faculty, this setup became increasingly problematic. The cost of printing alone was over $600 per semester. Paper handouts were distributed in library instruction classes, in library orientation tours, and during reference transactions. But students often did not keep or read them. Nor did students relate to loading and viewing a static PDF file to learn about how to use a research database.

There were also problems keeping the research guides up-to-date. Databases described on the handouts often enhanced the appearance and functionality of their interfaces. When this happened, the corresponding printed handout was immediately obsolete. The existing stock went in the trash and a new version was devised and printed. Often the new version was obsolete again in a semester or two. Revisions were labor intensive requiring editing and proofing of Word files with several iterations checked by the Reference staff before a final draft was made. Frequently the hyperlinks in the online PDF versions went bad and needed updating. All this work was for a product that students did not seem to use or want. The goal, relevant point-of-use instruction in library research, was not being met. There had to be a better way.

Why Wikis?

After comparing a number of different formats, the research guide committee decided to use wikis when creating database guides and other reference tools. Using wikis seemed like a sensible progression from using online PDF's for a number of reasons.

Prior to using wikis, all content that the research guide committee created originated from production software such as Word or WordPerfect. This process significantly limited collaboration. After a committee member completed a first draft, copies were either printed and distributed or were e-mailed to the other committee members. The committee members made edits and returned the copies, and the author updated the original document. When the editing was complete, the document was given to someone in Technical Services, who converted it to a PDF and posted a link to the PDF on the library's Web site. The process felt so arduous and dated that we might as well have been using typewriters.

Using wikis greatly expedited the committees' ability to collaborate on projects. Committee members now can create a draft online, while other members can view the document's progress and suggest changes. After the author completes a final draft, someone from Technical Services only has to post the wiki's unique URL.

With the previous method we used for creating guides, the content became static the instant the document was converted to a PDF. With wikis, we can update, correct, or reformat the content at any time. Since the wiki's URL remains the same, it isn't necessary to change the links on the library's Web site.

Wikis, however, are more than glorified word processors. They also provide the committee with a dynamic canvas with which to work. A wiki-based guide can be strictly textual, or it can

include embedded video, Word and PDF documents as attachments, RSS and social bookmark widgets, calendars, and more.

Finally, wikis provide point-of-need access. We previously printed a set number of guides each semester. The guides were distributed after instruction sessions, after reference transactions, during orientations, and kept in carousels near the reference desk. We had doubts about whether students kept the guides for future reference or threw them away after leaving the library. Also, the carousels generally remained full. We are now in transition from maintaining a stack of printed guides to only printing guides for some instruction sessions or when a patron requests a copy. We refer to the online guides when patrons have a question about a database or when referring to a database during an instruction session. The wiki software that we use allows us to e-mail the URL of guides to patrons without having to open our Washburn University e-mail account. This method also benefits the environment by reducing the amount of paper that was wasted on printing guides that were not used.

How We Did It

As with any project of this nature, we needed to get support for the project from several different levels. First, we consulted the reference staff to make sure we were on the right track and that this was something we needed to try. Then, we asked staff members from the Technical Services department if they would put the hyperlinks to our wikis on the library's Web site. We also made sure that library administrators supported the idea and, within reason, any potential expenses. Some members of the Technical Services department expressed concern about using third-party software to publish content online, but they reluctantly agreed to support the project.

It did not take long for the committee to decide that we did not want to use a free wiki. The dollar amount is right, but the *actual* cost of using the free service is putting up with a lot of flashy ads throughout the wiki. Not only are the ads distracting, but they do not represent the image Mabee Library and Washburn University wish to convey to our patrons. By creating a simple comparison chart of cost and features—specifically storage space, number of wikis, and bandwidth usage—we were able to select which wiki platform we wanted to use. For us, the choice was Stikipad. It was then a simple matter of presenting our findings to administrators and getting the funding we needed.

Through the process of selecting which wiki platform to use, we realized it was going to be necessary for committee members to learn how to use Adobe Photoshop (or another image editor) for graphics. We had been creating graphics in our paper guides by copying and pasting images into Word documents, then editing for size and adding shapes, arrows and text. However, that's not possible with a Stikipad wiki; you cannot cut and paste an image into a wiki, nor can you add layers to images. To use images in a wiki, you have to upload a layered image and insert it into the HTML code. Library administration agreed to pay for Adobe Photoshop to be put on one of our committee member's computer. Another member already had it on his computer, and a third member had it on a home laptop computer. Therefore, three out of our four committee members have access to Photoshop. Washburn University also offers classes in Adobe Photoshop at a minimal cost as part of its employee continuing education program.

Now we could work on the content and design of our pathfinders. We surveyed online guides from other academic libraries, decided what we wanted our guides to include, and created a template so that all the pathfinders had the same format and content. We set up each wiki in such a way that only library staff can make changes to the content of the guides.

Reflections, Evaluations and Next Steps

Prior to the implementation of the wiki research guide format, plans for assessing the new platform as well as the transition process were made. The research guides committee communicated frequently to talk about the process and the progress. Input was solicited during the training and writing periods. Informal compliments and complaints were welcomed. Librarians reported favorably towards the usability and intuitiveness of the wiki format. However writers complained of unforeseen technological glitches arising from the vendor. WYSIWYG became more illusive as basic knowledge of HTML coding was required to insert graphics and work around the minor wiki glitches. In implementing a burgeoning technology, minor challenges were expected and easily managed.

Two other layers of evaluation were built into the project. One of the features built into Stikipad is a “Discuss” button which allows interactivity with patrons. Comments can be made on the wiki as students use the resource. Future plans for further utilizing the “Discuss” button and including a similar reference satisfaction and success survey is being explored. Also, departmental input and ongoing evaluations were elicited via the library’s new Outreach Librarian Program. Collaboration with faculty liaisons coordinated content and application to the curriculum during the composition process. Continued collaboration is necessary in order to maintain the guide’s relevance to the curriculum.

Future steps include plans to continue gathering information from users and participate in a formal evaluation. Other academic libraries have approached the committee seeking additional information as they embark in using wikis for their bibliographic instruction pages. The research guides project was the result of library cooperation and effort, and needs to be marketed to our users. Several questions resulting from this exploration require further research.

When the Whole is Greater Than the Sum of Its Part(ner)s: Northwestern Partnerships for Success

Denise M. Shorey
Head of Reference
Northwestern University

Bob Davis
Associate Director, Academic Technologies
Northwestern University

Abstract

A buzz, a hum of activity, a social space in an academic environment, a destination for college students: this is the InfoCommons at Northwestern University Library. In an otherwise forbidding building, your traditional library, what have we done that has turned the entrance to the library into a choice location for meeting, greeting, studying, and researching? Beyond the obvious: comfortable and varied seating, high-end computers, a group project room, and staffing for research as well as technological needs, is the whole concept of an information commons--a learning space--that was developed and is maintained jointly by University Library and University Information Technology.

Collaboration is a watchword in today's libraries, but just as there are many types and sizes of libraries, so there are many forms of collaboration. Some more common partnerships are libraries and information technology centers; others involve writing centers, career centers, student affairs, or other units on campus that share in the immediate enterprise of enhancing student learning and life.

Our presentation will begin with the success that two key Northwestern entities had in creating a new type of learning space, discussing hurdles leaped and lessons learned. This is not the first joint venture between these two, however, and the presenters will also discuss an earlier collaborative effort that continues to have significant impact on faculty research today. Moving beyond this, the discussion will attempt to answer some of those questions that many librarians have: how to collaborate without losing turf; characteristics of effective collaboration; and some of the benefits--as well as potential pitfalls--that can occur when two or more different cultures come together.

Weeding the Storage Facility:
WorldCat Collection Analysis as a De-Selection Tool

Mary C. Aagard
Collection Project Librarian
Purdue University

Abstract

Like most academic libraries, the Purdue University Libraries face shelving shortages in both the active and storage collections. As the storage facility reaches capacity, what approach should the Libraries take to find more space? This session presents a project that uses WorldCat's Collection Analysis (WCA) software to analyze serial holdings in selected subject areas and develop criteria for de-selecting low use and/or short run titles. The librarian merges data exported from WCA with data from the catalog to create serial title lists organized by subject, language, date, and holdings. Based on initial de-selection criteria, the librarian ranks titles in three tiers according to how well the title matches the criteria. Each title is also compared to four consortial benchmark institutions to identify duplicate holdings so that when subject bibliographers review the final lists to make withdrawal decisions, partner institutions holdings forms one of the decision points. After the withdrawal decisions have been made, the librarian works with colleagues at those benchmark institutions to offer them de-selected titles they may have interest in acquiring.

The session will discuss working with WorldCat Collection Analysis and the collaborative process involved in making initial de-selection decisions based on a scientific process. The presenter will show graphical representations of withdrawal statistics, interlibrary loan requests for de-selected titles, and will discuss the response to the project from the Libraries staff and the consortial institutions.

Measure for Measure:
Developing an Assessment Plan for Access Services

Robin Ewing
Assistant Professor, Access Services Coordinator
St. Cloud State University

Abstract

After attending the ACRL workshop Assessment in Academic Libraries: *Using the ACRL Standards for Continuous Evaluation*, the Access Services Coordinator at St. Cloud State University decided to create an assessment plan for Access Services (circulation, interlibrary loan, and periodicals) to systematically measure the effectiveness of the department's services. Using the workshop materials, the ACRL *Standards for Libraries in Higher Education*, and *Standards and Assessment for Academic Libraries: A Workbook*, an assessment matrix is being developed to match workgroup goals to assessment instruments. Creating an assessment matrix requires reviewing existing assessment instruments to see if any of them address the goals of the department or organization or if new instruments are needed. For example, will LibQual provide some of the information needed? What about student focus groups? The assessment matrix also addresses the frequency of assessment. How often should the library survey group study room users? Administering a survey for every goal every year may cause survey fatigue.

In addition to describing the creation of an assessment matrix, this presentation includes a literature review, a discussion of goal development, and a review of the challenges due to the organizational structure of the library at St. Cloud State University.

The Librarian as Hacker, Getting More from Google

R. Philip Reynolds
Research Education Librarian
Stephen F. Austin State University

Abstract

This paper will cover four areas. First it will discuss the research habits of search engine users and some of the problems with these habits. Then it will discuss librarians' use of search engines. Here we encounter the real question: Do we do much better? Can we use a search engines to their full potential? When needed, can we hack an engine to make it perform beyond its intended function? Can we use a clever workaround to solve a problem? Or are we on a level playing field with our patrons once we get outside traditional database searching? Google currently offers over seventy free services—fifty-two of them are search related. How many are we familiar with and comfortable using?

The paper will incorporate a discussion of some of the Google hacks documented in the book Google Hacks, 3rd edition, by Paul Bausch, Tara Calishain, and Rael Dornfest. It will conclude with a demonstration of how to use Google to create Custom Search Engines (CSE) that can be used to support curriculum or enhance a collection of primary or other specific sources.

Introduction

Traditionally hacking has been associated with illegal activity. There is a positive definition to hacking. A "hack" can mean a clever solution that solves problems. Hacks are unorthodox solutions that extend the capability of an application beyond its conventional or intended use. Librarians can use or invent hacks to get more from their databases and applications. This paper will demonstrate ways to extend or hack Google to go beyond its conventional uses.

What does hacking have to do with librarianship?

One area where librarians need to come up with clever solutions or unorthodox ways of doing things is in searching for information on the Internet. Anybody can type in a couple of keywords and do a search, but to really stretch Google's capabilities we need to be able to do a hack. This requires in-depth knowledge of Google and some understanding of how web pages are organized and built.

Resource discovery is an obvious use for a Google hack. Resource discovery may appear straightforward, but in reality requires skills. Unfortunately these skills do not prevail among our users. A recent study by the Pew Charitable Trust reveals how poor the research being done by search engine users really is:

- 92% of those who use search engines say they are confident about their searching abilities, with … 52%, saying they're "very confident".

- 87% of searchers say they have successful search experiences most of the time, including some 17% of users who say they always find the information for which they are looking.
- 68% of users say that search engines are a fair and unbiased source of information … (Fallows i)

Furthermore, Fallows reports that "97% of internet users under 30 years express confidence in their search skills" (5).

Think about those who have recently visited the reference desk. How competent were their search skills? This begs the question raised by Chris Sherman, executive editor of Search Engine Watch:

> What makes searchers so confident in their own abilities? "The majority are doing simple searches," said Deborah Fallows, Senior Research Fellow at the Pew Internet & American Life Project and author of the report. "It's very easy and very quick to get an answer for a passing thought, and that leads to confidence." (Sherman).

Librarians understand the problems with relying on the web for information. Large amounts of research have gone into looking at the structure of web pages and using that structure to more effectively mine information from the pages (Cohen 1). Even more effort has gone into encouraging webmasters to add metadata to their page's Meta tags. None of these efforts have turned into that which every librarian really desires and longs for; a catalog for the entire web.

This new environment that we did not create, do not control, and can not classify or catalog is where our customers went. In a recent study, "…it became apparent that students are very eager to use only the Internet in conducting research. Though the survey was not in any way limited to Internet resources, less than 2% of students' responses to all questions included non-Internet sources." Up to 75% of the students in the study relied on the first answer they found and did no further research (Graham 72, 74). Most searches are just two or three key words. The average searcher checks less than two pages of search results (Fallows 2). Even when seeking medical information, 75% of those surveyed said they rarely or never check the source or the date of the health information they find on the web (Fox iii).

Do we do much better? As librarians are our search engine skills as highly developed as our OPAC or database skills? When needed, can we hack the engine to make it "perform beyond its intended function" or can we apply that "clever solution or workaround that solves" the problem? "A recent comparison of Cornell University reference librarians and Internet users on Google Answers showed reference librarians with their vastly larger collection of quality print and electronic information, years of experience, and professional training scored little better than the Internet users offering information on Google Answers. The researchers seem to try to excuse these results (Reynolds) by saying "A final point on the evaluations involves sources. Google researchers (as opposed to the librarians) are experts at locating hard-to-find information on the Web. Their answers, therefore, tend to be limited to freely available networked resources" (Kenny 10, 14).

What Can We Do?

"It's time to learn the ins and outs of search engines" and do some hacking (Reynolds). Many search engines accept Boolean operators. Google also allows certain syntax in place of them. The pipe symbol | can be used for OR; the – symbol can be used for not. Google assumes the operator AND for each term in a search. For example [dog AND bark] is the same as [dog bark]. The + sign is intended to force Google to include a term or character it would normally ignore. For example, the terms Sam I am would probably return a lot of web pages with the word Sam, but Google would ignore I am. We can force them to be included in the search like this: [Sam +I +am]. What we really want is the phrase Sam I am. This is searched with quotation marks ["Sam I am"] (Bausch, Calishain, and Dornfest ch.1, sec.1).

Google implements automatic stemming technology as a part of their searches and uses the asterisk as a full word wildcard ("Google Help Center: The Essentials of Google Search"). It can be used to search for a phrase that one does not quite remember. For instance, ["The mass of men live lives of * desperation (Bausch, Calishain, and Dornfest ch.1, sec. 2). The wildcard can return results with one word or with many words in its place. According to Google: "…a search for [cooking * classes] will match the phrases 'cooking school classes' and 'cooking and wine tasting classes'" ("Does Google Support Wildcard Searches"). Another unique Google syntax is the tilde ~, allowing one to search for pseudo-synonyms. Google finds words one would expect to find in a traditional thesaurus, but it also turns up unexpected terms, because Google uses algorithms to identify synonyms instead of human philologists.

Web page metadata can be exploited by savvy searchers. The <Title> tag of a web document often describes either the subject of the page's content, or the department or institution where it originated. The URL describes the page's domain. Less familiar than the ubiquitous [.edu] or [.com] are: [.us] from state or local government, domains from other countries [.de] (Germany). The directories listed in the URL tell us things like how important the page is, what function it serves or possibly what it contains. This may seem obvious to most that have had exposure to HTML, but when we use this metadata in an unorthodox search, we can discover valuable resources. This metadata is accessed by the use of special syntax available in Google. In Google, domain information is accessed with the [site:] syntax, title information with [title:] or [allintitle:] syntax, and URL information with [inurl:] or [allinurl:] syntax (Bausch, Calishain, and Dornfest ch.1, sec. 3).

We can take advantage of more than one type of metadata in the same search, resulting in powerful and sophisticated hacks (Bausch, Calishain, and Dornfest ch.1, sec. 4). Searching Google and with the following search string produces amazing results.

site:mil (intitle:database | inurl:database)

Let's examine our search. The first operator is [site:mil]. Site delineates the domain. Next we have a colon immediately followed by the domain name [mil]. This tells Google to search only in military web sites. It will use metadata from the domain name on each web page to sort out the military publications. Next there is a space. When Google finds a space between terms it

assumes the operator [AND]. Then we have parenthesis which sets up the next half of our search. The operator [intitle:] tells Google that the next term must appear in the <Title></Title> tag in the HTML code. Again this can be a form of metadata identifying what a page contains or its subject. Next there is a colon and immediately following it the word [database]. Whatever page Google retrieves, it must have the word “database” in the <Title></Title> tag.

The search string allows for an alternative or additional search of metadata by adding a space and then the pipe symbol [|]. The pipe symbol is borrowed from many programming languages and is the same as the [OR] operator. Next comes the operator [inurl:] followed by the word [database] again. This tells Google that if the word “database” appears anywhere in the URL, even at the end of several directories and slashes, that it is to retrieve it. Our search is going to find all pages with the “<title> database </title>” in the HTML code or the word “/database/” in the URL on military web sites. The results of the search are shown below: (see fig. 1)

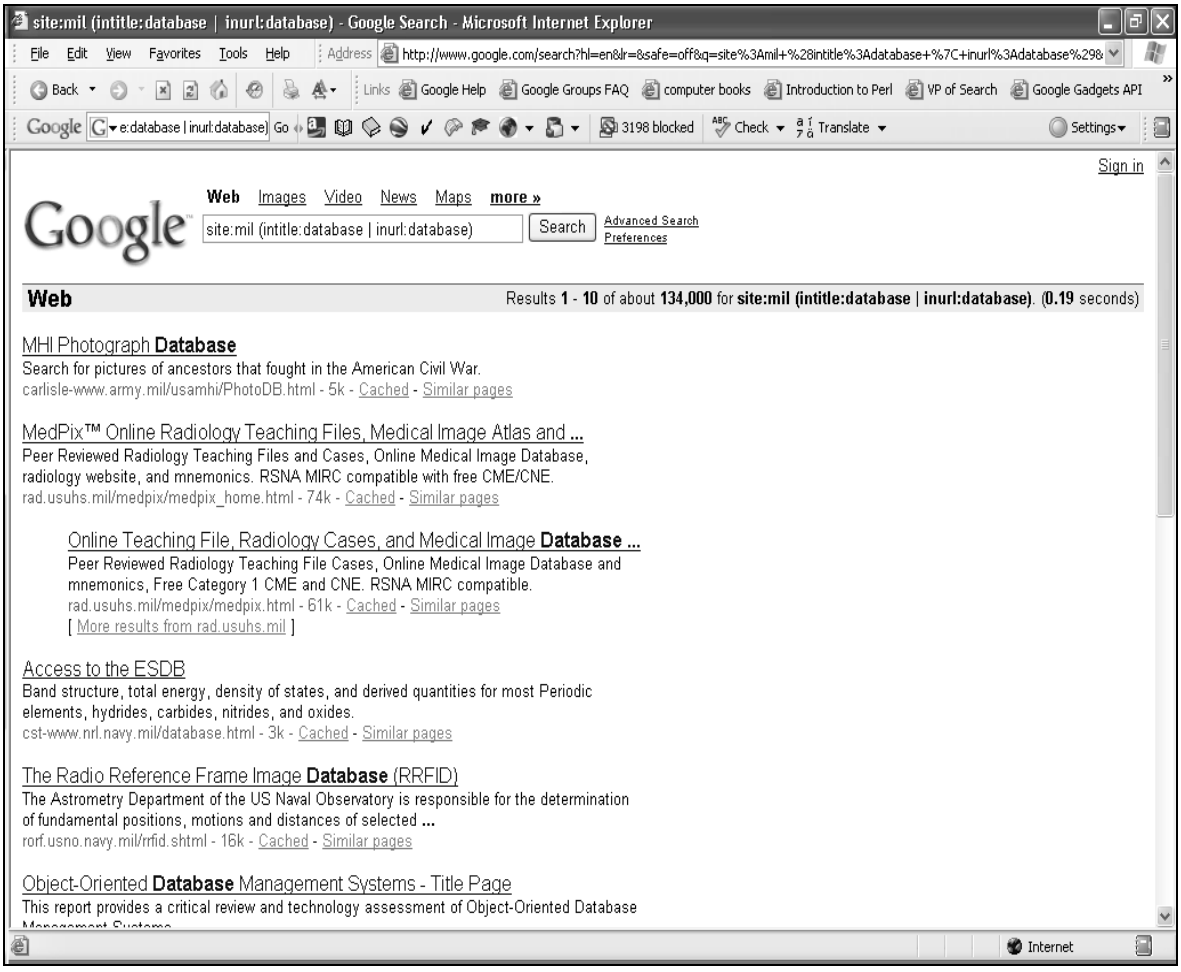


Fig. 1. The results of the Google search site:mil (intitle:database | inurl:database).

Our first hit is a Civil War photograph database. Our next two hits are to a database called MedPix. Looking at one of these links we find:

> **MedPix™** is a **free** online **Medical Image Database**, provided by the Departments of Radiology and Biomedical Informatics, Uniformed Services University, Bethesda, MD. All public content is **peer-reviewed** by an Editorial Panel (MedPix).

Next there is the ESDB database. The link to this database is dead. Going to the home page reveals the Center for Computational Materials Science, a Naval Research Laboratory. The page provides access to a wealth of research information, including many valuable databases. The list of primary and research resources uncovered by this search goes on and on.

We have created a virtual collection. The search string is the collection development statement. The materials collected are the web pages and databases found in the search results. The collection is virtual because it does not exist as a collection anywhere. It comes into existence at the time of the search and is gone when the search page is closed. Collection bias results from the choice of search engine and the algorithms used by that search engine. With a few minor modifications other virtual collections can be created (see table 1).

Table 1
Google Searches that Create Virtual Collections

Search	**Type of Results**
site:gov (intitle:database | inurl:database)	valuable federal government databases
site:edu (intitle:database | inurl:database)	databases at universities
site:il.us (intitle:database | inurl:database)	databases on Illinois state government web sites

We can repeat this search with any domain (.org, .net, .int, .uk, etc.) and refine our results to specific types of information by adding keywords for the subject we are interested in such as crime, plants, medicine, etc.

What Can Google Really Do?

We need to be able to find the information that patrons can not find for themselves. This entails being able to stretch the capabilities of a search engine beyond its normal limits (Bausch, Calishain, and Dornfest,; Johnny). If we count all of the Google services listed under "More Google Products" and "Google Labs," there are seventy different products or services. Fifty-two of those are search related (Reynolds). In their book Google Hacks, Bausch, Calishain [and] Dornfest list hack #1 as being aware of and using the Google directory, #2 as Google Zeitgeist, #4 as the spellchecker, and #5 as the Google Phonebook (ch. 2, sec. 1, 2, 4, 5). By studying the documentation and tools provided by Google, we immediately become expert searchers (Reynolds). An easy way to incorporate this knowledge is to remember the three P's of becoming a search engine expert: "**Pick** two or three search engines to use regularly. **Print** and study any help pages or documentation they provide. **Practice** using the various tools and incorporate them into your own research and into your work with others" (Reynolds).

If we look at the search operators available through Google, we find many of pieces of metadata we can use in searching. Many can be found on the Google Help: Cheat Sheet, Google Help

Search Center: Advanced Operators: Alternate Query Types, Google Help Search Center: The Essentials of Google Search and on the help screen for the various special searches like Google Scholar Help: Understanding a Search Result. If we add up the different syntax or operators available for a regular Google search listed on the help pages, we come up with over 28 different operators. Each of these operators focus on a specific type of metadata found on the web. There are other operators not mentioned on these pages, such as [filetype:], [daterange:] and others that appear to have little or no documentation at all (Bausch, Calishain, and Dornfest ch. 1, sec. 3).

Something New

Google has released a "Custom Search Engine (CSE)." It can be found on "Google Co-op: Welcome to Google Co-op." To use it, we must create a Google Account. You will be prompted to create one when you select the "Create a Search Engine" button on "Custom Search Engine." Once you have an account, Google allows you to create your CSE. However, what is this engine going to search? This crucial question that will make the difference between just another web page and a quality research tool.

I recently noticed an increase in book sales in WWI history. I thought it would be great if we had a collection of first hand accounts from soldiers about the war. If the same type of collections could be created for other wars, comparisons could be made between soldiers' opinions, attitudes and experiences. I could create a virtual collection of soldiers' diaries and journals from the war that had been placed on the web. Most "virtual collections" are a series of image files inside of proprietary databases. This makes it impossible to do a full text search for information, such as what was the food like or what was the first poison gas attack like. Even if there are transcripts of the image files in the database, they are still inaccessible to search engines because of the proprietary nature of most database systems.

This virtual library would need to collect diaries and memoirs of WWI soldiers that search spiders could crawl. These needed to be in established web sites that were unlikely to disappear and that seemed to post accurate transcripts of the original documents. Armed with these criteria I began searching for the diaries. I started with the web directories and then used some of the search strategies discussed earlier.

(WWI OR "The Great War" OR "World War One") (intitle:diary OR intitle:diaries OR inurl:diary OR inurl:diaries)

With this and other searches, I collected a list of resources with documents that matched my collection criteria.

The "Create a Custom Search Engine" page asks for the new search engine's name, then a description. Keywords are added to help others find the search engine. Terms like "WW I, World War One, The Great War, War, Diaries, Soldiers" worked well. Google provides an entry box in the creation form to list the sites to search. The CSEs tool has its own set of syntax. A chart describes the patterns and syntax used to enter the URLs in the documentation section. I spent over an hour entering my data. When I went to another web page to check something and then went back, all of my data was lost. The next time I entered my data, I created a plain text file in

"Windows Notebook" and saved it after every entry. After the text file was complete, I copied and pasted it into Google's form. Some of the sites had all of their diaries in one directory or part of the site which made it very easy to enter the data. Brigham Young University Library had all of their journals in: http://www.lib.byu.edu/~rdh/wwi/memoir/*.

Earlier the asterisk acted as a wildcard for a word. However, in the CSE it is used to include sections of sites without naming every single page ("URL Patterns"). On some sites the asterisk worked well; others had to have the entire URL for each page listed to avoid unrelated documents in the same directory or in related directories. After all the data was entered and saved, Google created the search engine and a free homepage to host it on. I have created or started several CSEs. The WW I: Diaries of The Great War engine is at:

http://www.google.com/coop/cse?cx=014997348189176913774%3A_b4nqqxhk2k

A second search engine Sacred Text of Islam The Quran and Hadith is at:

http://www.google.com/coop/cse?cx=014997348189176913774%3Abovrnnvevwo

The others can be found at:

http://www.google.com/coop/profile?user=01499734818917691377 4

One of the features of the CSE is that you can take the code of your engine and put it on your own web site along with the results page. When you are logged into your account, your homepage has a link labeled "Edit this search engine" When you click on that link, you are brought to a page where you can edit all facets of your engine. One of the options is labeled "code." If you select that option, Google will provide you with the necessary source code to add the search engine to your library's site or your subject page or any other site you have. There is an example of the WWI engine at:

http://www.protoknowledge.com/iwasthere/war/worldwarone/index.html

The search box can be integrated into your site and, if you try a search, you will see that the results page also has the look and feel of the rest of the site.

Conclusion

Google and other search engines have become a part of the information landscape. In order for us to continue to claim the status of information professionals, we will have to add "Google Hacks" to our search skills. We need to be able to not only fully exploit the Internet, but we must also use our knowledge and experience to create tools like CSEs and any others that may prove useful. We do this with the hope that we will help our patrons and expand their research skills, options, and capabilities.

Works Cited

Bausch, Paul, Tara Calishain, and Rael Dornfest. Google Hacks. 3rd ed. Sebastopol, CA: O'Reilly Media, Inc., 2006. Safari Books Online, Ralph W. Steen Library, Nacogdoches, TX.

Cohen, William W. "Recognizing structure in Web pages using similarity queries." Proceedings of the Sixteenth National Conference on Artificial intelligence and the Eleventh innovative Applications of Artificial intelligence Conference innovative Applications of Artificial intelligence. Orlando, FL, Menlo Park, CA: American Association for Artificial Intelligence, 1999.

Fallows, Deborah. "Search Engine Users: Internet Searchers are Confident, Satisfied and Trusting – But They are Also Unaware and Naïve." Pew Internet & American Life Project: Reports Online Activities & Pursuits. 23 Jan. 2005. Pugh Research Center. 04 Nov. 2006 <http://www.pewinternet.org/pdfs/PIP_Searchengine_users.pdf>.

Fallows, Deborah, Lee Rainie, and Graham Mudd. "The Use of Search Engines is a Top Online Activity and Americans Increasingly Feel They Get the Information They Want When They Perform Search Queries." Pew Internet & American Life Project. Aug. 2004 1-7. 06 Nov. 2006 <http://www.pewinternet.org/pdfs/PIP_Data_Memo_Searchengines.pdf>.

Fox, Susannah. "Online Health Search 2006: Most Internet Users Start at a Search Engine." Pew Internet & American Life Project. 29 Oct 2006. 06 Nov. 2006 <http://www.pewinternet.org/pdfs/PIP_Online_Health_2006.pdf>.

"Google Custom Search: Custom Search Engines." Google. 2006. Google, Inc. 6 Nov. 2006 <http://www.google.com/coop/manage/cse/create/1?>.

"Google Co-op: Custom Search Engine: URL Patterns." Google. 2006. Google, Inc. 6 Nov. 2006 <http://www.google.com/coop/docs/cse/patterns.html>.

"Google Custom Search: Custom Search Engine." Google. 2006. Google, Inc. 6 Nov. 2006 <http://www.google.com/coop/cse/overview>.

"Google Frequently Asked Questions - File Types." Google. 2005. Google, Inc. 6 Nov. 2006 <http://www.google.com/help/faq_filetypes.html>.

"Google Help Search Center: Advanced Operators: Alternate Query Types." Google. 2005. Google, Inc. 6 Nov. 2006 <http://www.google.com/help/operators.html>.

"Google Web Help Search Center: Does Google Support Wildcard Searches?" Google. 2007. Google, Inc. 15 Aug. 2007 < http://www.google.com/support/bin/answer.py?answer=3178&topic=352>.

"Google Help Search Center: The Essentials of Google Search." Google. 2005. Google, Inc. 6 Nov. 2006 <http://www.google.com/help/basics.html>.

"Google Help: Cheat Sheet." Google. 2005. Google, Inc. 6 Nov. 2006 <http://www.google.com/help/cheatsheet.html>.

"Google Scholar Help: Understanding a Search Result." Google. 2006. Google, Inc. 6 Nov 2006 <http://scholar.google.com/scholar/help.html>.

"More Google Products." Google. 2006. Google, Inc. 6 Nov. 2006 <http://www.google.com/intl/en/options/>.

"Google Co-op: Welcome to Google Co-op." Google. 2006. Google, Inc. 6 Nov. 2006 <http://www.google.com/coop/>.

"Google Labs." Google. 2007. Google, Inc. 15 Aug. 2007. <http://labs.google.com/>.

Graham, Leah and Panagiotis Takis Metaxas. "'Of course It's True; I Saw it on the Internet!': Critical Thinking in the Internet Era." Communications of the ACM 46.5 (2003): 70-75.

Generic Top-Level Domains. 21 Dec. 2005. IANA: Internet Assigned Numbers Authority. 28 Nov. 2006 <http://www.iana.org/gtld/gtld.htm>

Root-Zone Whois Information: Index by TLD Code. 26 Nov. 2006. IANA: Internet Assigned Numbers Authority. 28 Nov. 2006 <http://www.iana.org/root-whois/index.html>

Kenney, Anne R., Nancy Y. McGovern, Ida T. Martinez, and Lance J. Heidig. "Google Meets eBay: What Academic Librarians Can Learn from Alternative Information Providers." D-Lib Magazine 9.6 (2003) 1-16. 06 Nov. 2006 <http://www.dlib.org/dlib/june03/kenney/06kenney.html>.

Long, Johnny. johnny.ihackstuff.com. 06 Nov. 2006. 10 Nov. 2006 <http://johnny.ihackstuff.com/index.php?module=prodreviews>.

MedPix, "MedPix Medical Image Database." MedPix. 2006. Departments of Radiology and Biomedical Informatics, Uniformed Services University. 17 Oct. 2006 <http://rad.usuhs.mil/medpix/medpix_home.html>.

Naval Research Laboratory, "Center for Computational Materials Science Code 6390." Materials Science and Technology Division, Naval Research Laboratory. 11 June 2002. United States Navy. 6 Nov. 2006 <http://cst-www.nrl.navy.mil/>.

Reynolds, R. Philip. "Things to Read Before Session." Electronic Resources & Libraries. 7 Feb. 2007. ER& L Forum. 14 Aug. 2007 <http://electroniclibrarian.org/forum/2007/02/07/things-to-read-before-session/>.

Sherman, Chris. "Survey: Searchers are Confident, Satisfied & Clueless." SearchDay. 24 Jan. 2005. Search Engine Watch. 06 Nov. 2006 <http://searchenginewatch.com/showPage.html?page=3462911>.

The Online Information Literacy Game: A Trivial Pursuit?

Scott Rice
Networked Information Services Librarian
University of North Carolina at Greensboro

Amy Harris
First-Year Instruction Coordinator and Reference Librarian
University of North Carolina at Greensboro

Abstract

Educational games are receiving a critical look from academia for the ways in which they can be used to provide, promote, and enhance learning. “Serious” games, as they are often called, have been used across various disciplines to illustrate concepts, give real-life examples, or generate enthusiasm for a topic.

Believing that library instruction in information literacy can benefit from a games-based approach, University at North Carolina at Greensboro (UNCG) Librarians Amy Harris and Scott Rice created a computer board game with a question-and-answer format. The game was created using Ajax and XML and can be adapted easily by other libraries. The game allows from two to four students to play against each other by answering questions about information literacy topics in four different categories (such as Choose your Resource, Avoiding Plagiarism, and Searching and Using Databases). The game also has a one-player version in which students provide timed responses to questions. The game can be accessed at http://library.uncg.edu/game/.

One of the innovative additions to the game is evaluative exercises designed to get students to think about information literacy concepts in a concrete manner. When landing on special squares placed around the board, students are asked to evaluate either one or two websites. One-website exercises ask the student to find specific information about a website, such as the company’s physical address, contact information, etc. Two-website exercises ask the student to decide which of the two websites best fits specified criteria. For example, some two-website exercises ask the student to figure out which website is selling a real product or which website has more accurate or less biased information.

The Information Literacy Game has received positive responses, both from students and other librarians. However, the effectiveness of the game in fitting into the information literacy program and engaging students is still being measured. Data from online surveys is being gathered in order to better understand how much impact the game may have on student learning.

Introduction

Gaming is receiving a great deal of attention as way of introducing content while engaging students. This movement has been especially well-received in the library world. Colleges and universities around the world are building and have built games designed to teach and reinforce

information literacy concepts. Librarians at The University of North Carolina at Greensboro (UNCG) were eager to find a way to incorporate gaming into our existing library instruction program. This project ultimately brought together the first-year instruction librarian, from the library's Reference Department, and the distance education librarian, from the Electronic Resources and Information Technology department, in a collaboration to create a game to reinforce library instruction.

Goals

This project began with four simple goals. Our primary goal was to create a fun way to reinforce information literacy concepts taught in library instruction sessions. Due to the nature of the one-shot instruction session, there is very little opportunity for follow-up, with the exception of consultations and visits to the reference desk. We wanted to change that by finding a way students could revisit important concepts on their own time in a casual, fun way. Second, gaming was being discussed in library literature, and we were interested to learn how it might benefit our students. Further, much of the literature on gaming focused on large, grant-funded, multi-year gaming projects, so our third goal was to attempt to build a simple game with no outside funding or assistance. Finally, we wanted to build a game that other libraries could easily adapt for their own use. Librarianship is a very collegial profession, and we wanted to create something that could benefit others.

The Game

The game was created to be similar to a board game involving answering trivia questions. Players are first presented with a screen where they can choose an icon to represent them on the game board and enter their name. During game play, a player rolls the die and moves around the board, attempting to answer correctly questions in four categories: Choose Your Resource, Searching/Using Databases, Cite Your Sources/Avoid Plagiarism, and Library Wild Card. Answering a question correctly gives a player a colored "light" in one of four colors corresponding to the categories. Once a player has gotten all four colored lights, they are placed on the inner track of the game to answer four more questions, one from each category. Once this is completed, the player has won. The game allows from two to four players to compete in this manner, and a solo version allows a single player to play against a time clock. The player is given twenty seconds to answer a question and five wrong answers ends the game. Once a player has won (or lost, in the solo version), the player(s) are presented with the statistics of their game, including how many questions were asked and answered correctly in each category.

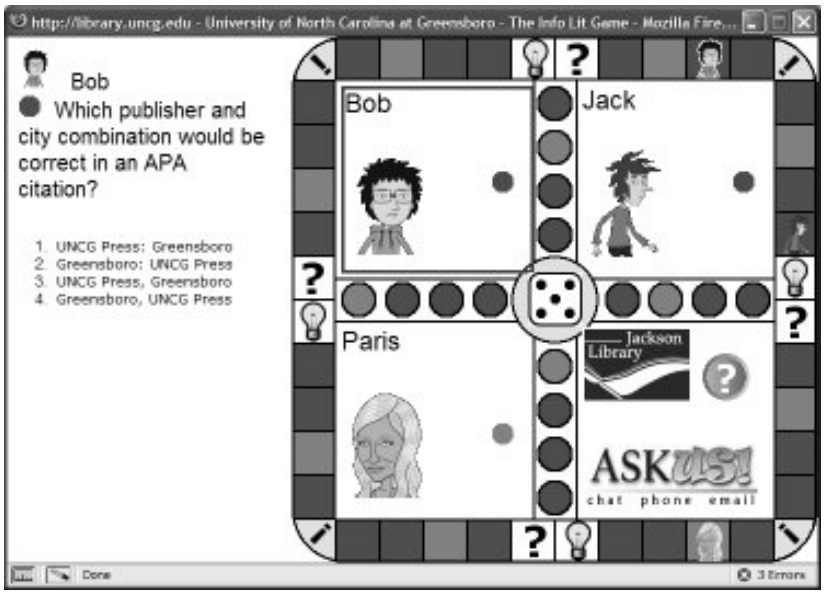


Fig. 1. A three-player game. It is currently Bob's turn, as indicated by the square around his name and picture. Each character has answered one question correctly, as evidenced by the round "light" in each of their squares.

The game also includes three special squares, spaced at intervals around the game board. The first square is a question mark, which gives the player a question to answer from a randomly chosen category. The second special square is the exclamation point, which randomly chooses from several different effects, including moving the player forward or backward one to five spaces, allowing the player to pick another player to lose a turn, giving the player a free light, or making the player lose a turn. The final special square is the light bulb square, which presents the player with a "web evaluation exercise." These exercises are of two types, chosen randomly. One type of exercise gives the player a link to a single website and asks the player to answer a question about that website after examining it. Questions asked involve finding information about the site such as author, contact information, or update frequency. The second type of exercise provides two websites and the player is asked to compare the two and evaluate them for information, such as bias or currency. Answering correctly gets the player a light and answering incorrectly loses the player a light.

Technology and ADA Compliance

AJAX was chosen as the technology for several reasons. The use of XML (eXtensbile Markup Language) allows someone to easily change quiz questions without using expensive software. Javascript does not involve server-side programming and also does not require extra permissions to run on a server, as it is executed within the browser. This means that libraries with less control over their technological resources would still be able to fully use the game as long as they can post the files to their web space. Further, the use of the several different files to hold the questions and scripts allows the program to download over a period of time without making the player wait unnecessarily. Players can begin the process of selecting icons and entering their names while the questions download in the background. Slower internet connections should be able to handle this phased-in download process without undue waiting times.

Compliance with ADA regulations and usability were two important concerns in the project. For this reason, several features of the interface and programming were developed to make the game as accessible as possible. All functions that can be performed with a mouse can also be performed with a keyboard. The game can be played by patrons who use a screen reader and can actually be played to some degree entirely without the use of images. Sound cues, which can be toggled on or off, let the user know if they have a correct or incorrect answer and also inform the next player that it is his or her turn. To assist in making the game as usable as possible, staff play-tested the game using the library's accessibility lab, including playing the game using the JAWS software. Future improvements to the game will be added to make the game even more accessible.

Addressing Information Competency Standards

Each of the question categories in The Information Literacy Game addresses a part of the Information Literacy Competency Standards for Higher Education, created by The Association of College and Research Libraries. The Choose Your Resource category, where students are given a piece of information and asked to determine the best place to find it, addresses Standard One, "The information literate student determines the nature and extent of the information needed" (8). The Searching and Using Databases category addresses Standard Two, "The information literate student accesses needed information effectively and efficiently" (9). This standard includes constructing a search using Boolean operators and truncation. The category entitled Cite Your Sources and Avoid Plagiarism reflects Standard Five, "The information literate student acknowledges the use of information sources in communicating the product or performance" (14), which encompasses selecting a citation style and using it correctly. The light bulb category, which asks students to find a particular piece of information on a website (such as a physical address or parent company) or compare two websites for accuracy, currency, authority or bias relates 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" (11).

Testing and Feedback

Before the game was considered complete, it was play-tested by student workers at UNCG's library. Students played the game, alone or in groups, and provided feedback. This feedback led to several changes in the game, including raising the amount of time given to answer a question in the one-player version from ten to twenty seconds and clarifying ambiguous questions.

An ongoing method of receiving feedback from players is the link to an online survey which is presented just below the statistical results on the game's ending screen. Players are presented with three questions using a Likert scale and a space for open commentary. We hope students will provide feedback that will help us continue to work to improve the game.

Roll-out

The game will be officially rolled out to students in Fall 2007. We decided to wait until the beginning of the fall semester because the majority of English 101 and other first-year courses are taught during this time. The game will be included on the customized course guide web pages for each English 101 library instruction class. The first-year instruction coordinator will show the game to teaching assistants during orientation, in order to facilitate introduction to first year students. The game will also be marketed directly to students on the library's website and in Blackboard, UNCG's course management software. We would like to award prizes through a random drawing to students who play the game and complete the survey in order to encourage students to play and provide feedback.

Portability

One of the primary concerns in creating the game was the interest in making it easily portable to other contexts and other institutions. At http://library.uncg.edu/game/mygame.asp the complete set of files is available for download. These files include all scripts, style sheets, images, sound files, and xml files necessary for playing the game, compressed into a zip file. Also included is a text file that explains how to modify game files for other uses. Options that can easily be modified within the game include the questions, the players' icons, the 'lights', whether sounds are used or not, whether solo play is allowed, and text and logo branding. The majority of changes can be accomplished easily within the question files and a config.js file, which also includes explanation of how to change various game settings. Information about changes to the game and issues with functionality are addressed through the authors' blog, http://librarygames.blogspot.com.

Lessons Learned

The most important lesson learned during this process is that we, a techie librarian and an instruction librarian, could build a game without outside funding or help. There are many wonderful gaming projects in progress which involve grants and dedicated programmers, but we did not have access to these things. We only had small amounts of time in between normal work responsibilities to complete it, and it was finished in approximately six months. This reflects a secondary goal of ours, a shortened time line. We wanted to have something workable in a short time, where other projects may take several years to complete.

Another important lesson was that there is no substitute for repeated playtesting. Before giving the game to students to play, we played it about fifty times each (some of these we played against each other). Playing the game very often, as librarians who have created the questions and exercises, provided a skewed view of the ease of use and knowledge level necessary to play the game. Play testing by students (and other staff) quickly pointed out errors in questions, functionality, and usability.

When we first envisioned the game, it was thought that librarians teaching information literacy would be the main beneficiaries. Once the game began to be distributed, we learned that the possibilities for this game extend far beyond libraries. A professor of elementary education spoke

to us about her students adapting the game for use in their elementary school classes. We had not even considered its use in other academic fields, but it became immediately obvious that any question set could be used, opening up the game for any number of educational opportunities.

The Future

Though the game is, in its present form, complete, we feel there are improvements to be made. In the immediate future, we plan to create a generic version of the game which will eliminate all UNCG-specific questions and logos. This will enable librarians to download the game and begin using it with little or no modification. Another future change will drop the fixed size window width in which the game currently runs. This change will allow players to modify the size of the window and the size of the text to suit their needs. Finally, we would like to be able to gather more statistics on people playing the game. Most importantly, we would like to know which questions students are missing most frequently. This would provide us insight into frequently misunderstood questions and/or gaps in the library instruction program. This could create a powerful assessment tool. We would also like to create a shortened version of the game that could be used at the end of a library instruction session to see what students learned. The regular version might then be used a few weeks later to test retention. This could provide valuable insight into the game's efficacy in reinforcing instruction.

Works Cited

Board of Directors of the Association of College and Research Libraries. “Information Literacy Competency Standards for Higher Education.” Association of College and Research Libraries. 2000. American Library Association. 29 May 2007 <http://www.ala.org/ala/acrl/acrlstandards/standards.pdf>.

Supporting Campus Publications at the University of Kansas Libraries

Brian Rosenblum
Scholarly Digital Initiatives Librarian
University of Kansas

Holly Mercer
Coordinator of Digital Content Development
University of Kansas

Abstract

Driven by concerns about the current scholarly communication environment, libraries are taking on more active roles in the scholarly publishing arena, building new tools and services to support the publication of scholarly content. The University of Kansas Digital Initiatives is conducting a pilot program to explore new models for the online publication of journals, conference proceedings, monographs, and other scholarly publications. This service is intended to help lower barriers to electronic publishing for campus publications, help make their content available online in a manner that promotes increased visibility and access, and ensure long-term stewardship of the materials. Components of the pilot program include evaluating of electronic publishing software, gathering information about the scope of publishing activity occurring on campus, engaging faculty editors about scholarly communication issues, and identifying potential campus partners interested in electronic publishing. This paper will discuss the program's activities to date and some of the key questions and issues that have emerged. We will also follow the development of one of the initial projects, the digitization and publication of the back issues of a scholarly journal, from its initial planning stages to completion, discussing issues such as negotiating the agreement with our faculty partner, working with a vendor to scan and OCR (optical character recognition) the content, creating article-level metadata, and putting the final, digitized content online.

Introduction

Driven by concerns about the current scholarly communication environment, academic libraries are assuming increasingly active roles in the scholarly publishing arena by building new tools and services to support the publication of scholarly content. The University of Kansas (KU) Digital Initiatives program has been exploring ways in which the Libraries and Information Technology (IT) can support electronic publishing on campus, gathering information about the scope of publishing activity occurring at KU, engaging faculty editors about scholarly communication issues, and identifying potential campus partners interested in electronic publishing. This paper will discuss some of the program's activities to date, and will follow the development of an initial project, the digitization and publication of the back issues of a scholarly journal.

The KU Environment

Digital Initiatives (DI) at KU is responsible for designing and implementing services needed to create, display, discover, store, and preserve scholarly information in a digital format. A program of Information Services (Libraries and Information Technology), Digital Initiatives is building a rich set of software, tools, and services in support of the KU community's research and teaching endeavors. One example of such a service is KU ScholarWorks <http://kuscholarworks.ku.edu>, the University's scholarly digital repository. Launched in 2005, and now populated with more than 1200 items, KU ScholarWorks helps capture and make accessible the research output of KU's faculty.

Digital Initiatives has also launched a program to explore new models for the online publication of journals, conference proceedings, monographs, and other scholarly publications <http://kudiglib.ku.edu/~diglib/projects/epublishing.shtml>. This program seeks to gauge interest at the University in a central electronic publishing system, and to test, select, and implement such a system. An electronic publishing program can help address an identified need--rather than simply engaging faculty in theoretical discussions on scholarly communications--by assisting faculty editors in adopting policies and systems that support digital library best practices and improve access to scholarship.

Beginning in 2002, the Libraries created an inventory of journals published with assistance from the University, and a separate inventory of KU faculty who serve as editors for scholarly journals. This information proved helpful to gauge interest in a centralized electronic publishing system. In fact, it has not been a difficult task to identify journals and editors interested in forming partnerships with DI for electronic publishing.

In conducting a scan of the publishing activities at KU, Digital Initiatives determined that currently KU campus units publish various items in print form, including monographs and journals. Other publications have no official affiliation with the university, but may be associated with an individual faculty member or researcher involved with a scholarly society. Further, there are electronic publications (including refereed journals) hosted by departments, research centers, and other campus units, with varying levels of institutional technical, financial, and operational support.

The Academic Library as Publishing Partner

With the development of new open-source applications for electronic publishing, there are new opportunities for libraries to play a stronger role in supporting the publishing activity on their campuses. The pilot program at KU is intended help lower barriers to electronic publishing for campus publications by providing the technical infrastructure to publish in electronic format, while adhering to standards and best practices for description, access, and preservation of electronic collections.

There are several benefits to journals in partnering with Digital Initiatives. Journal editorial staff need not worry about the technical aspects of electronic publishing, but can focus on the journal content. Further, the Digital Initiatives program is committed to preserving and maintaining

access to digital collections. Moving journal content from print to electronic can increase the visibility of the journal, and therefore increase use of the journal. Digital Initiatives can extend this reach even further by using systems that support standards such as the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH), that use uniform identifiers such as Handles, and that allow Web crawlers to access content. These are all elements of a solid methodology for providing improved visibility and access to digital content. Finally, DI can provide consultation about other aspects of electronic publishing, such as workflow and production for electronic content, intellectual property and copyright issues, and track download statistics for content we host.

In spring 2007, we began work on the first project to come out of this initiative: the digitization and publication of *The Latin American Theatre Review*.

Pilot Project: *Latin American Theatre Review*

Published twice a year since 1967 by the Department of Spanish and Portuguese and the Center of Latin American Studies at the University of Kansas, *Latin American Theatre Review* (LATR) covers all aspects of theatre in Latin America and has grown to be one of the premiere scholarly journals in its field <http://www2.ku.edu/~latamst/latr.htm>. As of today, there are eighty issues, totaling some 12,500 pages, with over 1300 scholarly articles, news items, theater schedules, and book and performance reviews. The journal is an essential resource for anyone interested in Latin American theater over the last forty years.

One of the goals of digitizing this publication is to increase access, particularly in the countries of Latin America, where many readers, scholars, and writers do not have convenient access to it. Also, because there are dwindling supplies of print versions of the back issues, digital format will provide an alternative way to distribute the content.

Digitizing and publishing the back issues of this journal online involved several stages of activity. These are discussed below.

Agreement with the Publication

This first step was to come to a common understanding--through numerous discussions and eventually signing a memorandum of agreement--with the journal editors regarding the goals, outcomes and responsibilities of all the parties involved.

One area of discussion focused on the issue of access to the online files. KU Libraries is interested in increasing access to the scholarship produced at KU, and our willingness to provide resources to support LATR rested on being able to provide open access to as much of the content as possible. The journal editors also want to maximize the visibility and usage of LATR, so free online access is in their interests as well. However, like many journals that have very tight operating budgets, LATR is concerned that making their content freely available online will result in subscription cancellations and thus endanger some of the subscription revenue upon which they are dependent. Although the editors foresee the likelihood of going entirely online in

the future, they are not ready to do so at this time, and they still require financial resources to support the production and distribution of their print edition.

The Libraries and LATR agreed to start with a 5-year embargo period--that is, all issues up to five years ago would be made freely available online, and as new issues are published, twice a year, new content would be added to keep that five year period up to date. Although this is a longer embargo period than KU Libraries desires, it provides a low-risk way for the journal to ease into the world of online publishing. We hope to revisit this issue in the future, as both LATR and the Libraries gain a better understanding of the effect of electronic access on the journal's usage and subscription list.

A second concern had to do with the physical volumes and ownership of the digital files. The publishers agreed to provide a complete run of the journal which could be unbound for scanning. Digital Initiatives would oversee the scanning, in this case by outsourcing it to a vendor, and would have the right to archive and publish online the digital files in perpetuity. This is a non-exclusive agreement, so the publishers can request the digital files and work with another online publisher if they choose, but the files will also remain available online through Digital Initiatives' systems.

Metadata and Scanning

In addition to providing a complete run of the back issues of the journal, we also needed article level metadata for the entire content. This included information such as article title, author(s), volume, issue, date, page numbers, and keywords and abstracts where available. Graduate students, employed by LATR, created and corrected data in an Excel spreadsheet according to specifications provided by KU Digital Initiatives staff.

The next stage was the actual digitizing of the materials. Digital Initiatives identified a vendor based on price quotes and levels of service, and gave them technical specifications. The vendor provided 600dpi bi-tonal tiff images (with skew correction and quality control), OCR text files for each page, and a searchable PDF file for each article based on the metadata provided to them.

Publishing Platforms

KU ScholarWorks is the University's institutional repository designed for the long-term preservation of digital objects. It is based on DSpace <http://dspace.org>, open-source software co-developed by the Massachusetts Institute of Technology and Hewlett Packard. Placing the journal content into KU ScholarWorks will help ensure its long-term retention and accessibility. Each article will get a Handle--a permanent, linkable location on the web can be used for reliable citations--and metadata will be made available to Google, Google Scholar, and other scholarly search engines, helping to provide greater visibility for the journal.

While the hierarchical structure of KU ScholarWorks is well suited to storing serial content such as journals, there currently is only one generic look-and-feel for the entire repository; this is too rigid for the wide variety of content Digital Initiatives could potentially host. Journal editors have indicated a desire for a more customized look and feel for their content—a place on the

Web that provides them with a recognizable visual identity. In addition, KU ScholarWorks lacks editorial workflows and other features used in electronic journal publishing.

Because of this, we will also be providing support for Open Journal Systems (OJS) <http://pkp.sfu.ca/?q=ojs>, an open source journal management and publishing system that has been developed by the Canadian-based Public Knowledge Project as part of its efforts to expand and improve access to research. OJS is currently used by over 800 journals worldwide, and it provides comprehensive support for publishing electronic journals--from online submission of manuscripts by authors, to administering and tracking the peer-review process, to final publication of articles--all in a single electronic environment that can help facilitate and make more efficient the journal publishing process.

By utilizing both OJS and KU ScholarWorks, we will be able to offer publications the journal management functions they need (including a customizable look and feel), as well as ensuring that the content is retained in our institutional repository for improved access and preservation.

Future Steps

Once the initial batch of files (representing 35 years of content) are placed online, we will continue to develop and enhance the project. The main areas for attention as we proceed include:

- Increasing interoperability between OJS and KU ScholarWorks. Rather than having the content reside in two locations, we foresee using OJS as a journal editing tool that feeds content into KU ScholarWorks for final publication and archiving. Further development needs to take place in order for these two applications to communicate with each other. We are also monitoring developments in the DSpace community that will help make the interface more flexible.
- Developing a model ingest process for the regular publication of new content. In the case of LATR, new content will be published every six months, and an efficient and reliable workflow needs to be implemented to handle this. This may include developing a process to publish future issues directly to the web from the editor's electronic files, rather than scanning the printed issues.
- Tracking and analyzing statistics and usage, so all parties gain a better understanding of how much the online content is being used and what the impact is on the visibility and usage of LATR.

Digg This: Tagging and Social Collaboration on the Web

Keri Cascio
Librarian/Trainer
Missouri Library Network Corporation

Abstract

Just as the Internet allows users to create and share their own documents, photographs, and videos, it also enables them to organize digital materials in their own way. Web content is often categorized collaboratively, using tags or keywords supplied by users. Users no longer rely on pre-existing library formats to classify and organize their information. A December 2006 survey from the Pew Internet & American Life Project found that 28% of Internet users have tagged or categorized content online such as photographs, news stories, or blog posts.

By using sites like Del.icio.us (sharing browser bookmarks), Flickr (sharing photographs), YouTube (sharing videos), Digg (sharing news), and LibraryThing (sharing books), the public communicates information as a social interaction. These sets of user-created tags and descriptors are sometimes referred to as "folksonomies." Since tagging is open ended and always editable, it can quickly adapt to growing fads and trends. Tags can reflect and represent both Web content and the people who create and review it.

We will look at this social approach to the organization of information and discuss how libraries can understand and leverage the explosive volume of metadata that is being created on a daily basis.

A Semester Long Library Research Course

Pamela M. Salela
Instructional Services Librarian
University of Illinois at Springfield

Julie M. Chapman
Instructional Services Librarian
University of Illinois at Springfield

Abstract

The University of Illinois at Springfield (UIS) librarians have been teaching library research methods as a semester long credit course for over thirty years. In Fall 1998 UIS began to offer courses online. It was not long before we considered adding Library Research Methods (UNI401) to our burgeoning online curriculum offerings. The course is currently taught utilizing a textbook, as well as with lectures which have been developed in-house. Supplementary readings are provided through electronic reserves. Communication takes place via the discussion board, email, telephone and/or chat room. The instructors provide a great deal of structure through weekly assignments and assessments (quizzes) and a semester-long research project. We also provide ample opportunity for students to provide feedback through course evaluations both public (in the discussion board) and confidential and anonymous. This paper will provide an overview and details about the course structure, including the syllabus, assignments, readings and discussion topics.

Adapting to an online environment did present some interesting challenges, such as how to create a learning community and how to provide meaningful feedback to the class as a whole, as well as to each individual student. We will share our insights on what worked and did not work and discuss future directions for the course.

History

UIS (formerly Sangamon State University, 1970-1995) librarians have been teaching credit courses on library instruction since at least the mid-1970s. In its initial incarnation the course was the two-credit "Library Lab: Basic Sources of Information (UNI301)." Over time, the course evolved in tandem with changes in information technology and access. The course was always seen as a valuable asset to the curriculum offerings of the campus and eventually became an option for fulfilling degree requirements in various programs. Eventually, the course was changed to a 400-level offering, affording access to graduate students. And recently, recognizing the evolution of content and increase in course work and requirements, it was changed to three credits.

Collaboration

The evolution of the course has been a product of instructional services librarians jointly developing, revising and teaching the curriculum. This reflects the strongly-encouraged interdisciplinary teaching environment of UIS. As new librarians have entered the environment and inherit the course, this tradition has been maintained. The general opinion has been that this is a positive pedagogical model and one that benefits the instructors as well as the students. When different subject liaisons combine their efforts, the effect is to provide a more diversified perspective of the research process. The course curriculum reflects this with its focus on humanities and social sciences, including a strong section on government information.

Each semester, the syllabus and course content are re-examined to ensure relevance to the current information-seeking climate. In addition, topics are frequently switched out for the exercises, both to keep the course fresh and interesting for those teaching it, as well as to maintain a focus on current publications and contemporary issues. For example, for a few semesters the readings focused on King Philip's War, but when new instructors rotated in, the topic was changed to midwifery. Also, as laws and policies change with the evolution of the information landscape, our recommended readings must change as well. For example, the course once referenced the conundrum of copyright and music downloads, but with the advent of iPods and the changing nature of the music industry that is no longer relevant. A recent iteration of the course instead provided a focus on copyright clearance and reissued documentaries to provide context to the legal vagaries of intellectual property. Ideally, the course should be systematically revised with a team comprised of a librarian from each of the following areas: copyright, archives, government documents as well as liaisons with foci on humanities, social sciences and sciences. Currently input is garnered from these factions in a more ad hoc manner.

Curriculum

The course is organized in much the same way that a face-to-face class might be, including readings, regular assignments and quizzes, and discussion topics. The course is currently founded on the textbook, The Research Process, by Myrtle S. Bolner & Gayle A. Poirier and lectures that have been developed in-house. The lectures are in the form of readings with screen captures and provide the foundation for the course. Supplementary readings are provided through electronic reserves. Communication takes place via the discussion board, email, telephone and/or chat room. A great deal of structure is provided through weekly assignments and assessments (quizzes) and a semester-long research project.

The course is designed to teach students to understand research as a process. They are introduced to the foundations of doing research and then slowly build the skills and knowledge base necessary for approaching academic research assignments in a systematic and methodical manner. Following is a typical semester-long topic agenda.

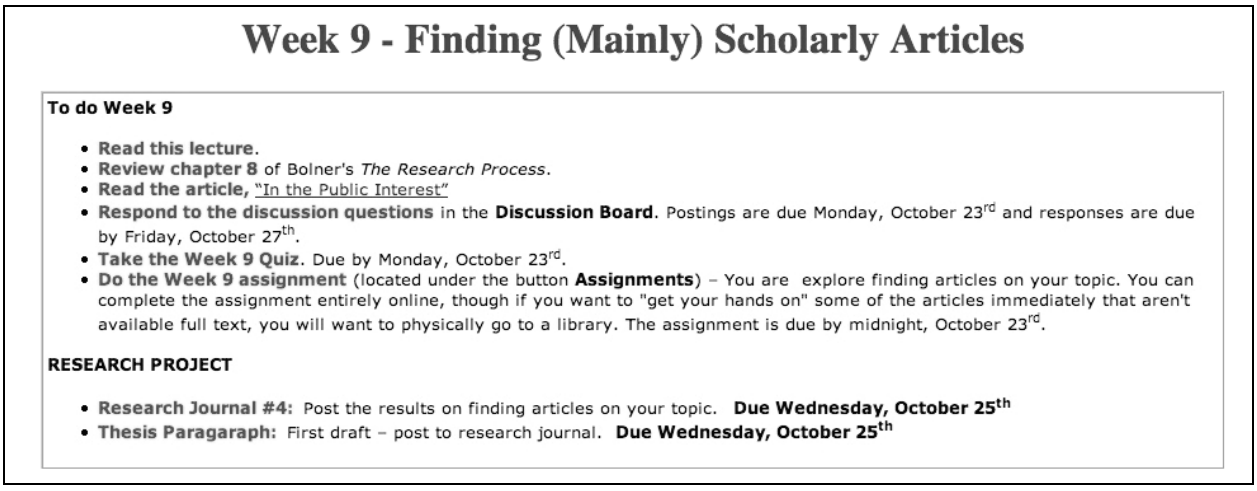
Week 1: Introduction & Overview of Organization of Academic Libraries
Week 2: Research Topics & Types of Information Sources (Books, Articles, Websites)
Week 3: Importance of Evaluation!
Week 4: Citation, Plagiarism, and Annotated Bibliography

Week 5: How to Think Like a Librarian: Controlled Vocabulary vs. Keywords
Week 6: Finding Background Information & Facts
Week 7: Finding Books
Week 8: Finding Magazine & Newspaper Articles
Week 9: Finding Scholarly Articles
Week 10: Finding Federal & State Government Information
Week 11: Finding Statistics
Week 12: Finding Websites
Week 13: Other Information Sources – Biographies, Book Reviews, Literary Criticism, Tests
Week 14: Thanksgiving Break
Week 15: Recap – Annotated bibliography due.
Week 16: Research Summary due

Fig. 1. Sample syllabus schedule

Learning about research can begin to take place by examining scholarship and guiding students through a process of learned critical assessment. Early in the course, readings (web sites, scholarly material, purportedly scholarly material, and a newspaper article) are assigned on a chosen topic. The students are asked to provide a reaction to each of the readings on the discussion board; they assess each reading's worthiness as a source in an academic research paper and must back up their assessment with some rationale. In the succeeding weeks, they are given more information on what should go into the evaluation process and are then asked to re-examine and re-assess the readings.

To keep the students constantly engaged in the material, a series of course components have been devised. There are quizzes, discussion board requirements, assignments (eight throughout the semester), and the research journal. It can be difficult to keep track of all of the components due each week so a clear roadmap is provided which specifies all due dates. Following is a sample schedule from Week 9:



Week 9 - Finding (Mainly) Scholarly Articles

To do Week 9

- **Read this lecture**.
- **Review chapter 8** of Bolner's *The Research Process*.
- **Read the article,** "In the Public Interest"
- **Respond to the discussion questions** in the **Discussion Board**. Postings are due Monday, October 23rd and responses are due by Friday, October 27th.
- **Take the Week 9 Quiz**. Due by Monday, October 23rd.
- **Do the Week 9 assignment** (located under the button **Assignments**) – You are explore finding articles on your topic. You can complete the assignment entirely online, though if you want to "get your hands on" some of the articles immediately that aren't available full text, you will want to physically go to a library. The assignment is due by midnight, October 23rd.

RESEARCH PROJECT

- **Research Journal #4:** Post the results on finding articles on your topic. **Due Wednesday, October 25th**
- **Thesis Paragaraph:** First draft – post to research journal. **Due Wednesday, October 25th**

Fig. 2. Sample schedule for Week 9

Throughout the semester, students produce a series of journal postings on the research process, built around their selecting, developing, and finding and evaluating resources on a topic of their choice. This requirement has evolved over several semesters from focusing on creating a simple thesis statement into developing a detailed thesis paragraph. This change encourages students to think through their topic in depth before making a commitment to the focus of their project. The culminating project is an annotated bibliography, the rubric for which clearly states that the sources must be relevant to the thesis and that the annotations must be evaluative. The students are encouraged to take the course in tandem with a subject-based course for which a research paper is required. Developing a highly selective bibliography puts them in an excellent position to write a quality research paper.

Learning Community

In addition to course content, there is also the added element of establishing a relationship with our students over the course of the semester. As librarians we are accustomed to teaching one-shot instruction sessions. We typically see students for brief periods and are dependent on the course instructor for setting the tone of the environment of the classroom learning community. If the learning community of the course has been poorly structured, there is little we can do to remedy existing attitudes when we walk into the classroom.

So, faced with the "luxury" of a full semester to teach information literacy, we are now also responsible for creating a learning community that will foster our pedagogical objectives and provide a positive learning environment. This is a very constructivist approach to learning, and a philosophy that is widely embraced at UIS. In many ways, the live face-to-face classroom is more conducive to creating a learning community. Since human beings are social by nature, positive social interactions can be encouraged within the course that will foster student learning within and outside the classroom. But when teaching online, within the parameters of using a course management system, the spontaneous seeds of social inclination must be more intentionally cultivated. A structure must be provided that will enable diverse student populations the means to get to know one another enough to feel comfortable exchanging ideas and questions about the research process.

There are two key techniques that UNI401 instructors employ for creating this critical aspect of the asynchronous online classroom: assignments and structured discussion board.

Regular Assignments

Although the course is taught entirely in an asynchronous format, weekly readings and assignments with regular due dates are still required. This is critical to the learning environment. If students are doing assignments without a structured time frame, they will not have common ground upon which to interact. So, while some would prefer the self-paced course, we find that simultaneous involvement in the course material is critical to the learning process. Having the students constantly involved in the research process through assignments that provide an incremental approach to a final project keeps them paced. And that they are engaged in that process simultaneously alleviates the struggle in isolation and provides a built-in support system.

Discussion Board

The discussion board is the other critical technique. A structured environment is provided that engages the students with each other, as well as the course material. This is not entirely different from techniques that would be employed in a live classroom. And perhaps one improvement over the live classroom is that all students are required to participate, something that is very difficult to achieve in the live classroom.

Each week a series of approximately three questions is provided for the students to respond to. They are all required to answer every question and to post a substantive response to at least one of their classmates. The three questions for week one (see fig. 3) set the tone for building the learning community. Each question serves a distinct purpose in building the dynamic of learning engagement.

1. Please introduce yourself and give us a brief biography. What are your expectations for the class?

2. What is your reaction to the chapter from Kuhlthau's "Seeking Meaning"? How does her theory compare with your research experiences?

3. Please list and comment on some things you have noticed are sometimes confusing in libraries? If you were the Director of a college library with unlimited time, money and staff, what would you change?

Fig. 3. Questions for week one

Question one provides the elemental ingredient for creating a sense of community. Since most of the students will never meet each other face to face this question provides them the opportunity that might be more difficult to create on their own. We consistently find that students open up right away and provide enough information about themselves, not just as students, but as human beings, to foster a climate of getting to know one another.

Question two is a response to chapter three, “The Information Search Process” from Carol Kuhlthau’s Seeking Meaning: A Process Approach to Library and Information Services. This chapter outlines a study that was conducted on student perceptions of and experience with the research process. Students discover, not only from Kuhlthau’s essay, but from their public postings to the class, that they are not alone in their feelings of anxiety toward the research process. This creates a sense of ease, and the learning community begins to coalesce. The following response from a student in the fall 2006 UNI401 course reflects a very common response to this reading.

> The reading "Seeking Meaning" put into words everything I experience when conducting research and writing a paper. I found it comforting because I previously felt that the feelings were solely my own. Specifically my initial apprehension when learning of a research assignment and even the feeling that the project is threatening. I also, as briefly mentioned in the "Emerging Model" segment, tend to focus more on the technical requirements of the paper (length,

> style, deadlines, etc.) than choosing a topic and developing a focus that I can really work with. I did not feel that there was an actual pattern that I followed when it comes to writing research papers, but this chapter outlined my pattern rather accurately (UNI401, fall, 2006).

In addition, there are those who have some experience and confidence in approaching the research process systematically. We find that they contribute to the learning community in significant ways because they offer their insights as peers.

Question three affords the students the opportunity to be teachers. Invariably, all students have had some experience with libraries. And if they do not have recent experience, oftentimes it is because they have found other ways of satisfying their information needs. We have found their responses to be creative and engaging, and we have learned quite a bit about how they perceive libraries and what we could be doing better! Also, encouraging open dialogue about their own ideas further encourages them to feel comfortable engaging in the course environment, thus contributing to the evolution of the learning community.

When the lectures focus on the philosophical and political aspects of the information universe – open access, copyright, government information access (online vs. print archives) – the students are able to combine the skill set that we are teaching (be it Boolean logic, subject headings, or citation styles) with an engagement in issues of substance that can stimulate deeper thought on the ramifications of systemic structures.

Conclusion

Though the course has stood the test time and evolved into a strong offering, this does not mean that there is not room for improvement. The evolution of information technology and access necessitates redesigning the discussion questions, assignments and exercises fairly frequently. For example, Discussion Board questions do not always elicit enthusiastic participation. Some weeks the material is rather dry and not as conducive to stimulating repartee, e.g. Boolean logic. However, the problem may not be so much with the subject matter as with the need to devote more creative energy into designing questions that engage and keep the students' interest. There are many weeks within the course during which learning techniques and skills have been combined successfully with conceptual engagement.

In addition to content and pedagogical refinement, there are challenges regarding the delivery of course material. When the course was initially adapted to be taught online, Ielleen Miller (one of the first library faculty to teach the course online and currently the Information Literacy Librarian at Eastern Washington University), developed scripted "movies" in which she demonstrated the techniques of searching various databases. That tactic, while extremely useful, quickly became difficult to maintain due to product changes and the labor-intensive nature of re-creating these animated demonstrations to reflect those changes. There is hope, however, that Web 2.0 is creating an environment in which it may once again be possible to provide live demonstrations that can be captured and archived. Tools such as conferencing software like Elluminate Live! could be employed. In addition, the advent of virtual worlds such as Second

Life are beginning to provide a landscape of possibilities for ease of delivery that is quickly coming full circle to emulating the live, face-to-face classroom.

Finally, while the techniques devised for creating a learning community for our students has proven very successful, we still feel that there is much room for improvement. Some ideas include creating a private chat room where students could meet to discuss, vent and just socialize. This could be done through the course management system or through a virtual world environment. Also, teaching the course with 'live' audio lectures (instead of the printed lectures), might provide more stimulation, especially for those whose learning styles are more in step with auditory perception.

By keeping the curriculum engaging through content and community building, regularly adapting the course to contemporary tools of delivery, and maintaining a strong collaborative approach to teaching, we are confident that UNI401 will continue to be successful.

Works Cited

Bolner, Myrtle S., and Gayle A. Poirier. The Research Process: Books and Beyond. 2nd ed. Dubuque, Iowa: Kendall/Hunt Pub. Co., 2007.

Kuhlthau, Carol Collier. Seeking Meaning: A Process Approach to Library and Information Services. 2nd ed. Westport, CT: Libraries Unlimited, 2004.

Information Literacy: Creating Modules for Summarizing and Evaluating Quantitative Studies in Education and Psychology

José A. Montelongo
Education Librarian
California Polytechnic State University

Abstract

This paper presents the components of an information literacy module designed to assist students in evaluating empirical studies using quantitative studies. An empirical study was deconstructed and analyzed. In order to evaluate the quantitative study, two strands of questions were interwoven among the sections of the study. One strand of questions was included to help students write a summary of the study after reading it entirely. The questions in this strand require the students to find the main ideas of each of the article's paragraphs. Students use these abstracted main ideas in order to write their summary of the study.

The second strand of questions included section-specific questions designed to help the students to evaluate the abstract, introduction, method, results, discussion, and reference sections of the article. The questions in this line of questioning prompted students to judge the author's qualifications, the adequacy of the language sample used, and the generalizability of results. By creating modules that include both strands of questioning and posting these on an Internet website, librarians can help students become more critical evaluators of the research studies they read.

Introduction

The Association of College and Research Libraries (ACRL) has defined information literacy as including those abilities required "to recognize when information is needed and the ability to locate, evaluate, and use effectively the needed information" (Information Literacy Advisory Committee, "Information Literacy"). The ACRL has established five standards, each with its own learning outcomes and performance indicators, for defining information literacy. The five standards are: a) defining the need for information; b) selecting the methods for accessing the information; c) evaluating the information critically; d) using the information effectively; and e) using the information ethically " (Information Literacy Advisory Committee, "Standards Toolkit").

The subject of this paper is the third standard-- the critical evaluation of text. The ACRL identifies seven performance indicators for this standard:

1. The information literate student summarizes the main ideas [after having read the text].
2. The information literate student … applies initial criteria for evaluating . . . the information.
3. The information literate student synthesizes main ideas to construct new concepts.

4. The information literate student compares new knowledge with prior knowledge to determine the value added, contradictions, or other unique characteristics of the information.
5. The information literate student determines whether new knowledge has an impact on the individual's value system and takes steps to reconcile differences.
6. The information literate student validates understanding and interpretation of the information through discourse with other individuals. . .
7. The information literate student determines whether the initial query should be revised (Information Literacy Advisory Committee, "Information Literacy").

Students in the areas of psychology and education need the skills outlined above for reading, summarizing, and evaluating articles that contain quantitative experiments. However, not all students possess the skills necessary to summarize and/or evaluate the experiments contained within a research article. In order to help students become critical thinkers, subject librarians with backgrounds in reading instruction and statistical research methods can create study guides to develop the summarization and evaluation skills of these students. These study guides may be posted on the library's website as information competence modules or as paper-and-pencil activities in classroom sessions.

Process Text Guides

Text guides can help students summarize and evaluate articles. A text guide is a teacher-created activity that includes exercises designed to simulate the thought processes of "good readers." One particular kind of text guide is the process text guide. This type of text guide is designed to assist students while they are engaged with reading the text. The wide assortment of activities in a process text guide can provide students with the real-time directions they need to read, summarize, and critically evaluate an article.

To illustrate the breadth of activities that might be included in a text guide, an unpublished quantitative study by the present author on the subject of categorical encoding in short-term memory (STM) was used to create a sample process guide (Montelongo, "Differential"). As shown in Fig. 1, there are two overarching sets of activities in the sample process guide. One set is dedicated to the writing of a summary and includes finding the main ideas, noting the important details, categorizing the related ideas, outlining and re-writing the author's ideas in a summary. The second set of activities is designed to simulate the critical thinking processes of "good readers" as they evaluate text. Such activities may include not only those requiring the assessment of the timeliness, authority, and validity of a particular research piece, but also those that involve stating the research question, critiquing the experimental design and methodology, understanding the statistical analyses, and questioning the author's conclusions. More importantly, one of the goals of these critical thinking exercises is to get students to think like research scientists who assess the merits and flaws of the extant research and who can generate their own experiments to fill in the gaps or generalize the findings. Even though both sets of activities are integrated in the process guide to simulate a good reader's processing of text, they will be treated separately in the discussion below.

Summarization	Evaluation
Finding the Main Idea	*Defining the Research Question*
Noting Important Details	*Applying Criteria of Timeliness, Authority,*
Categorizing Related ideas	*Creating Tables*
Outlining	*Analyzing Data*
Re-writing	*Learning Parts of the Study*
	Designing Experiments
	Evaluating Conclusions
	Critiquing References

Fig.1. Exercises related to the summarization and evaluation of research studies.

Process Guides and Summarization

A simple method for teaching students to summarize text consists of four steps (Montelongo and Herter, 2). First, students read the entire text in order to get an overview of the content. Next, they deconstruct the text paragraph by paragraph, selecting the main ideas and noting the important details of each paragraph as they do so. Then, students use these abstracted main ideas to create a scaffold for the summary. The resulting scaffold is then used to write the summary.

In college reading skills courses, instructors stress the importance of finding the main idea of each paragraph in the text as basic for writing a summary. The main idea of a paragraph is best defined in relation to other elements of a paragraph—the topic and the supporting details. The topic is what a paragraph is about. The main idea is what the author wants to say about the topic. The supporting details are the facts, reasons, examples, or opinions that prove or support the main idea.

In the sample process guide, each one of the article's paragraphs is immediately followed by a question about the paragraphs' main ideas. The students' task in each of these is to find the sentence that captures the author's main idea for every paragraph. After all of the main ideas have been identified, the student is then asked to compile all of the main idea sentences and write them out as shown in Fig. 2. This compilation of main ideas will serve as the outline for the students' original summaries. A sample summary is also included in the figure.

Main Ideas:

The present experiment found evidence showing that abstract and concrete nouns are encoded differently in STM because a larger stimulus sample was used than in a previous study of the same phenomena.

Evidence for the psychological reality of word categories has been provided through "release from proactive interference (PI)" experiments.

In a “release-from-PI” experiment, greater recall for words from a different category by the experimental group is taken as evidence that the categories are “psychologically real.”

Release from proactive interference has been obtained for several categories of words, but not for others.

Wickens and Engle (1970) failed to find evidence of differential encoding for these two word categories using the “release-from-PI” paradigm.

The present study intends to investigate the psychological reality of abstractness and concreteness using a larger language sample.

A large number of abstract and concrete nouns, that differed on abstractness and concreteness dimensions but matched for word frequency and number of syllables, were used to compose the materials.

In constructing the triads, care was taken to ensure that participants did not use relationships among the stimuli to recall them.

The subjects, all introductory psychology majors, were matched for gender.

The subjects recited the stimuli on each triad, counted backwards by three’s, and then attempted to recall them.

Presentation of the stimuli was standardized by using a projector and a stopwatch.
The results statistically significantly suggest that abstract nouns and concrete nouns are encoded differently in short-term memory.

All four experimental conditions showed superior recall for the final shift trial.

The results show that abstract and concrete nouns are differentially encoded in short-term memory and that experimenters must use large enough language samples to maximize generalizability.

Summary:

Wickens and Engle (1970) conducted a release-from-PI experiment to see if abstract nouns and concrete nouns are differentially encoded in short-term memory (STM). Those researchers failed to find the expected superior recall on the final trial when switching from one category to the other. Montelongo suggested that the failure to obtain the release from PI for concrete and abstract words was due to the fact that Wickens and Engle used such a small stimulus sample. Using a much larger stimulus sample, Montelongo was able to find the predicted releases from PI for concrete and abstract nouns. Additionally, he was able to also obtain releases from PI for four- and five-trial category shifts. These results reinforce the notion that experimenters should exhaust as much of the language sample as possible to maximize the potential for generalizability of results.

Fig. 2. A compilation of all the main ideas in the manuscript and a summary.

The main idea exercises in the process text guides should be calibrated to correlate with student abilities. In this sample process text guide, students choose a main idea sentence from among alternative sentences in the paragraph. In subsequent text guides, however, students may generate their own main idea sentences without the list of alternatives. Ultimately, the goal is for the students to be able to read these empirical studies without the use of these guides.

Critically Evaluating Research Studies

The second set of exercises in process text guides is included to assist students develop the higher order thinking skills to evaluate research studies. The ACRL has identified the following performance indicators essential for the evaluation of information:

a. examines and compares information from various sources in order to evaluate reliability, validity, accuracy, authority, timeliness, and bias;
b. analyzes the logic of supporting arguments or methods;
c. recognizes interrelationships among concepts and combines them into potentially useful primary statements with supporting evidence;
d. extends initial synthesis, when possible, at a higher level of abstraction to construct new hypotheses that may require additional information;
e. determines whether information satisfies the research needs;
f. uses consciously selected criteria to determine whether the information contradicts or verifies information used from other sources;
g. draws conclusions based upon information gathered;
h. tests theories with discipline-appropriate techniques (e.g., simulators, experiments;
i. determines probable accuracy by questioning the source of the data, the limitations of the information gathering tools or strategies, and the reasonableness of the conclusions (Information Literacy Advisory Committee, "Standard Three").

Each section in a research study—abstract, introduction, methods, results, and conclusion—gives rise to questions idiosyncratic to that section. Examples of questions that might be asked for each section are presented below. While many types of questions are included in the sample process text guide, they are not intended to be exhaustive of the entire population of questions that might be asked in process guides.

The Abstract Section

The exercises related to the introduction are presented in Fig. 3. The abstract of an article is a summary of the article. It includes the research question, a description of the methodology and it also includes an encapsulation of what was found. The first exercise in the sample process guide asks the readers to find the main idea of the abstract as part of the summarization process. Exercise 2, however, is part of the critical evaluation process. It prompts the readers to understand the purpose of the abstract section.

Differential Encoding for Abstract and Concrete Nouns in STM
By José A. Montelongo
Unpublished Manuscript
May 15. 1979

Differential Encoding for Abstract and Concrete Nouns in STM

Abstract

[A] In a previous investigation of differential encoding for concrete and abstract words in short-term memory (STM), Wickens and Engle (1970) failed to find evidence showing that abstract and concrete nouns are encoded differently in a "release from proactive inhibition" paradigm. Since only eight lists of triads were used by Wickens and Engle (1970), the present experiment was undertaken to explore the possibility that the lists of triads used by the previous experimenters were not representative of the population of abstract to concrete and concrete to abstract list combinations. 120 subjects, each getting a different list combination, participated in a "release from PI" experiment. Differential encoding was found for both abstract to concrete and concrete to abstract noun shifts in both four trial and five trial conditions.

1. The main idea of paragraph [A] is:____
   a. Wickens and Engle (1970) failed to find evidence showing that abstract and concrete nouns are encoded differently in a "release from proactive inhibition" paradigm.
   b. The present experiment found evidence showing that abstract and concrete nouns are encoded differently in STM because a larger stimulus sample was used than in a previous study of the same phenomena.
   c. 120 subjects participated in a “release from PI” experiment.
   d. Differential encoding was found for both abstract to concrete and concrete to abstract noun shifts in both four trial and five trial conditions.

2. The abstract of a study:____
   a. Introduces prior research findings.
   b. Provides the reasons for the present study as well as the methods employed, such as the “release-from-PI paradigm.”
   c. Provides a summary of the research question, methodology and results of the present study.
   d. Introduces the research question to the present study.

Fig.3. Exercises related to the Abstract section of a manuscript.

The Introduction Section

The exercises related to the introduction are presented in Fig. 4. The introduction section of an article states the problem and provides a review of the literature. As may be seen in the sample process guide, each paragraph is followed by a main idea exercise for purposes of summarization. For critical evaluation of the article, process guide creators might include exercises dealing with the authors’ authoritativeness and the article’s timeliness. Thus, exercise 4 asks the readers to investigate the credentials of the author of the study and the timeliness of the study and to complete this information in a table. As a means for assisting readers with answering these questions, a text guide may also provide some useful hints. For instance, to find information about the authors’ academic background and publications, readers are referred to the Internet and to the author’s website. For the second question in this table, readers must consider if the article is recent enough to address present-day situations. This requires a judgment as to whether the topic is currently of importance to researchers working in the field of learning and memory.

The other critical thinking exercises in the introduction section test student understanding of the “release-from-PI” experimental paradigm and the purposes of the study. Exercise 7 is important because it asks the readers to generate an experimental situation different from that described in the manuscript. In order to accomplish this, the readers must have a clear idea of purpose of the

experiment. At the end of this section, there is also a question about the purposes of the introduction section.

Differential Encoding for Abstract and Concrete Nouns in STM

[B] Individual words may be members of an assortment of categories. For example, words can be categorized on the basis of frequency, on the basis of its part of speech, or the basis of word length, or on the basis of its semantic meaning. Several experiments have been conducted in an effort to determine the psychological reality of these categories in short-term memory (Wickens, 1970). Evidence for the psychological reality of word categories has been provided through "release from proactive interference (PI)" experiments.

3. The main idea of paragraph [B] is:____
   a. Individual words may be members of an assortment of categories.
   b. Words can be categorized on the basis of frequency, on the basis of its part of speech, or the basis of word length, or on the basis of its semantic meaning.
   c. Several experiments have been conducted in an effort to determine the psychological reality of these encoding dimensions in short-term memory.
   d. Evidence for the psychological reality of word categories has been provided through "release from proactive interference (PI)" experiments.

4. Directions: Find the information regarding the qualifications of the author and the timeliness of the article.

AUTHORITY	By researching the author's qualifications on the Internet, I discovered that: ______ a. Montelongo is a librarian at Cal Poly in San Luis Obispo. b. Montelongo has a doctorate in Education from New Mexico State University and has a few publications on text structure and reading. c. This manuscript is unpublished. d. All of the above are true.
TIMELINESS	This article is: _____ a. Not current enough to be relevant to research on this topic. b. Too old for current treatment of subject, but still useful as background piece. c. The findings reported in this article are current enough to generalize to present-day phenomena. d. None of the above.

[C] The "release from PI" paradigm is a modification of the Peterson-Peterson (1959) short-term memory task. Two groups of participants are shown triads of words drawn from the same category (say, fruits) and asked to recall them for the first three or four trials. With each succeeding trial, recall for the most recently presented items becomes more difficult because of the interference from previously presented items. On the last trial, the participants in the control group are presented with a triad of words from the same category. The participants in the experimental group are presented with the same words as the control group for the early trials. On the final trial, however, these subjects are presented with a triad of words from a different category (say, vegetables). If there is greater recall for these final items by the experimental group relative to the performance of a control group, this is taken to mean that the two categories of words are encoded differentially and thus, "psychologically real."

4. The main idea of paragraph [C] is:____

a. The "release from PI" paradigm is a modification of the Peterson-Peterson (1959) short-term memory task.
b. The participants in the control group are presented with triads of words all taken from the same category.
c. The participants in the experimental group are presented with a triad of words from a different category on the final trial.
d. In a "release-from-PI" experiment, greater recall for words from a different category by the experimental group is taken as evidence that the categories are "psychologically real."

5. Which is an example of the "release from PI" experiment? _____

	Participants	Trial 1	Trial 2	Trial 3	Trial 4
a)	Experimental	plum, almond, orange	melon, apple, grape	lemon, apricot, fig	squash, cucumber, onion
	Control	plum, almond, orange	melon, apple, grape	lemon, apricot, fig	pear, banana, raspberry
b)	Experimental	squash, cucumber, onion	plum, almond, orange	melon, apple, grape	lemon, apricot, fig
	Control	pear, banana, raspberry	plum, almond, orange	melon, apple, grape	lemon, apricot, fig
c)	Experimental	plum, almond, orange	melon, apple, grape	lemon, apricot, fig	pear, banana, raspberry
	Control	plum, almond, orange	melon, apple, grape	lemon, apricot, fig	pear, banana, raspberry
d)	Experimental	squash, cucumber, onion	plum, almond, orange	melon, apple, grape	squash, cucumber, onion
	Control	pear, banana, raspberry	plum, almond, orange	melon, apple, grape	squash, cucumber, onion

[D] Release from proactive interference has been obtained for several categories of words. For example, Goggin and Wickens (1971) presented bilingual subjects with triads composed of words taken from one of two languages for the first three trials and then presented them with a triad of words selected entirely from the second language. In accordance with expectations, performance showed a decline over trials for triads that included elements taken from the first language category and a marked improvement for words taken from the second language category. The release from PI led the authors to conclude that language serves as an encoding dimension in short-term memory for bilinguals. Changes in word frequency, in word length, and in sense impression have also led to releases from PI (Wickens, 1970). Surprisingly, shifts in verb tense, in grammatical class, and in number (singular-plural) have not led to the expected release from PI.

6. The main idea of paragraph [D] is:____
a. Release from proactive interference has been obtained for several categories of words, but not for others.
b. Goggin and Wickens (1971) concluded that language serves as an encoding dimension in short-term memory for bilinguals from a "release-from-PI" experiment.
c. Changes in word frequency, in word length, and in sense impression have also led to releases from PI.
d. Shifts in verb tense, in grammatical class, and in number (singular-plural) have not led to the expected release from PI.

7. Directions: Generate lists of words for the experimental and control groups using word categories other than fruits and vegetables.

Participants	Trial 1	Trial 2	Trial 3	Trial 4
Experimental				
Control				

[E] Many experiments have shown that concrete nouns are learned faster and are more resistant to forgetting than abstract nouns (Paivio, 1978). Concrete nouns are also rated higher on imagery (Paivio, Yuille, and Madigan, 1969). The differences in imagery would suggest the likelihood abstract and concrete nouns are differentially encoded in short-term memory. However, Wickens and Engle (1970) failed to find evidence of differential encoding for these two word categories using the "release-from-PI" paradigm.

8. The main idea of paragraph [E] is:____
   a. Many experiments have shown that concrete nouns are learned faster and are more resistant to forgetting than abstract nouns.
   b. Concrete nouns are also rated higher on imagery.
   c. The differences in imagery would suggest the likelihood abstract and concrete nouns are differentially encoded in short-term memory.
   d. Wickens and Engle (1970) failed to find evidence of differential encoding for these two word categories using the "release-from-PI" paradigm.

[F] In their experiment, Wickens and Engle (1970) observed that a shift from abstract nouns to concrete nouns (Lo-Lo-Lo-Hi) produced a statistically non-significant (but suggestive) release from PI. The reverse condition, shifting from concrete nouns to abstract nouns (Hi-Hi-Hi-Lo) showed a slight decline from trial 3 to trial 4. In their experiment, Wickens and Engle (1970) used only eight lists of words. The use of so limited a language population raises the specter that the results of the study are limited in generalizabilty to only those stimuli used in the experiment. In a seminal paper, E.B. Coleman (1964) suggested that many experiments where the treatments are the language materials were limited in generalizability to the specific language materials used in the experiment. The purpose of the present paper is to explore the possibility that a "release-from-PI" will be obtained when a larger language sample is used.

9. The main idea of paragraph [F] is:____
   a. Wickens and Engle (1970) observed that a shift from abstract nouns to concrete nouns (Lo-Lo-Lo-Hi) produced a statistically non-significant (but suggestive) release from PI.
   b. The present study intends to investigate the psychological reality of abstractness and concreteness using a larger language sample.
   c. E.B. Coleman (1964) wrote a seminal paper on generalization to a language population.
   d. The reverse condition, shifting from concrete nouns to abstract nouns (Hi-Hi-Hi-Lo) showed a slight decline from trial 3 to trial 4.

10. The introductory section of the paper:____
   a. Provides a review of the literature.
   b. Presents the research question, a review of the literature, and theoretical grounding for the study.
   c. Introduces the theoretical grounding for the study and presents the research question.
   d. Presents the research question, a review of the literature, the theoretical grounding for the study, and provides an analysis of the methodology.

Fig.4. Exercises related to the Introduction section of a manuscript.

The Methods Section

The exercises related to the methods section of the article are included in Fig. 5. Once again, the main idea questions are intended for the summary of the manuscript, while the remaining exercises are meant to increase the reader's critical thinking skills about the experimental design, language sample, subject sample, and the procedures used in the research investigation. The goal of these critical thinking exercises is to make the readers think about the logic behind the design, procedures, selection of subjects and materials used in the experiment. The exercises are designed to make the reader think about searching for more powerful research studies or to even generate a better study or series of studies.

Method

[G] Design. A Treatment-by-Sample mixed design was used. Each matched pair of subjects was given an individualized list of triads. There were four experimental conditions: (a) Hi-Hi-Hi-Lo; (b) Hi-Hi-Hi-Hi-Lo; (c) Lo-Lo-Lo-Hi; (d) Lo-Lo-Lo-Lo-Hi. The participants in the Hi-Hi-Hi-Lo condition were presented with three trials of high imagery concrete nouns and a triad of low imagery abstract nouns on the fourth trial. The participants in the Hi-Hi-Hi-Hi-Lo condition served as the matched control of the Hi-Hi-Hi-Lo group. The materials for these two conditions were identical for trials 1, 2, and 3. On the fourth trial, the low imagery abstract words in the Hi-Hi-Hi-Lo condition were matched with the high imagery concrete words in terms of word frequency and length. An additional trial was included for the fifth trial of the Hi-Hi-Hi-Hi-Lo condition. A list of low imagery abstract words was presented to the students in order to investigate the possibility of a fifth-trial "release from PI." The materials for the Lo-Lo-Lo-Hi and the Lo-Lo-Lo-Lo-Hi conditions were similarly matched except that the participants in these conditions were presented with lists of low imagery abstract words first, followed by a final trial consisting of high imagery concrete nouns.

11. The main idea of paragraph [G] is:____
    a. A Treatment-by-Sample mixed design was used.
    b. Four matched experimental conditions, all of which included a category switch on the final trial, were used.
    c. The Hi-Hi-Hi-Hi-Lo condition served as the matched control of the Hi-Hi-Hi-Lo condition.
    d. A list of low imagery abstract words was presented to the students in order to investigate the possibility of a fifth-trial "release from PI."

12. In what way do the Hi-Hi-Hi-Hi-Lo and the Lo-Lo-Lo-Lo-Hi conditions act as the "controls" for the Hi-Hi-Hi-Lo and the Lo-Lo-Lo-Hi experimental conditions respectively?
    a. They all have the same words in all of their trials.
    b. The first three trials of the control conditions are exactly the same as their respective experimental condition.
    c. The control conditions and the experimental conditions each have a different category of word on the final trial.
    d. The control conditions and the experimental conditions all have a different number of trials.

13. Which of the following would be the most appropriate control group for the Hi-Hi-Hi-Lo condition?
    a. Hi-Hi-Hi-Hi
    b. Lo-Lo-Lo-Lo
    c. Lo-Lo-Lo-Hi
    d. Lo-Hi-Hi-Hi

[H] Language Sample. The materials used in this experiment were derived from a pool of 148 abstract nouns and 148 concrete nouns taken from the Paivio, Yuille, and Madigan (1969) norms. The mean imagery ratings for the concrete and abstract nouns were 6.45 and 3.05, respectively. The mean concreteness ratings were 6.80 for the concrete nouns and 2.48 for the abstract nouns. The materials were also matched for number of syllables and word frequency. The abstract nouns averaged 2.41

syllables, the concrete nouns 2.43. Each word was used either four or five times and the position of each word in the lists was varied as much as possible between lists.

14. The main idea of paragraph [H] is:____
    a. The stimuli used in this experiment were all derived from the Paivio, Yuille, and Madigan (1969) norms.
    b. The stimuli used in this experiment differed widely in imagery and concreteness.
    c. A large number of abstract and concrete nouns, that differed on abstractness and concreteness dimensions but matched for word frequency and number of syllables, were used to compose the materials.
    d. Each word was used either four or five times and the position of each word in the lists was varied as much as possible between lists.

15. Why were the stimuli matched for number of syllables and word frequency?
    a. To ensure that any differences in performance were due to imagery and concreteness and not to word frequency and number of syllables.
    b. Because words that are more frequent are easier to recall than words that do not occur as often.
    c. Because words that have more syllables take more time to pronounce than shorter words and thus, are more memorable.
    d. To ensure that words that are more frequent and abstract do not have an advantage over words that are concrete and have more syllables.

[I] The following criteria were used for constructing the triads. First, none of the nouns could be obvious associates of other words in the list. All three of the words comprising a triad could not be of the same frequency. All of the words in a list began with different phonemes. Finally, none of the words could be roots of or forms of other words in a list.

16. The main idea of paragraph [I] is:____
    a. None of the nouns could be obvious associates of other words in the list was one of the criteria for constructing the triads.
    b. In composing the lists, care was taken to ensure that the participants were not presented with three words with the same frequency.
    c. In constructing the triads, care was taken to ensure that participants did not use relationships among the stimuli to recall them.
    d. In constructing the triads, care was taken to ensure that participants did not have the same root words.

17. What other important criteria might have been used to compose these stimulus words?
    a. Some of the words could be capitalized, others in lower case.
    b. All of the words should be written in black for ease of reading.
    c. None of the words in a triad should rhyme.
    d. All of the above.

[J] Subjects. The Ss were 127 male and female students enrolled in introductory psychology classes who participated in partial fulfillment of course requirements. The data for seven subjects was discarded because they failed to reach a criterion of 2/3 correct on the first trial. There were 30 subjects in each of the four experimental conditions. The Ss in the Hi-Hi-Hi-Lo condition were matched by gender to the Ss in the Hi-Hi-Hi-Hi-Lo condition. Likewise, the Ss in the Lo-Lo-Lo-Hi condition were matched by gender to the Ss in the Lo-Lo-Lo-Lo-Hi condition.

18. The main idea of paragraph [J] is:____
    a. 27 male and female introductory psychology students participated in the study.
    b. The subjects, all introductory psychology majors, were matched for gender.
    c. There were 30 subjects in each of the four conditions.
    d. The Ss in the Hi-Hi-Hi-Lo condition were matched by gender to the Ss in the Hi_Hi-Hi-Hi-Lo condition, and the Ss in the Lo-Lo-Lo-Hi condition were matched by gender to the Ss in the Lo-Lo-Lo-Lo-Hi condition.

19. How might the results of this experiment be limited in generalizability?
    a. The results would only hold for the Lo-Lo-Lo-Lo-Hi condition.

b. The results may be limited to only very young people.
c. The results cannot be limited in generalizability since the experimenter carefully matched the subjects.
d. The results cannot be limited in generalizability since the experimenter matched the subjects for gender.

[K] Procedure. Each subject was administered the typical instructions for the Peterson-Peterson (1959) short-term memory task. Once the subject indicated an understanding of the instructions, the experiment began. Every triad was presented for three seconds and the subject recited it once. A second slide containing a two- or three-digit number was then displayed. The subject counted backwards from that number by "threes" for an interval of 20 seconds. Finally, a slide containing question marks appeared for a duration of six seconds. During this interval, the subject attempted to recall the words in the triad. The process was repeated in the same manner for the remaining triads. Each matched pair of subjects received a different combination of digits from which to count backwards.

20. The main idea of paragraph [K] is:____
a. Once the subject indicated an understanding of the instructions, the experiment began.
b. The subjects recited the stimuli on each triad, counted backwards by three's, and then attempted to recall the words.
c. The subjects counted backwards by three's to prevent rehearsing the words they had seen.
d. The process was repeated in the same manner for the remaining triads.

[L] Apparatus. Each noun in a triad was typed in small case letters on a piece of transparent paper and mounted on a 2x2 inch slide. A Kodak Carousel projector was used to present the slides, and a stopwatch was employed to monitor the presentation and counting times.

19. The main idea of paragraph [L] is:____
a. Each noun in a triad was typed in small case letters on a piece of transparent paper and mounted on a 2x2 inch slide.
b. A Kodak Carousel projector was used to present the slides and a stopwatch was employed to monitor the presentation and counting times.
c. Presentation of the stimuli was standardized through the use of a projector and a stopwatch.
d. Presentation of the stimuli was monitored.

Fig.5. Exercises related to the Method section of a manuscript.

Results Section

In this sample process guide, there are several types of activities related to the results section. These are presented in Fig. 6. The main idea activities once again are important for summarization. The critical thinking activities are designed to make the reader interpret the results and also to use an online statistical program to test the author's conclusions and to generate a visual representation of the results (Lowery). Some statistical tests such as the sign test, and variations of chi-square lend themselves to computation by the readers. By having them complete the statistical tables themselves, readers can familiarize themselves with the process of statistically evaluating the results of experiments. For statistical tests, such as the ANOVA for unordered variables and correlation tests for ordered variables, the module creators might provide statistics that approximate those reported by a manuscript's author(s).

Results

[M] All four experimental groups exhibited a release from proactive interference indicating that abstract and concrete nouns are differentially encoded in short-term memory. For the four-trial Hi-Hi-Hi-Lo condition, mean recall was 95%, 62%, 48% and 64% for trials 1-4, respectively. For its matched control Hi-Hi-Hi-Hi-Lo condition, mean recall was 94%, 64%, 52%, 49%, and 65% for trials 1-5, respectively. For

the statistical comparisons of the four-trial conditions, the differences in recall from trial three to trial four for an experimental group were contrasted to the same measure for the control group. A "+" was assigned if the difference in recall from trial 3 to trial 4 reflected a greater increment or less of a decline for the experimental list than for its matched control mate. A "-" was assigned if the control list had a greater increment in recall or less of a decrement from trial 3 to trial 4 than its matched experimental mate. The binomial comparison for the concrete-to-abstract (Hi-Hi-Hi-Lo vs. Hi-Hi-Hi-Hi-Lo) yielded a ratio of 21 to 7 ($p<.05$, two-tailed) by sign test. There was one tie. For the Lo-Lo-Lo-Hi experimental condition, mean recall was 85%, 49%, 42%, and 69% for trials 1-4, respectively. For its matched control condition (Hi-Hi-Hi-Hi-Lo), mean recall was 82%, 54%, 42%, 40%, and 58%. The results were statistically significant by sign test, 23 to 5 ($p<.01$, two-tailed).

21. The main idea of paragraph [M] is:____
    a. The results statistically significantly suggest that abstract nouns and concrete nouns are encoded differently in short-term memory.
    b. A "plus" was assigned if the difference in recall from trial 3 to trial 4 reflected a greater increment or less of a decline for the experimental list than for its matched control mate.
    c. A "-" was assigned if the control list had a greater increment in recall or less of a decrement from trial 3 to trial 4 than its matched experimental mate.
    d. The binomial comparison for the concrete-to-abstract conditions (Hi-Hi-Hi-Lo vs. Hi-Hi-Hi-Hi-Lo) and the abstract-to-concrete conditions (Lo-Lo-Lo-Hi vs. Lo-Lo-Lo-Lo-Hi) was calculated.

[N] The most easily interpretable test of the results is one that contrasts the number of same-condition lists that showed increased recall from the last pre-shift trial to the shift trial vs. the number of same-condition lists that showed a decline for the same interval. The combined binomial ratio for all four experimental groups was 65 to 20 ($p<.01$two-tailed). There were 35 ties. The large number of ties attests to the insensitivity of the paradigm.

22. The main idea of paragraph [N] is:____
    a. The most easily interpretable test of the results is one that contrasts the number of same-condition lists that showed increased recall from the last pre-shift trial to the shift trial vs. the number of same-condition lists that showed a decline for the same interval.
    b. The combined binomial ratio for all four experimental groups was 65 to 20 ($p<.01$two-tailed).
    c. All four experimental conditions showed superior recall for the shift trial relative to all others.
    d. The results showed that concrete words are always easier to recall than abstract words.

23. Go to Vassar Stats (http://faculty.vassar.edu/lowry/VassarStats.html) and check to see that the probabilities reported by the author are correct. Write down the probabilities associated with each comparison in the table.

Comparison	"+"	"-"	p-value
Hi-Hi-Hi-Lo vs. Hi-Hi-Hi-Hi-Lo	21	7	
Lo-Lo-Lo-Hi vs. Lo-Lo-Lo-Lo-Hi			

24. Go to Vassar Stats (http://faculty.vassar.edu/lowry/VassarStats.html) and generate a graph of the mean recall figures provided by the author.

Fig.6. Exercises related to the Results section of a manuscript.

Discussion Section

The exercises related to the discussion section are presented in Fig.7. Since this section of a manuscript or article summarizes the finding of the study and its implications, the process text guide should include exercises that test the readers understanding of the conclusions reached by

the manuscript author(s). It is important that the reader understand the findings of the study and also to have a clear idea about the study's generalizability of results.

Discussion

[P] The obtained releases from proactive interference for all four of the experimental conditions seem to make the case for differential encoding in short-term memory along the imagery-abstractness dimension. The conflicting results obtained by Wickens and Engle (1970) and in the present study suggest the possibility that the differences stem from the degree of representativeness of the language samples used. In the Wickens and Engle study, a combined total of only 96 nouns were used. In the present study, approximately three times the number of combined abstract and concrete nouns were used. Furthermore, Wickens and Engle generated only 8 lists for the entire experiment. In this study, every matched pair of subjects was presented with a unique list. These results provide strong evidence that concrete nouns and abstract nouns are differentially encoded in short-term memory. The results also demonstrate the need for individual experimenters to exhaust as much of the language population as possible in order to broaden both inherent and statistical confidence in his results (Coleman, 1964).

25. The main idea of paragraph [Q] is:____
    a. The obtained releases from proactive interference for all four of the experimental conditions seem to make the case for differential encoding in short-term memory along the imagery-abstractness dimension.
    b. The results also demonstrate the need for individual experimenters to exhaust as much of the language population as possible in order to broaden both inherent and statistical confidence in his results
    c. The results show that abstract and concrete nouns are differentially encoded in short-term memory and that experimenters must use large enough language samples to maximize generalizability.
    d. The results show that abstract and concrete nouns are differentially encoded in short-term memory and that experimenters must use large enough subject samples to maximize generalizability.

26. From the results presented in this paper, which study provides the best information on the subject of encoding for concreteness and abstractness in short-term memory?____
    a. The Wickens and Engle study is more powerful because it was based on performance data for 256 subjects, while the Montelongo study used 120 subjects and because it was published in an important scholarly journal in the area of Psychology.
    b. The Montelongo study is more powerful than the Wickens and Engle study because a large stimulus sample and large subject sample was used and because the results were generalized to category shifts on the fourth and fifth trials.
    c. Both of the studies are important because they both used large numbers of subjects.
    d. Neither study is important because the research is based on the Paivio, Yuille, and Madigan (1968) norms that were published almost forty years ago.

27. What studies need to be carried out with respect to the topic of imagery encoding in STM? Describe in detail.

Fig.7. Exercises related to the Discussion section of a manuscript.

Reference Section

Information literacy modules also include activities designed to help readers utilize these reference sections to their advantage. The exercises included in Fig.8 prompt the readers to pay attention to particular researchers in order to have them make inferences about the research in

this area. Other exercises might have the readers examine the various publications to acquaint them with the literature.

References

Coleman, E.B. (1964) Generalizing to a language population. Psychological Reports, 14, 219-226.

Goggin and Wickens (1971) Proactive interference and language change in short-term memory, Journal of Verbal Learning and Verbal Behavior, 10, 453-458.

Paivio, A. (1971). Imagery and verbal processes. New York: Holt, 1971.

Paivio, A., Yuille, J.C. & Madigan, S.A. (1968). Concreteness, imagery, and meaningfulness values for 925 nouns. Journal of Experimental Psychology Monographs.

Peterson, L.R. & Peterson, M.J. (1959). Short-term retention of individual verbal items. Journal of Experimental Psychology, 58, 193-198.

Wickens, D.D. (1970). Encoding Categories of Words: An Empirical Approach to Meaning. Psychological Review, 77, 1-15.

Wickens, D.D. and Engle, R.L. (1970). Imagery and Abstractness in Short-Term Memory. Journal of Experimental Psychology, 84, 268-272.

28. What was Alan Paivio's area of study?_____

29. What was Delos D. Wickens' area of study?_____

Fig.8. Exercises related to the Reference section of a manuscript.

Conclusions

Process text guides may be used to develop students' abilities to summarize and evaluate research studies. By including these guides via Internet modules or in classroom sessions, subject specialist librarians may help students develop information competence. Through the use of activities designed to simulate the thought processes of good readers, students can learn to more efficiently summarize and evaluate research articles.

Works Cited

Information Literacy Advisory Committee. Information Literacy Competency Standards for Higher Education. 18 Jan. 2000. American Library Association. 27 Aug 2007 <http://www.ala.org/ala/acrl/acrlstandards/informationliteracycompetency.cfm#ildef>.

Information Literacy Advisory Committee. Standards Toolkit. 19 Apr 2007. American Library Association. 27 Aug 2007 <http://www.ala.org/ala/acrl/acrlissues/acrlinfolit/

infolitstandards/standardstoolkit.cfm>.

Information Literacy Advisory Committee. Standard Three. 8 Dec 2006. American Library Association. 27 Aug 2007 <http://www.ala.org/ala/acrl/acrlissues/acrlinfolit/infolitstandards/stnd3/standardthree.cfm>.

Lowery, Richard. Vassar Stats: Web Site for Statistical Computation. 2007. Vassar College. 27 March 2007 <http://faculty.vassar.edu/lowry/VassarStats.html>.

Montelongo, José A. Differential Encoding for Abstract and Concrete Nouns in STM. Unpublished ms., Indiana University, 1979.

Montelongo, José A and Roberta J. Herter. Text Guides: Scaffolding for Summarization and Fortifying Reading Skills. Unpublished ms., 2007.

Not Just Q & A! Teaching through Digital Reference

Frances Devlin
Interim Coordinator for Reference Services
University of Kansas

John Stratton
Social Science Librarian
University of Kansas

Lea Currie
Education Librarian
University of Kansas

Abstract

The University of Kansas Libraries implemented its chat reference service in 2003 to provide research assistance to students, staff and faculty. To further extend our hours of service, we established partnerships with three other state academic institutions in 2004 and created the Kansas Academic Cooperative Chat Service. Usage statistics have shown that chat has developed into a popular service used by students to get online library help. Chat transcripts generated as a result of the service provide a plethora of materials worth further examination.

In our paper, we will present results based on our analysis of approximately 1,500 chat transcripts from 2005-2006 using the ACRL Information Literacy Competency Standards for Higher Education.

Standard One
"The information literate student determines the nature and extent of the information needed."

Questions Based on Performance Indicators:
1. Does the reference interview allow the student to articulate the information need? Is the student allowed to identify key terms that describe the topic?
2. Does the student have the opportunity to identify the types of information he/she needs?
3. Is the student given instruction on how to locate information using a variety of formats and library services?
4. Does the student have the opportunity to revise or refine his/her topic?

Standard Two
"The information literate student accesses needed information effectively and efficiently."

Questions Based on Performance Indicators:
1. Is the student instructed to use the most efficient and effective approaches to finding the needed information?
2. Does the student have the opportunity to construct a search strategy?

3. Does the librarian suggest a variety of formats and search strategies for retrieving information?
4. If necessary, does the librarian help the student revise his/her search strategy?
5. Does the librarian instruct the student on how to save and organize the information? (e.g., email, save, print) or (e.g., RefWorks or Endnote)

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."

Questions Based on Performance Indicators:
1. Does the librarian give the student the opportunity to comment on the information he/she is finding?
2. Does the librarian instruct the student on how to evaluate the information he/she is finding?
3. When applicable, does the librarian refer the student to other services and technologies?
4. Is the student given the opportunity to compare the new knowledge with prior knowledge?

Is there an exchange between the student and the librarian concerning what impact the new information is having on his/her value systems?

Standard Four
"The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose."

Questions Based on Performance Indicators:
1. Does the librarian instruct the student on how to use the information appropriately?
2. Does the student have the opportunity to discuss his/her successes and failures in finding the desired information?
3. Does the librarian take the opportunity to refer students to other workshops or technology available through the libraries?

Standard Five
"The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally."

Questions Based Performance Indicators:
1. Is the student instructed in the ethical use of information?
2. Does the librarian instruct the student on policies related to the use of information?
3. Does the librarian instruct the student on how to document information appropriately?

Fig. 1 ACRL Information Literacy Competency Standards for Higher Education

We have developed questions for each standard to determine if library staff are using chat interactions to instruct students how to find appropriate resources and provide them the tools to conduct research. Our evaluation of transcripts will provide insights into whether librarians are teaching students to determine what information is needed, how to access it, use it, and evaluate

it critically. In addition, an analysis will identify staff training needs and help us determine future strategic directions to improve our service.

Introduction

The University of Kansas Libraries implemented its chat reference service in 2003 to provide research assistance to students, staff, and faculty. To further extend hours of service, KU Libraries established partnerships with three other state academic institutions in 2004 and created the Kansas Academic Cooperative Chat Service. Usage statistics have shown that chat developed into a popular service used primarily by students to get online library assistance. Chat transcripts generated as a result of the service provide a plethora of materials worth further examination. Based on the ACRL Information Literacy Competency Standards for Higher Education (hereafter ACRL Standards), our evaluation of transcripts provided insights into whether librarians were teaching students to determine what information they needed, how to access it, use it ethically, and to evaluate the information critically.

Literature Review

Smyth (27-28) describes three models used to analyze chat transcripts at the University of New Brunswick Libraries at a time when the service was in its beginning stages. The purpose of the analysis was to shed some light on what questions were being posed and how much instruction occurred within the reference setting. Utilizing Sears' Classification of Reference Question Types, the ACRL Standards, and the Eisenberg-Berkowitz Information Problem Solving Model to analyze seven months' of data, Smyth concluded the application of other models to chat analysis would ultimately "push forward our understanding of the complexities of reference services" (30). Graves and Desai (347-352) also analyzed chat transcripts to determine whether or not appropriate instruction was offered in the virtual reference environment at Southern Illinois University. Using six categories to analyze seven weeks of IM transcripts, the authors analyzed two sources of data to determine whether instruction was offered and accepted in each session. Their analysis indicated that students wanted to learn using the IM venue, though there appeared to be some limitations present that disallowed librarians the chance to engage users as reflected in the higher levels of information literacy standards.

Zhuo, Love, Norwood, and Massia (79-86) analyzed the effectiveness of the chat reference service at Central Missouri State University by randomly choosing one hundred chat reference sessions and examining them using ALA's RUSA Guidelines for Behavioral Performance of Reference and Information Service Providers. Using the five categories offered by the RUSA Guidelines, the authors formulated evaluative questions for each RUSA criterion. Their findings demonstrated that sixty five percent of those transcripts displayed evidence of library instruction. Yet, a study conducted by Ellis and Francoeur (2) suggested that current RUSA Guidelines did not take into account the recent rise of chat reference services. They believed that the ACRL Standards were better suited for reshaping all reference services. They pointed out that the benefits of using instruction in chat interactions were that the user could request assistance at the point of need and they could keep a written record of the chat interaction to refer to as needed. Ellis (112-116) found the application of the ACRL Standards to have promise in analyzing chat reference interactions, although the author also suggested that the lack of visual cues, slow

typing, out of sync exchanges, dropped calls, abruptness of interaction, and multiple calls often hampered the librarians' ability to teach.

Methodology

For the study at the University of Kansas Libraries, the three authors divided up approximately 2,300 chat transcripts from calendar years 2005 and 2006 and reviewed them using the ACRL Standards. Approximately fifteen percent of the transcripts were not used (leaving 1,955 transcripts) since they represented practice sessions among librarians, dropped calls due to technical difficulties, or librarians did not have time to respond before the user signed off. The authors used the five ACRL Standards as criteria, formulating questions for each performance indicator under each Standard (see Figure 1) and responded only to the questions that pertained to each transcript and tallied the results (see Figure 2). Evaluation of these transcripts provided insights into whether or not librarians were teaching students to determine what information they needed, how to access it, use it properly, and how to evaluate it critically in their chat interactions.

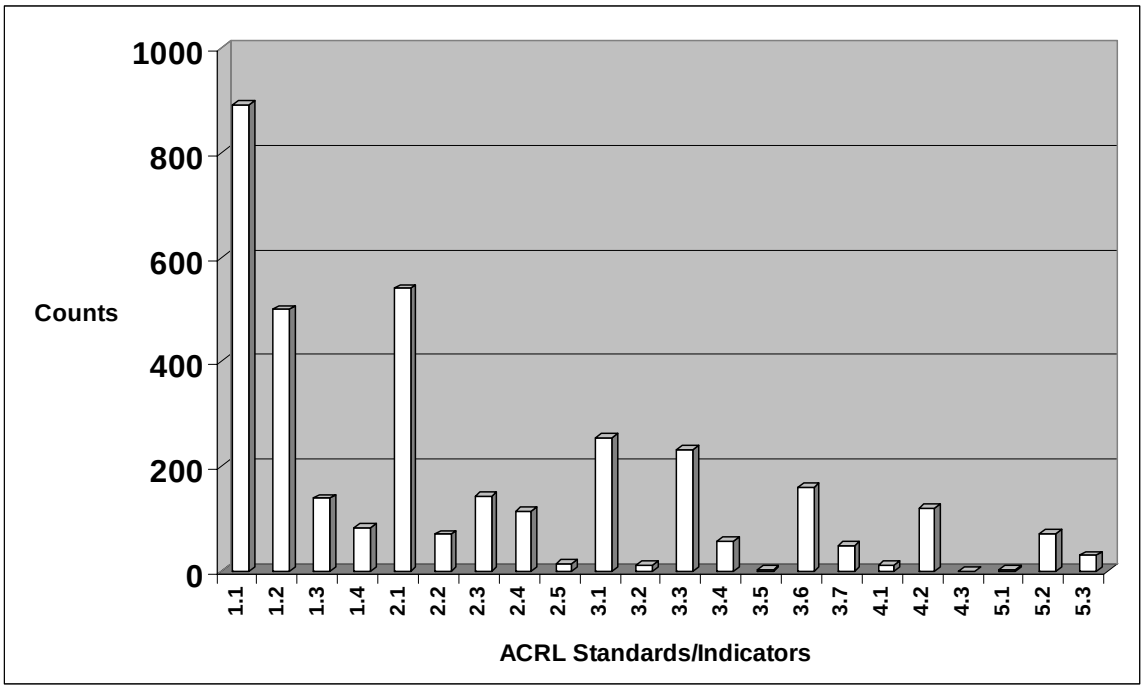


Figure 2: Summary of transcripts. Counts represent number of times ACRL Standards were observed in the set of transcripts (1,955) analyzed.

Analysis and Findings

Findings of the KU study were very comparable to those of Ellis and Francoeur (2) and Smyth (27-28). It was observed, for example, that Standard One (*The information literate student determines the nature and extent of the information needed*) and Standard Two (*The information literate student accesses the needed information effectively and efficiently*) were most often addressed through chat interactions. Typically, through the online reference interview, librarians

could identify the types and extent of the information needed and had time to describe the most effective and efficient strategies to access that information. In many cases, students received assistance with constructing search strategies and were offered suggestions for a variety of formats to access the information they needed. Yet librarians did not often take the opportunity to help students revise search strategies or help them save and organize the information they were finding.

When evaluating 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*), the authors found that students were often given the opportunity to summarize or comment on the information they were gathering, but there was little evidence that they were being instructed on how to evaluate the information. In some cases, librarians were asked for instruction on how to identify a scholarly journal article. This did provide an opportunity to explore with the student how to differentiate a scholarly source from a popular source. Although there was some evidence that students were comparing previous knowledge to their new knowledge, there was very little evidence from the interactions that there was any impact on their value system. In a few cases, students were referred to library subject specialists in their discipline to help them select the proper information sources for their topics and to help them evaluate the information they were finding. A few students appeared to extend their search to a variety of sources and services after librarians instructed them in these options.

There was far less evidence that Standard Four (*The information literate student, individually or as a member of a group, uses information effectively to accomplish a specific purpose*) was being utilized in chat interactions. Since the librarians do not get to see the finished product of the students they are helping, there does not seem to be a good method of finding out if they have been successful in instructing students to apply the information appropriately. Standard Five (*The information literate student understands many of the economic, legal, and social issues surrounding the use of information and accesses and uses information ethically and legally*) was also underutilized during chat sessions. Although this standard is easier to evaluate than Standard Four, the only time there was evidence that librarians were instructing students in the ethical and legal use of information was when students had queries regarding copyright or citing references in their papers.

Conclusions

It is clear that chat is a popular and convenient service and students may be more receptive to learning when help is offered at their point of need. The review of chat transcripts allowed us to see if librarians were taking advantage of “teaching moments” that occur in this medium and whether they were using these online interactions to provide students with information literacy skills. However, the authors recognize that providing instruction in the online environment can be time-consuming and is difficult to assess in terms of its immediate effectiveness. Chat therefore represents only one component of a comprehensive reference and instruction service.

After close examination of the data collected, the authors feel confident that the chat reference service at University of Kansas has been successful in meeting Standards One and Two. Librarians had the opportunity to use the reference interview to find out what types of

information the students needed and helped them devise a search strategy. Students were also provided opportunities to revise their strategies.

The breakdown in librarians' ability to communicate the ACRL Standards began with Standard Three. Many opportunities to instruct students on how to evaluate information sources were missed during the chat interactions that were examined. Librarians often asked students if they were finding the information they needed, but were not informing them about the quality of the information or helping them question the information's validity.

When evaluating Standard Four, librarians sometimes missed opportunities to find out what the students were trying to accomplish with the information they were helping them find. Although the authors question whether or not the nature of the chat medium is conducive to teaching Standard Four, it was noted that librarians missed opportunities to ask more probing questions that would have helped students utilize information for the purpose of their research.

Very rarely were librarians able to meet Standard Five. This leads to the conclusion that the best way to teach students to use information ethically is to volunteer this information when they are ready to end the chat session. For example, librarians could ask if students know how to cite their sources and show them how to use style guidelines or offer information on plagiarism.

In this study, Standards Three, Four and Five of the ACRL Standards were more difficult to accomplish in chat interactions. The authors suggest further development of guidelines applicable to chat reference, possibly using a combination of the ACRL Information Literacy Competency Standards for Higher Education and the RUSA Guidelines for Behavioral Performance of Reference and Information Service Providers as models. Guidelines would also assist in establishing baselines for service, identify future and ongoing training needs and ensure consistency within cooperative chat services.

Works Cited

ACRL. Information Literacy Competency Standards for Higher Education. 2006. American Library Association. 22 May 2007 <http://www.ala.org/acrl/ilcomstan.html>.

Ellis, Lisa E. "Approaches to Teaching Through Digital Reference." Reference Services Review 32.2 (2004): 103-119.

Ellis, Lisa E., and Stephen Francoeur. "Applying Information Competency to Digital Reference." 67th IFLA Council and General Conference, Conference Programme and Proceeding Held in Boston, Massachusetts, August 16-25, 2001. 22 May 2007 <http://www.ifla.org/IV/ifla67/papers/057-98e.pdf>.

Graves, Stephanie J., and Christina M. Desai. "Instruction Via Chat Reference: Does Co-browse help?" Reference Services Review 34.3 (2006): 340-357.

RUSA RSS Management of Reference Committee. Guidelines for Behavioral Performance of Reference and Information Service Providers. American Library Association. 12 July 2007. RUSA. 22 May 2007 <http://www.ala.org/rusa/stnd_behavior.html>.

Smyth, Joanne. "Virtual Reference Transcript Analysis: A Few Models." Searcher 11.3 (March 2003): 26-30.

Zhuo, Fu, Mark Love, Scott Norwood and Karla Massia. "Applying RUSA Guidelines and the Analysis of Chat Reference Transcripts." College and Undergraduate Libraries 13.1 (2006): 75-88.

Understanding Evolving User Requirements in the Library New Media Service

Sean Cordes
Instruction Services
Western Illinois University

Abstract

On a wave of technology and space movements, libraries are not only changing tools and appearance, but services as well. Bibliographic instruction is now paired alongside online learning; single study carrels are making way for collaborative spaces; and reference, instruction, and media and information technology departments are coming full circle, evolving traditional library research processes to encompass a full multimedia information product development cycle.

In addition to locating a call number, today's academic library students may ask for assistance making digital captures of a physics experiment, adding scrolling credits with Chinese characters to a video, or editing raw footage video footage into a coherent multimedia guide about food safety.

This presentation discusses the multimedia production service, a form of emerging user service arising from the idea of the information commons model as a collaborative workspace. While these environments involve library space and network technology, the research focuses on the blending of information technology and library staff into collaborative processes arising from these novel library work elements.

The research was drawn from a body of peer reviewed literature covering theoretical and practical library and business management practices. The author tempered this knowledge using first hand case examples from the Multimedia Production Studios at Iowa Sate University. In addition, a diagramming strategy based on Human Interaction Theory is described that can be used to foster the development of management processes in multimedia development centers and other library service units.

Introduction

To climb steep hills requires slow pace at first.
-- William Shakespeare (*H8* 1.1.160-161)

Librarians are mounting plans to meet advances in technology and the expectations of educators and users. These changes are reflected in the user requirements for success in the information society which libraries serve. But for practicing librarians this is not a battle against technology, user or administrative demands. For those in the field, the change to new service is a battle driven by the need to meet novel challenges head-on, deliver exemplary service, and ultimately strengthen organizational viability.

The Library New Media Development Service

In fall 2006, our library inherited a 4 station new media production environment from our campus Information Technology Services building. The facility had some existing clientele including: students assigned to use the facility for class projects, and students, faculty, and staff that used the equipment to create personal projects. After the equipment was relocated, we created a series of signs to guide users between the library and information technology building. Existing users found the equipment by bridging between way finding signage located in both buildings. Reference librarians guided existing user to the new location. Subsequently, new users discovered the equipment and adopted the facility.

Some Initial Impressions

Traditional reference service helps users locate and access print-based and electronic materials. The new media development service combines just-in-time instruction and technical support with production tools, to help student learners build new media products using library and self-generated resources. The concept is somewhat unique in that it provides a focused, end-to-end service for the creation of student information projects in a library setting.

One early consideration was how to provide technical and instructional support coverage for the sometimes lengthy development process. Students came to make projects; sometimes they stayed for hours, or days. One student brought a blanket and "camped out" over the weekend, sleeping on the floor near the computer so the digitization process would not be interfered with. As a result, student workers with media development skills were hired, a library professor was assigned to oversee general operations, and relations with information technology staff tightened eventually establishing an official presence in the help and information area.

These evolving services and the facilities provide an immersive backdrop to explore modern library service. The new media development setting provides a unique contrast to traditional reference and instruction service, and is a fertile ground for understanding and developing supports for emerging library services in terms of users, the goals they hope to achieve, and the requirements needed to meet them.

System Users

Academic library users are a diverse group on the whole, and the same holds true for those developing new media projects. In addition to demographic characteristics like age, gender, fields of study, and marital status, each user brings unique preferences to the process such as, technology readiness, cultural norms, attitudes, interests, and work and learning styles. These characteristics shape user expectations and the creative development process, and have a direct bearing on project requirements and criteria for meeting requirement.

System Goals

On the surface the goals of the new media development service seem like those of library service in general, to help users solve information problems. With the new media query, the resolution is achieved by creating a satisfactory information product. But information products come in many forms, and the tools and processes used to create them are just as diverse. The most common project involves importing video, editing it, and publishing it in the form of a DVD. This basic project requires multiple steps and often multiple tools as well, and although it's the most typical activity, DVD creation is just the tip of the new media iceberg.

Other projects include scanning files for project documentation, developing web sites, creating audio podcasts, and transferring photos from a digital camera and editing them for use in a PowerPoint presentation. Whichever type of project or medium the user is working with, the system goal is to send them away happy with product in hand. Given the wide range of tools and outcomes, meeting the requirements for these projects is challenging, and in contrast to much traditional library service, often requires the collaborative and coordinated time, hands, and minds of multiple support persons.

Ultimately the goal of service is to provide the user with information that "anticipates" as well as "meets" user needs. This includes the ability and willingness to foresee new end products in the information problem cycle, ones that offer more than data but are complete regardless of the intricacy of the problem (ALA guidelines for Information services).

System Events

The new media service system is event driven, moved along by user inputs and interactions. There are external events; such as when users originally define a project support request. There are temporal events, such as the initial steps where users create a project name and file, or the important moment of ensuring follow-up satisfaction the end of the project (Richardson 215). Finally, there are state events. These events identify system activity at a given point in time, triggering processes as the system changes its state or condition (Whitten 339), such as design collaboration between library technologists and users, and technical support interaction between librarians and information technology staff. State intervention is an important great consideration when performing the steps in the end-to-end development cycle. Because projects require multiple transitions, the ability to understand when a process is complete, pending, or has failed, is critical to making the most of development time. This is particularly crucial given the wide range of responsibilities a librarian may have outside of new media development, and the limited periods student users can be in the library given class and other responsibilities.

System Requirements

Requirements describe what the system is supposed to do (Davis 15). Designers use requirement information to create an operational scenario for the service based on what they have learned about a system's users, goals, and events. Events can be functional things that must happen. They can also be non-functional, such as constraints imposed on the system; power outages, computing power, or incompatible media types. Requirements are measured to ensure they are satisfied, and the service performs as desired. Gaps uncovered between the real (requirements) and ideal, (the assessed outcomes) can be used to improve system performance. Inasmuch as the

users, goals, and events embody the interactive processes of the new media development system, it is useful to examine some of the major requirements related to each.

Event 1 Problem Negotiation

Just like determining an exact reference question, clarifying the new media support request can be tricky. For example, a user may come in with an assignment to "make a video." But the instructor may be expecting any number of outcomes: a video file, (such as an MPG or QuickTime movie), a digital video recorded onto a VHS tape, or a bootable DVD with animated menus.

In addition, librarians may find the tables turned in terms of understanding terminology and goals relating to the information problems students are likely to bring to the library. "Incoming freshman report [similar] facility with and knowledge of new media skills such as creating and editing audio and video files as do seniors. This may represent a new area of demand on both faculty and technology providers in the years ahead. (Katz 4)" The result, as Frand observes, is an information age mindset marked by a desire for immediacy, connectedness, and the blurring between consumer and creator (16).

In addition to challenges regarding external communication, there are issues of external content brought into the development equation. Librarians and support persons are not always aware of the conditions present when user content was created. Imagine the confusion if a patron wanted a librarian to locate a book using not the Library of Congress Classification system, but a system they created themselves using J.R.R Tolkien's "Languages of Arda."

Users often bring external media into the library facility from personal video cameras and other outside sources. This can introduce variables into the process, such as subtleties in file encoding, which make troubleshooting extremely difficult, and add a measure of ambiguity not usually present when working with traditional reference and other library instructional supports. As a result, where many reference questions can be solved with a general knowledge of support tools and processes, new media support requires specialized knowledge in most cases.

Event 2 Problem Resolution

In traditional reference service, questions can often be answered by directing a patron to a particular tool or location. However, new media support is often more tenuous because it relies on specialized technologies, standards, and processes. For example, the reference transaction generally proceeds in a linear fashion from initial query to problem solution. In a sense, this is also true in part of the new media project. For instance, some development requires that certain steps happen in order to proceed forward, such as moving from the media importing to editing process.

Conceptually however, new media is built on the principal of non-linearity. New media projects do follow a linear process; all projects of course have a beginning and an end. But object properties can also be altered in space, time, and form. They can be destroyed, restored, and

reinvented. Therefore there is no individual sum of efforts that can be imposed to achieve a definitive solution. The end result is more than a sum of data or process.

For example, if a patron is transferring content from a tape, it must be done in real time. As the tape plays it is captured to a digital form. But digital content created on a hard drive camcorder can transfer as fast as the hardware and software will allow. New media development is an interactive series of process and property. Thus an understanding of functional (process) and non-functional requirements (infrastructure), the interaction between them and the impact on the system is critical to supporting the system.

One approach to addressing diverse requirements management is by developing a network of shared responsibilities. Roving staff can monitor the process stage a student project is in, offering support as transitions are made between software steps or tools in the process. This information regarding client progress can be documented and passed between shifts for continuing support. In addition, it is important that information technology persons maintain a physical or virtual presence to ensure computer hardware and network infrastructure are performing correctly. Finally, the more group members understand about the system, the more robust support is likely to be. For example, all participants can adopt the practice of checking for loose cables and connections. Shared responsibility for non-functional requirement like system awareness and maintenance can increase system efficiency and strengthen team relationships.

Event 3 Satisfaction Evaluation

To ensure success of the new media development, two things must happen - products must be created and users must be happy with both process and product. A key consideration is that satisfaction is high enough at each point to continue the process. Therefore, multiple evaluations are likely to occur throughout the process, each outcome required to meet a standard before work can progress, and a final evaluation to ensure overall satisfaction. Further, not only must there be an evaluation of skill, but because the product must make a meaningful whole, there is cognitive assessment as well. The final product must be technically functional, but it must make sense cognitively and aesthetically as well.

Thus the new media development process requires evaluation of both technical and cognitive aspects across the range of time when the product is developed. Following this, a measure of long term satisfaction is generated - first, when the user leaves the facility with a completed product or assignment and, then again, much later, when the librarian encounters the user again. Because users are likely to be at the university for an extended time, it is important that the value of the service be felt at the time a product is completed, but also into the future. As Woodruff notes “We need to know what customers think of our value delivery as well…We cannot assume that customers within a target segment will have similar evaluations of what we do (15).”

Conclusion

Requirements help us bring our services from where they are to where they need to be. These necessities stretch across all service areas driven by users and their goals, and carried out through collaborative events between “actors” in the system including librarians, patrons, and

technology. Emerging services such as new media development offer novel challenges not typical to current library service. First, the skills, processes, and terminologies for new media development differ from that of the traditional reference transaction.

Further, while the transaction process for new media development and the reference query are similar, there are unique differences that require consideration. First, the length of the new media development period can be extended, requiring following up at multiple points in time, particularly those points where there are transitions in the development process that require new skills or tools. Second, the end evaluation results in a final product so that project success and failure must at times be addressed at the librarian level, not later in the classroom. This can be uncomfortable for librarians who must at times terminate the student transaction in unavoidable failure (such as a power outage that destroys a large project), sometimes after weeks of work.

System behavior is never exact. It almost seems to breathe a life of its own. So beyond the technical and instructional skills that accompany managing the new media service, sustainability can only be ensured by the attention, support, and care of all library stakeholders. This ensures that technical and cognitive issues are managed to provide the most efficient and effective experience for users and librarians.

Work Cited

Davis, Alan M. Software Requirements: Objects, Functions, and States, 2nd ed. Englewood Cliffs, NJ: PTR Prentice-Hall, 1993.

Frand, Jason L. "The Information Age Mindset." Educause Review 35.5 (2000): 15-24.

Guidelines for Information Services. 12 July 2007. American Library Association. 15 June 2007 <http://www.ala.org/rusa/stnd_consumer.html>.

Katz, Richard N. The ECAR Study of Undergraduate Students and Information Technology, 2006 – Key Findings. December 2006. Educase Center for Applied Research. 24 May 2007 <http://www.educause.edu/ir/library/pdf/ERS0607/EKF0607.pdf>.

Richardson, John. "Understanding the Reference Transaction." College and Research Libraries 60.3 (1999): 211-222. 2 May 2007 <http://www.ala.org/ala/acrl/acrlpubs/crljournal/backissues1999b/may99/richardson.pdf>

Shakespeare, William. Complete Works of William Shakespeare. 1 Jan. 1994. Project Gutenberg 24 May 2007 <http://www.gutenberg.org/dirs/etext94/shaks12.txt>.

Whitten, Jeffrey L., Lonnie D. Bentley, and Kevin C. Dittman. Systems Analysis and Design Methods. Boston: McGraw, 1998.

Woodruff, Robert B., and Sarah Gardial. Know Your Customer: New Approaches to Customer Value and Satisfaction. Cambridge: Blackwell Business, 1996.

Enhancing Library Services through Support Staff Training: A Unique Approach

Jill Becker
Public Services Supervisor
University of Kansas

Monica Claassen-Wilson
Program Assistant for Collection Development
University of Kansas

Abstract

In 2006, the library support staff governance group (KULSS) at the University of Kansas initiated an innovative staff development program. The concept focused on organizing and developing a day-long workshop. Our program was inspired by a similar conference at Auburn University, but a review of the literature revealed that few other libraries had ever offered staff development in this type of format.

Our primary challenge included securing both approval and funding from the library administration. They were intrigued and excited by our ideas, and allowed us free reign to design a program that we thought best suited support staff needs. The administration was also an ally in empowering supervisors to encourage and allow their staff to participate for the entire day. The program included sessions geared towards improving morale, job satisfaction and personal growth, as well as sessions with a focus on practical skills for enhancing productivity. A few examples included:

- Morale 101
- Creating a positive working environment
- Be Effective!
- Improve your efficiency with Outlook tips and tricks
- Your Skills on Paper
- A Skills Assessment
- Panel Discussion
- Careers in Libraries of the Future

The goal of the program is to help staff feel more valued, be more confident in the work they do, and gain skills that will support their commitment to the KU Libraries. We utilized several assessment tools, including evaluation forms, focus groups, and surveys to gauge our success at both the session level and at a program-wide level. The success of the program has led the library dean to approve the workshop as an annual professional development opportunity, with broader participation from all constituent groups within Information Services.

Attendees will leave this session knowing the processes involved in planning and implementing a staff development workshop for library support staff. They will gain a better understanding of

the obstacles and rewards that come with implementing staff development activities, as well as the outcomes of our efforts.

Introduction

The KU Libraries Support Staff Executive Board (KULSS Exec) initiated a professional development workshop geared towards library support staff in the summer of 2006. The idea for a staff development workshop arose from discussions among KULSS Exec board members regarding the lack of a staff development committee in the libraries. The Libraries had a very active staff development committee for several years, but during the merger of the Libraries with university Information Technology and Networking departments into Information Services (IS), the committee was expanded to include members from those departments. The result was a gradual slow-down of activities as the larger group struggled to find meeting times to suit all members and implement activities that were broad enough to apply to all staff under the Information Services (IS) umbrella. After the IS and Libraries administrations stated their intent to find a better solution to managing staff development, the staff development committee was dissolved several months later.

Since it was unknown when another committee would be established, the KULSS Exec board decided to brainstorm ideas for hosting its own staff development workshop. The goal of the workshop was to help staff feel more valued, be more confident in the work they do, and gain skills that would support their commitment to the KU Libraries. Upon completion of the workshop, staff would use the skills that they learned to further their personal professional development which would enhance the overall services of the KU Libraries.

Literature Review

When planning the workshop, the board began by researching other libraries that provide staff development opportunities such as training and workshops to their support staff. Auburn University hosts a staff development workshop which was the inspiration for many of our workshop sessions. In addition to the workshop, Auburn has developed and implemented a library career ladder (Ransel and Fitzpatrick). Like many libraries, support staff roles were expanding to include more duties. They developed a career ladder with coursework requirements that allow for advancement within the library without changing jobs. Positive outcomes of the career ladder include improved morale and job satisfaction, enhanced quality of the workforce, and more camaraderie between staff in different areas of the library. The job performance at a higher level makes for a stronger, happier, more flexible workforce.

In addition to the Auburn model, the board looked to current literature on staff development in libraries. A 2004 article from *Colorado Libraries* describes the planning process for a staff development program at Colorado State University. The objective was to develop a program that would be “practical for the workplace, will enhance the productivity of the work environment, or will address a major change or focus in the work organization” (Jaramillo 6). This article also highlights the importance of having administrative support in any staff development efforts. When the administration stresses the importance of staff development opportunities, all levels of staff will perceive the efforts as important as well.

A 2005 survey of Western New York Library Assistants asked questions pertaining to staff development needs in five areas: need for training and professional development; support for training from employers and supervisors; specific topics to meet training needs; participation in library professional organizations; and attitudes towards learning, career, and training (Buchanan 423). The author concluded that a vast majority of library assistants agreed that "learning new things at work makes their job more enjoyable" and that "they would attend professional development training, workshops, or conferences if their employer provides both release time and funding" (Buchanan 430).
When developing assessment tools to measure staff perceptions of the workshop as well as staff development in general, the KULSS board modeled questions based on this study.

Planning

Session topics were arrived at through a series of brainstorming sessions by the executive board. All suggestions were compiled, categorized and ranked based on suitability for the workshop/session format and relevance to library staff. The list was then forwarded as a survey to the entire library support staff group to solicit further input and additional rankings. The results of the compiled surveys were then used to plan the sessions for the workshop.

The initial workshop schedule was designed with more sessions than were needed, with the idea that it would be narrowed down based on presenter availability and meeting space requirements. Staff development topics that were not used for the workshop were set aside to be submitted to the broader IS-wide professional development council once it was in place and functioning. An early hurdle in the planning process was limiting the attendees to library support staff only. When the dean asked the board to consider inviting all IS staff to participate, the board was able to successfully make the case that keeping the participant list small would ensure a greater chance of success. The intention of the board was also to target the workshop to a group of staff who do not generally take advantage of the opportunity to attend conferences off-campus, and to avoid any potential conflicts where a supervisor who wanted to attend then refused to allow his or her staff to attend.

The board secured the support of the library administration early on, including approval of a projected budget of $1500. The budget for the workshop was quite low for the number of expected participants. The presenter costs were low due to the use of primarily on-campus resources. The meeting space was free, including room setup and all A/V equipment (a savings of $730). The board was required to utilize the Union's catering service, which was the biggest budget item at $780. Overall, the actual expenses came in around $500 under the projected budget of $1500.

Implementation

Once the executive board had written the preliminary agenda and budget, it met with the library administration to get final approval for implementation. The plan was approved, and the group divided responsibilities into the following categories, with established deadlines for each:

- Contacting presenters

- Communicating with the Union to reserve rooms and arrange catering
- Creating and printing signs for publicity
- Creating and compiling registration forms (paper and online)
- Printing and assembling information packets for attendees
- Designing surveys (for individual sessions and workshop as a whole)

The event took place on March 21, 2007, 8:30 am-4:30 pm. Staff were treated to breakfast and lunch, along with free chair massages and the following sessions:

- Morale 101 – Creating a positive working environment
- Be Effective! Improve your efficiency with Outlook tips and tricks
- Your Skills on Paper – A skills assessment
- Constructing a Learning Plan: Training opportunities and career development
- Yoga in the Workplace
- Retirement Information
- Panel Discussion – Careers in Libraries of the Future
- Panel Discussion – Issues in the Workplace (Q&A with Administration)
- Closing Teambuilding Drum Circle and Ice Cream Social

In addition, the following information and activity booths were available throughout the day:

- Make a book snake
- Ergonomics
- Nutrition
- Cubicle Art
- Libraries Organizational Chart

Findings

The evaluation and assessment plan involved several surveys, including half-page surveys at each of the sessions and a longer survey about the overall workshop. Of the 50 library support staff members who participated in the staff development workshop (including six of the executive board members), 32 people completed the overall workshop evaluation survey. The board members were asked to fill out surveys for individual sessions they attended, but did not complete the overall evaluation survey. In general, comments received on the surveys were overwhelmingly positive, with particular emphasis on the appreciation of opportunity to learn new skills, interact with colleagues, and spend a day away from the library.

Many respondents included the suggestion that the sessions needed to be longer in length, to allow for more in-depth discussion, particularly the Issues in the Workplace panel, which provided the opportunity for staff to submit questions anonymously. Favorite sessions which will definitely be repeated in the future are Outlook Tips & Tricks and Yoga in the Workplace.

Completed surveys indicate the following:

- 100% (31) agreed that the session topics were interesting
- 90% (27) agreed that the session topics were relevant to their job

- 75% (24) agreed that attending workshops help them achieve their professional or career goals
- 97% (31) agreed that learning new things make work more enjoyable

Goals and Outcomes

Goal: 50% of KU Libraries Support Staff employees in attendance.
Outcome: 55 out of 87 total support staff (60%) attended

Goal: Staff who attend will feel more valued, be more confident in the work they do, and gain skills that will support their commitment to the KU Libraries.
Outcome: Based on the workshop evaluation survey, 89% of those who complete the survey agreed or strongly agreed that the Support Staff Development Workshop provided them with valuable skills that they will use in their job at the KU Libraries.

Goal: Continued support from Library Administration for further staff development activities.
Outcome: Library Administration has agreed to support this type of activity as an annual event and is interested in broadening the event to include all levels of staff in the libraries and the broader Information Services organization.

Conclusions

The board's perceptions of a need for a workshop-style staff development opportunity were confirmed by the overwhelmingly positive response to the workshop, expressed on the surveys and through face-to-face conversations and feedback. Support staff have an interest in professional development and welcome the opportunity to participate in training activities. To this end, it is essential that administration and supervisors provide support and encourage their staff to participate in these types of activities.

The primary challenge included securing both approval and funding from the library administration. The administration was intrigued and excited by the workshop idea, and allowed the board free rein to design a program that best suited support staff needs. The administration was also an ally in empowering supervisors to encourage and allow their staff to participate for the entire day. The program included sessions geared towards improving morale, job satisfaction and personal growth, as well as sessions with a focus on practical skills for enhancing productivity. The board utilized several assessment tools, including evaluation forms; focus groups; and surveys to gauge our success at both the session level and at a program-wide level.

The success of the program has led the library dean to approve the workshop as an annual professional development opportunity, with broader participation from all constituent groups within Information Services.

Works Cited

Buchanan, Robert. "Library Assistant Training: Perceptions, Incentives, and Barriers." The Journal of Academic Librarianship 31(5): 421-431.

Jaramillo, George R. “Staff Development in an Academic Setting.” Colorado Libraries 30(2): 6-9.

Ransel, Kerry A. and Jack D. Fitzpatrick. Developing and Implementing a Library Career Ladder: A Success Story. 6 Oct. 2006. Auburn University Libraries. 10 Apr. 2006 <http://www.lib.auburn.edu/dean/career/duke06.ppt>.

Looking at the Whole Pie & One Piece at a Time: Measuring Our Instructional Delivery

Connie Ury
Library Outreach Coordinator
Northwest Missouri State University

Gary Ury
Assistant Professor, Computer Science/Information Systems
Northwest Missouri State University

Abstract

Our library has a long history of gathering student and faculty feedback regarding the effectiveness of library instruction. Over the years, we have asked our constituents to provide input and suggestions to help us improve the delivery of our on ground and online library instruction; the content of our Web-based tutorials; and the effectiveness of our personal teaching styles. We have used this qualitative data to fine tine our instructional materials and to improve our personal and group teaching models.

Since 2001 we have gathered quantitative data measuring student performance on assignments directly related to curriculum delivered in the library classroom. These assignments include quizzes over online tutorials in general education courses (English Composition, Fundamentals of Oral Communication, and Computers and Information Technology); papers, reports, and article reviews in an upper level Management Information Systems course (a 300 level business course) and Managerial Communication (a 200 level business course); and graduate level research papers in several Computer Science courses.

The presenter will share the value of both qualitative and quantitative data in overall library instructional program planning and design; the use of this data in individual library instructional component improvement; and the ways in which qualitative and quantitative feedback can be employed by individual librarians for personal teaching improvement and in one's personal portfolio for rank and promotion.

Introduction

This paper chronicles the history of Owens Library's efforts to improve our instructional delivery, curriculum, and tutorials using qualitative and quantitative methods of data collection and analysis. We are sharing a wide variety of methodologies, instruments, and analyses in the hopes that others will find ideas to employ or modify in library instruction improvement efforts. If you would like to discuss the information in this paper or share insights, please contact the authors at cjury@nwmissouri.edu.

Part 1: Qualitative Data Analysis

Qualitative information has been gathered and analyzed regarding the content of our Web-based tutorials, the effectiveness of librarians' teaching styles, and the delivery modes of on-ground and online instructional models. We employed the information gathered to improve our teaching models and materials.

Freshman Seminar

Between 1995 and 1998, we surveyed Freshman Seminar students about the effectiveness of library orientation curriculum. Their responses are shown in fig. 1.

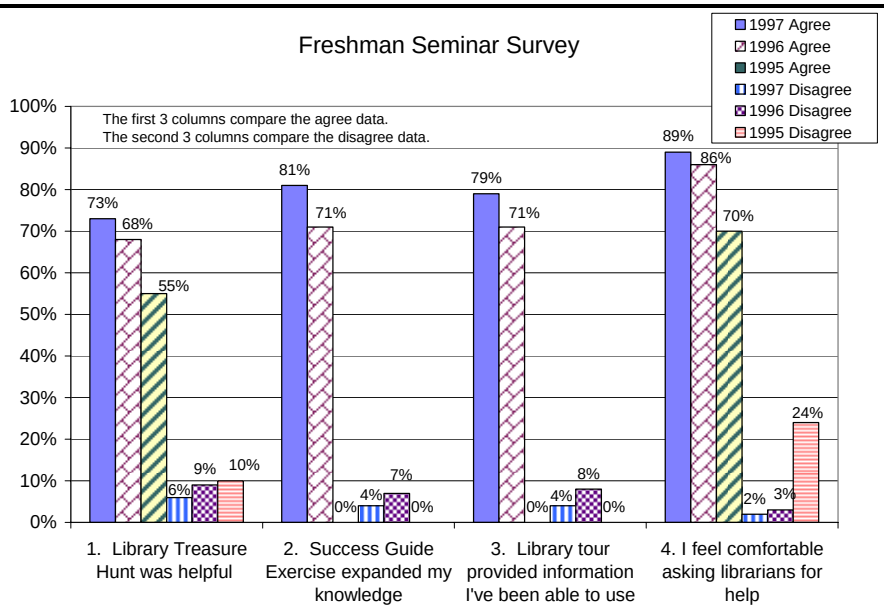


Fig. 1. Freshman Seminar curriculum survey[a]

[a] Columns which show 0% indicate the question was not asked that year.

After receiving the students' responses each year, librarians attempted to improve the curriculum and students' level of comfort with library employees. Attending to the students' ratings and personal comments, we were able to increase their satisfaction levels.

In 1999-2000, we migrated the Freshman Seminar Library Success Guide quiz from a print to an online format. We surveyed students regarding their opinions about this format. The results are shown in fig. 2-4.

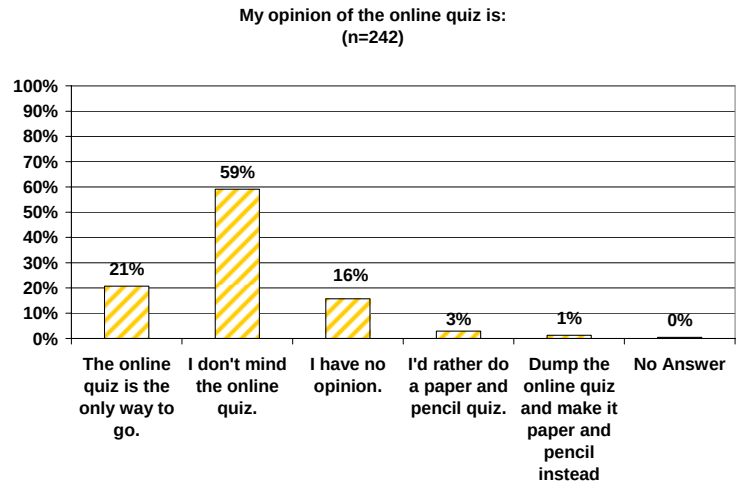


Fig. 2. Quiz opinion

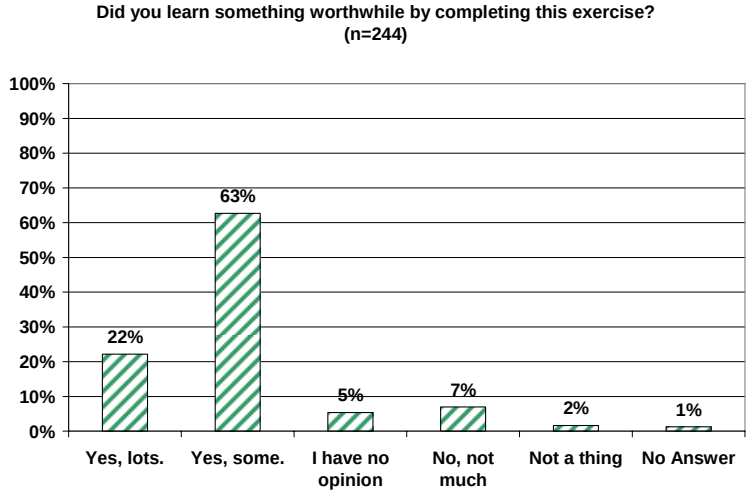


Fig. 3. Worthwhile learning

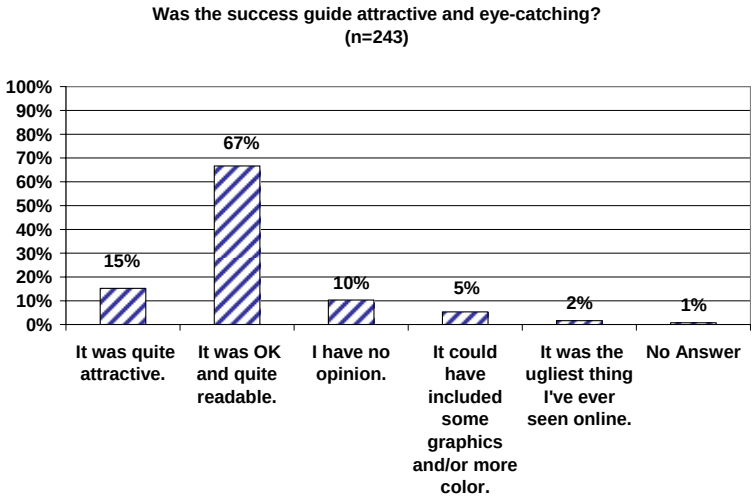


Fig. 4. Appearance

The students indicated that they preferred the online format, the content of the guide and the quiz comprised a worthwhile exercise, and the design of the Library Success Guide was appealing. The students' preference for online content guided our choice to move more library instruction curriculum to the Web.

Using Computers

In 1998-99, we evaluated the library instruction content of Using Computers, a general education course. (This course is currently entitled Computers and Information Technology (CIT)). The students' ratings appear in fig. 5-8.

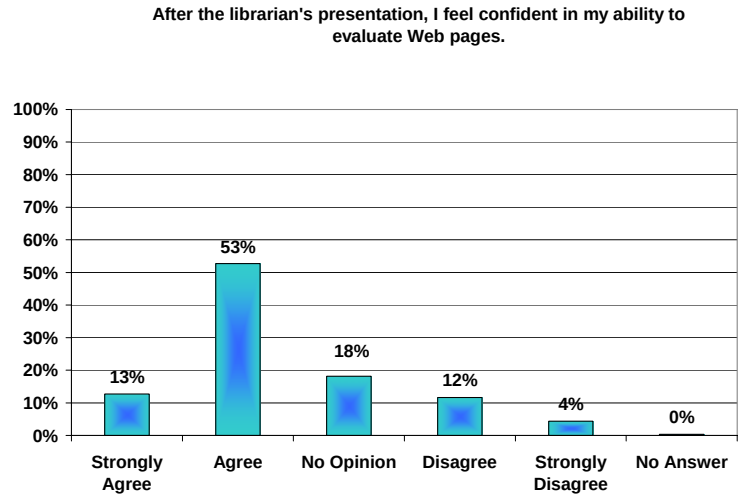


Fig. 5. Evaluating Web pages

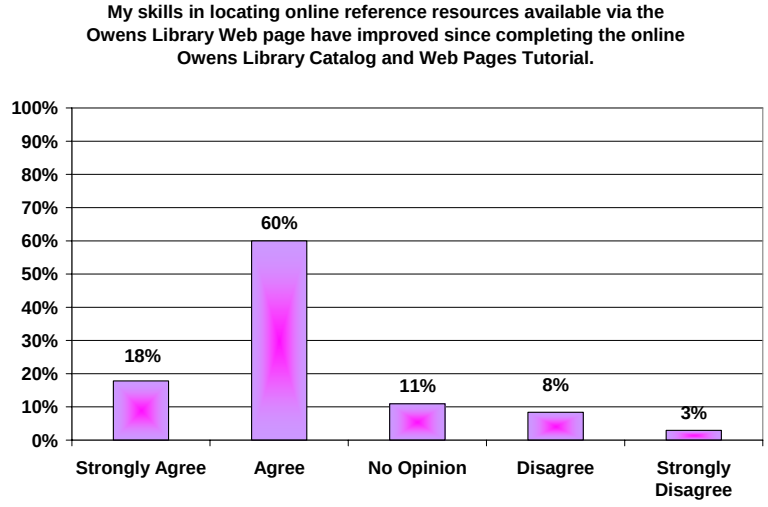


Fig. 6. Locating reference resources

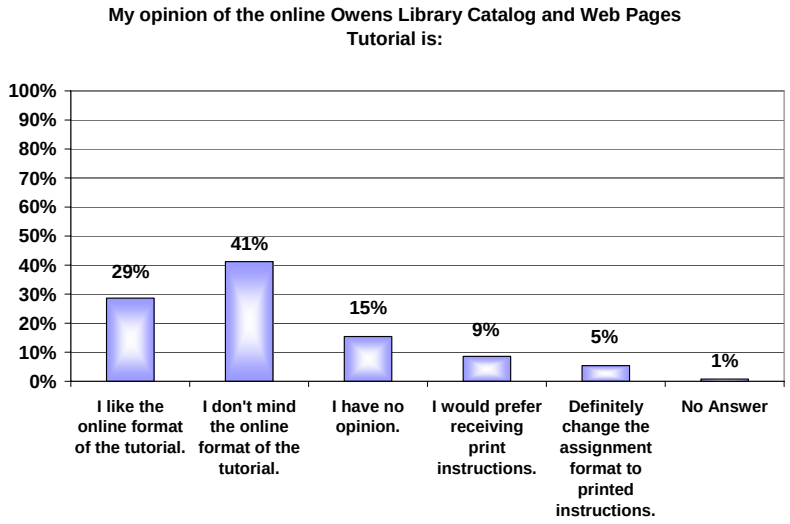


Fig. 7. Catalog & Web tutorials

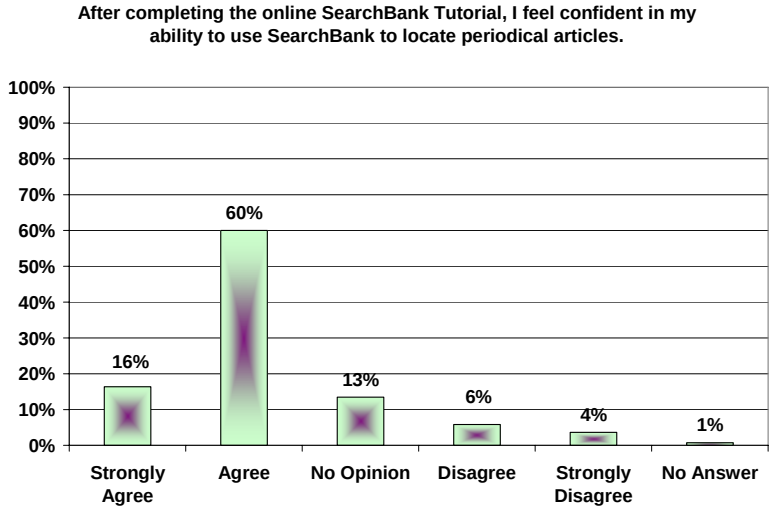


Fig. 8. SearchBank tutorial

The students' feedback justified that the two days of on-ground instruction we were devoting to the class were a profitable use of our time. The students' feelings of confidence after completing the tutorials underscored the value of online instruction.

English Composition

During 2000-2001 we surveyed English Composition faculty to assess the perceived effectiveness and quality of library instruction. As shown in fig. 9, 75% of the responding faculty believed the library instruction sessions were effective and 71% believed the sessions were effective in meeting course goals.

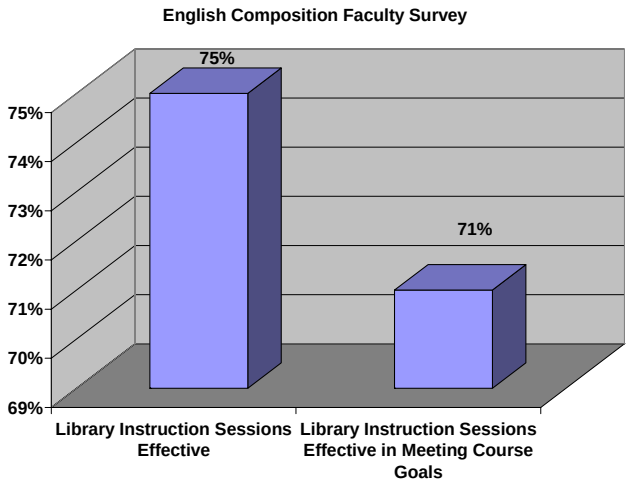


Fig. 9. English Composition faculty survey

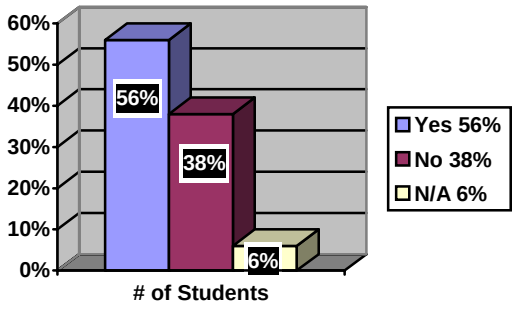
When asked what areas they would target for improvement, three faculty members suggested deleting the "Works Cited" assignment. Singular suggestions were: "Collapse instruction into one class;" "Post-test after library instruction;" "Teach students to access more scholarly and print sources;" "Expand instruction to three days;" and "Improve mode of test access."

Based on the survey analysis, we:

- Worked with the Center for Information Technology to troubleshoot problems with students accessing the tutorial/quiz via courseware
- Changed our citing instruction to cover only online citations
- Included games and student participation in our lessons

In Spring 2002, students were asked to rate a newly designed English Composition research tutorial, which had a space theme. We moved to a graphic theme because in the year 2000 students indicated that they would prefer a theme and pictures in the tutorial. The students' responses are shown in fig. 10-13.

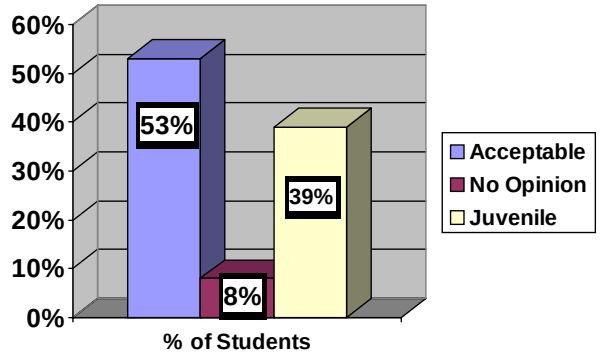
Would you recommend the English Composition Research Tutorial to other students?



In Spring 2000, 71% of the students said they would recommend the Research Tutorial to other students.

Fig.10. Recommend tutorial—2002

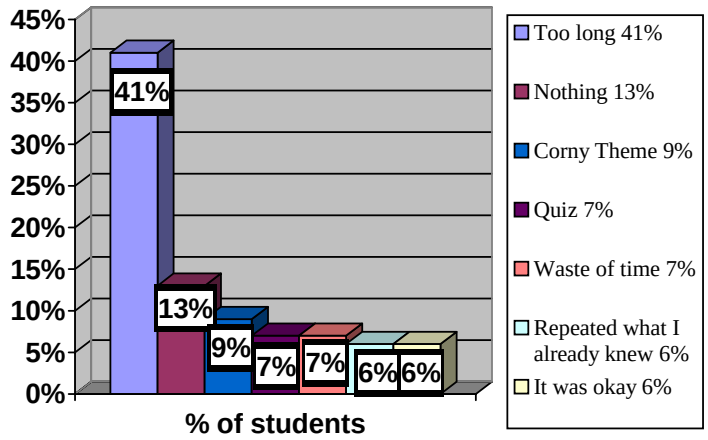
What do you think of the space exploration theme and graphics used in the tutorial?



In Spring 2000, 3% of the students felt it needed more graphics or liveliness. This led us to add the space theme to the tutorial.
We asked this question because during a focus group in Spring 2001, one faculty member was highly dissatisfied with the appearance of the tutorial and noted that it was juvenile.

Fig. 11. Tutorial theme—2002

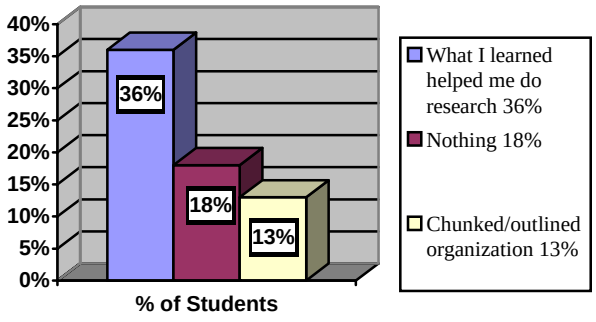
What did you like least about the research tutorial?



The number of students who thought the tutorial was too long increased over Spring 2000, when 31% of the students thought the tutorial was too long. Our strategy of chunking the material into smaller units did not help with perception of length.

Fig. 12. Liked least—2002

What do you like best about the research tutorial?



In Spring 2000, 50% of the students noted that the tutorial helped them search, locate sources, or research better.

Fig. 13. Like best—2002

We developed the following recommendations for improvement of the tutorial for the 2002-2003 year:

- Shorten the tutorial, keeping the best of the content
- Reorganize the tutorial into sections students can access separately. Students chunk their learning and view parts of the tutorial they need to improve their knowledge
- Upgrade tutorial graphics to more mature designs

Overall Program Assessment

Owens Library conducted student assessment surveys about the library instruction program in 2000 and 2004, with 610 students responding in 2000 and 638 students responding in 2004. The results are depicted in fig. 14-16.

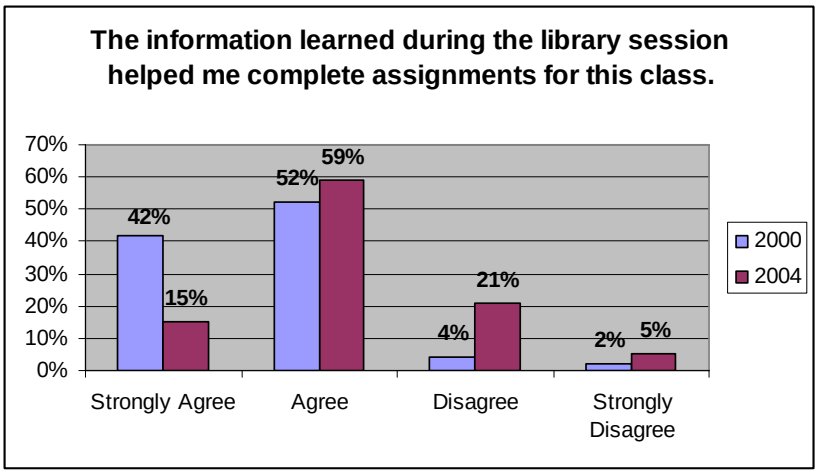


Fig. 14. Complete assignments

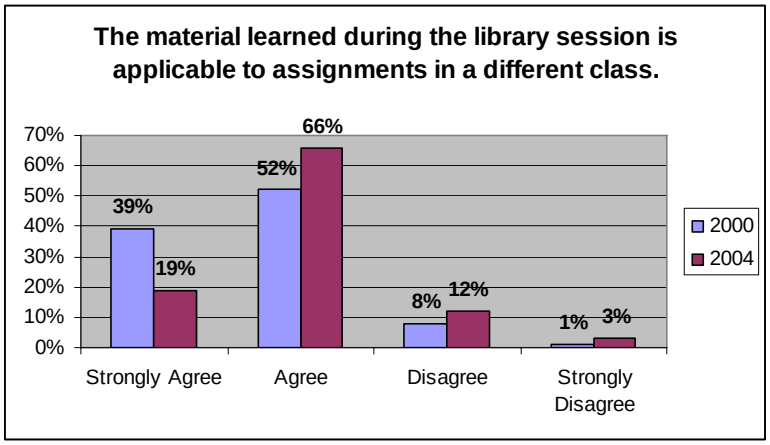


Fig. 15. Applicable to assignments

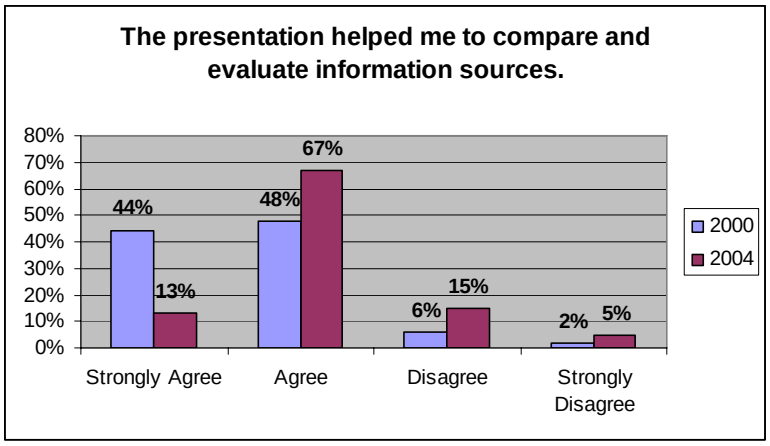


Fig. 16. Compare/evaluate

Students rated the value of the instructional sessions lower in 2004 than in 2000. One rationale for this rating might be that a greater number of upper level courses were included in the 2004 survey. (Upper level students sometimes think they don't need as much assistance as beginning students need.) The survey was administered at the end of instructional sessions in 2000 and one month after instruction in 2004. The 2004 lag was planned to eliminate "the halo effect" that occurs when students are asked to rate a class at the time of instruction. A third factor that may have affected the survey outcome is the rising information expertise of students. In 2000, many students were uncomfortable in the information environment. By 2004 students were entering college with a higher level of perceived online expertise.

In 2004, students were asked to provide responses to open-ended queries. The three most popular responses to each question are tabulated as shown in fig. 17-19.

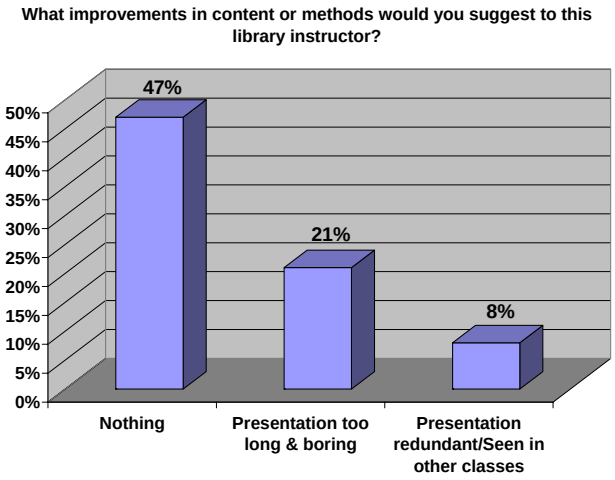


Fig. 17. Improvements

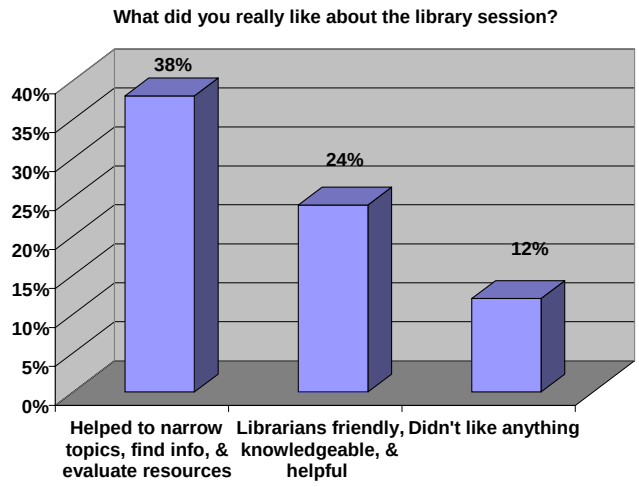


Fig. 18. Liked about library session

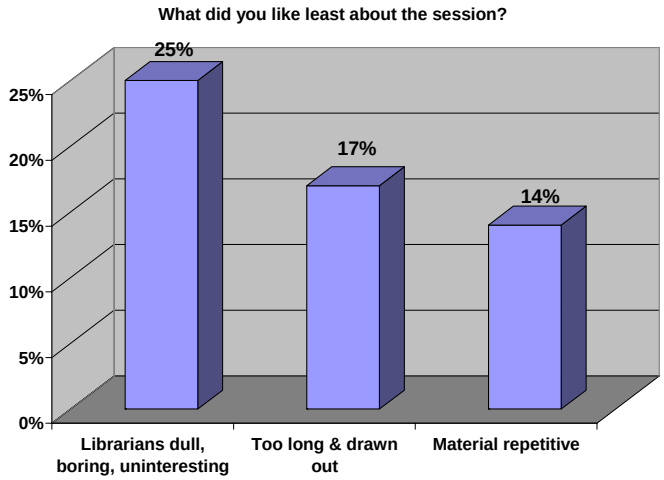


Fig. 19. Liked least about library session

In response to the information gathered, librarians incorporated gaming techniques that captured students' attention into the library curriculum and sought to improve instructional delivery, focusing particularly on their intonation, style, and interaction with students. Lessons were reformatted to include interactivity, hands-on participation, and discovery learning. In Fall 2007, a new program assessment will be deployed, with the results compared to previous assessments in the hopes of ascertaining how the changes in instructional delivery have impacted student perceptions.

In 2004, faculty completed a questionnaire regarding their opinions and concerns about library instruction. Eighteen of 26 professors responded. The faculty were highly satisfied with the quality of library instruction delivery (see fig. 20). These responses will also be compared with the 2007 assessment.

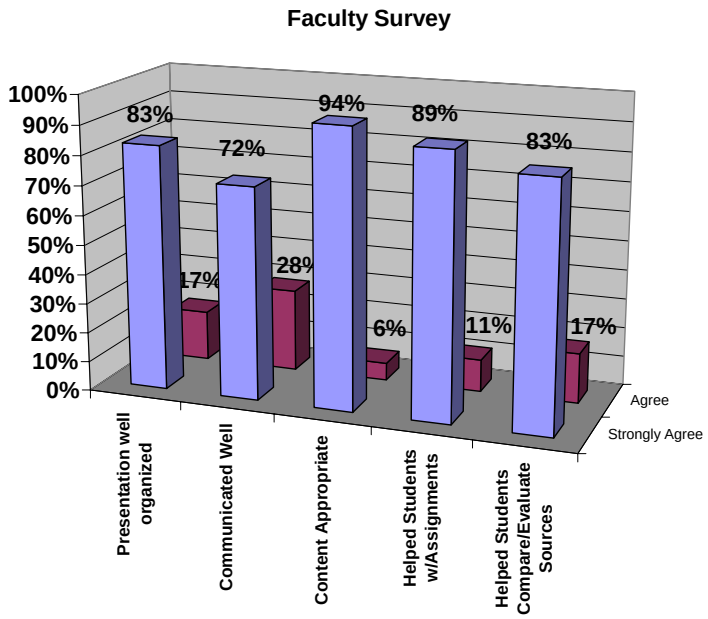


Fig. 20. Faculty survey

Part 2: Quantitative Data Analysis

While qualitative data has guided our efforts in improving instructional styles and formats, quantitative data has helped us fine-tune our instructional content, assignments, and quizzes. Measuring students' performance has helped us to define areas where we need to improve teaching materials and refine test questions.

Fundamentals of Oral Communication

In Fall 2002, the *SearchPath* tutorial for Fundamentals of Oral Communication incorporated an upgraded quiz, which mirrored the tutorial content and checked for comprehension/mastery. The tutorial was changed to include expanded content and an improved interface. It incorporated interactivity in either a graphic or non-graphic mode to address concerns about off-campus connectivity. Quizzes, which gauge knowledge retention, were available at the end of each unit.

Students completed a pre-test and a post-test to determine whether the tutorial helped them master the course information literacy competencies. A matched or paired t-test was performed and a significant difference (see fig. 21) was found. The average mean across all 19 classes was 6.50 (sd = 0.317) on the pretest and 7.30 (sd = 0.423) post-test. The students' scores improved from pre-test to posttest. We determined that the tutorial experience made the difference in the students' performance.

Comparison of Pre-Test and Post-Test Scores for Fundamentals of Oral Communication Library Instruction Fall 2002

Source	N	Mean	Variance	t-test	D.F.	*p*
Pre-test	**19**	**6.5**	**0.317**			
Post -test	**19**	**7.3**	**0.423**	**-6.624**	**18**	**.000***

***Note: *p*-value < Alpha 0.001**

Fig. 21. Pre-Test & Post-Test scores comparison

Fundamentals of Oral Communication tutorial quiz scores for the years 2004-2005 through 2006-2007 have been analyzed and compared to ascertain whether students continue to master the tutorial content; if tutorial content needs to be adjusted; and if quiz questions properly address the content. The scores are reported in fig. 22.

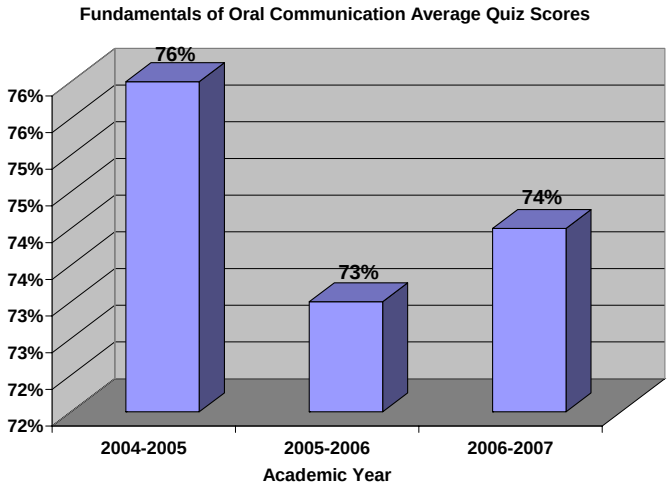


Fig. 22. Fundamentals or Oral Communication quiz scores

Currently the librarians are statistically reviewing the quiz question-by-question to identify items consistently answered incorrectly. These items will be analyzed to ascertain whether the question is poorly worded or the information is not fully covered in the tutorial.

CIT

On-ground students in the general education CIT class receive online instruction via two tutorials about evaluating Web pages and searching the Internet respectively, as well as on-ground instruction in which they practice Web searching and evaluating Web pages. They complete their searches and worksheet in class, receiving librarian feedback throughout the process.

Online students interact with a librarian via threaded discussion as the librarian helps them formulate a search strategy. They complete a worksheet on evaluating a Web site. The librarian grades the worksheet, returning it with comments.

At the end of the instructional unit, all students take an online quiz to measure their knowledge. Online students don't receive their grade on the worksheet prior to taking the quiz. Student scores for 2003-2004 through 2006-2007 are shown in Fig. 23.

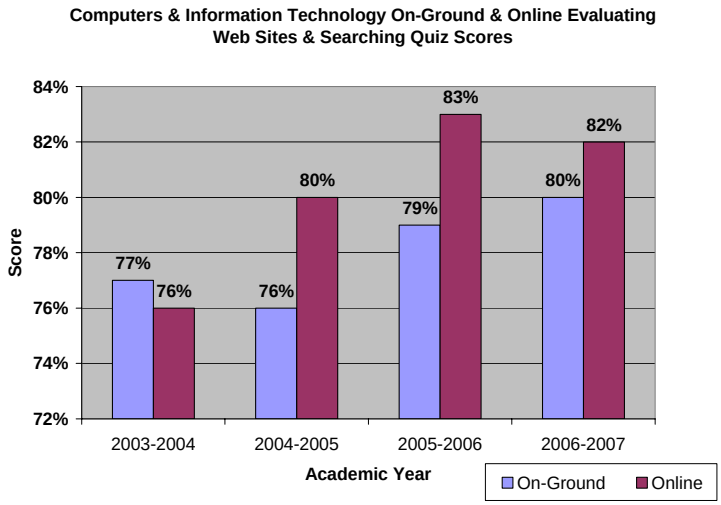


Fig. 23. CIT quiz scores

As illustrated in fig. 24, the difference in quiz scores between online students and traditional students was not found to be statistically significant. The data does illustrate that the average scores for the online students have consistently been higher than the traditional classroom students (four year average of all students; 80% online, 78% traditional) and yet the scores for the online students have been more widely dispersed around the mean than the traditional students (standard deviation; .3095 online, 1.825 traditional).

Comparison of Online and Traditional Instruction Assessment Test Scores for Computers and Information Technology Students 2004-2007

Source	N	Mean	*sd*	t-test	F	*p*
Online	**4 years**	**80%**	**3.095**			
Traditional	**4 years**	**78%**	**1.825**	**-1.252**	**.711**	**.432**

Fig. 24. Comparison

We are in the process of evaluating the individual questions in this quiz to identify any questions that need to be rewritten for clarity and/or areas we need to address more fully in our instructional model. Of the 40 questions contained in the question bank, a preliminary investigation has identified eight questions that need further review. These questions were identified as having a correct response from less than 70% of the students. There were no

statistically significant performance level differences on individual questions between online and traditional students.

English Composition

English Composition students complete an online tutorial and quiz. Quiz scores for the years 2000-2001 through 2006-2007 are shown in fig. 25.

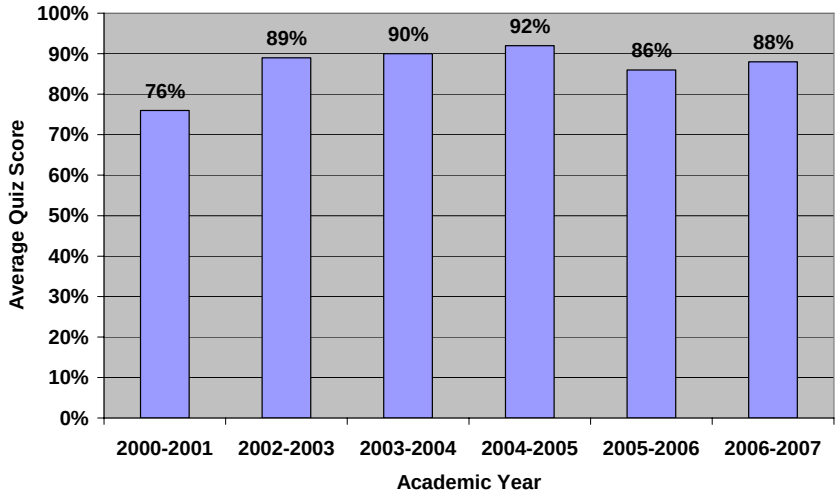


Fig. 25. English tutorial quiz scores

Students are allowed to retake the quiz until they obtain a score they feel is satisfactory. Learning occurs as students review the material while retaking the quiz. The drop in scores in 2005-2006 may be attributed to a redesign of the tutorial and the quiz, with the difficulty level of the questions being raised.

We track English Composition score trends to identify areas in which students might need more instruction or areas in which we might need to "ramp up" our tutorial as information literacy levels rise among our student population.

Managerial Communication

We began tracking student scores in Managerial Communication classes in 2005-2006. This course is part of the business core classes required for all students in the College of Business & Professional Studies. Initially students received library instruction in locating an article about a business communication topic in a business periodical index and wrote a review of the article. In 2006-2007, some classes began locating several sources about a topic related to business communication and synthesizing those sources to create a report. The drop in scores (see fig. 26) may be attributed to the higher level of critical thinking required in the synthesizing process.

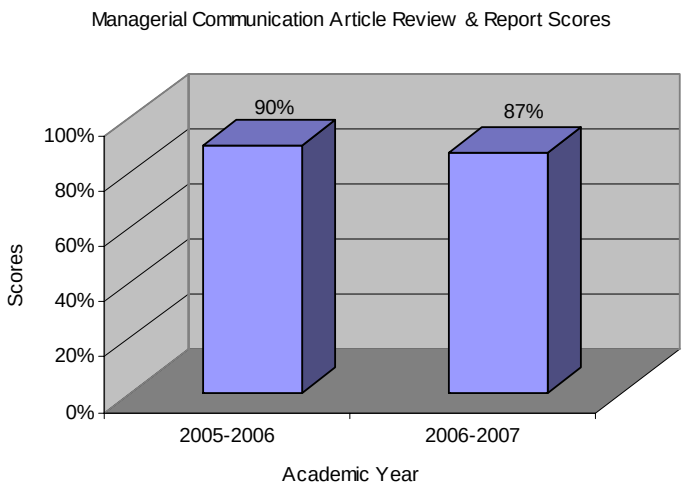


Fig. 26. Managerial Communication scores

Management Information Systems

Management Information Systems (MIS) is also a business core course. The tasks of the MIS library assignment are to choose a Web page related to a MIS topic from a selected list; evaluate the Web page for the authority of the authors or sponsors; check for bias; and verify sufficient currency for the topic. Students write a report evaluating their chosen Web page, summarizing the content of the page, and correctly citing the page.

Students watch an online lecture and read a Web tutorial about searching the Web using Google Advanced Search. On-ground students attend a class presentation in which searching for, evaluating, and citing Web pages are demonstrated. Online students link to a handout that demonstrates the finer features of Google Advanced Searching and to a Web page that helps them learn to evaluate Web pages.

Students in the on-ground environment spend two class periods with the librarians as they develop their search strategies and select Web pages. Online students have the option to communicate with a librarian by e-mail as they search for and select a Web page. The higher scores achieved by on-ground students (see fig. 27) might be attributed to the one-on-one help provided by librarians.

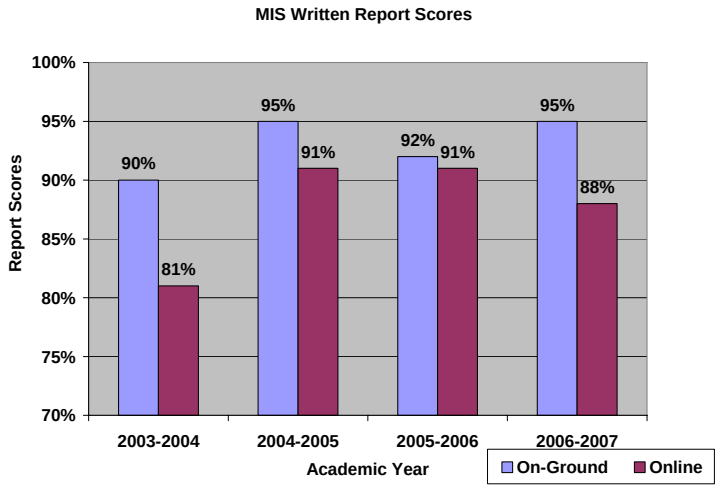


Fig. 27. MIS scores

Tracking MIS scores allows us to identify areas where students struggle. During some semesters, librarians graded students' papers to make us aware of students' problems. We used information gleaned from our experiences to fine-tune the curriculum. Working with students one-on-one, we have identified topics which are particularly difficult to research. We have collaborated with faculty to edit the topics list and pre-researched topics to ascertain whether adequate information is available for new topics.

Information Literacy Test

In 2005, librarians deployed a pilot assessment of our information literacy model using the James Madison University Information Literacy Test (ILT), which measures ACRL Standards 1, 2, 3, and 5. One hundred and forty-two students were included in the pilot group (62 100 level English Composition students and 80 300 level MIS students). We aimed to document information literacy skills as students progressed through our library curriculum. We hoped that the students who had just completed the English Composition library curriculum would score proficiently on the ILT and that the MIS students, who had received more in-depth library instruction, would demonstrate a higher skill level on the test.

The students were compared for overall GPA and composite ACT scores and found to be academically and statically equivalent. The average ILT scores for the two groups were statistically equivalent. The proficiency level established for the ILT was 65%. The average ILT score for MIS students was 66.29%. The average ILT score for English Composition students was 65.48%. While this difference was not statistically significant, several trends emerged. The average score for all students in the pilot group was 65.94%. This was above the proficiency level and above the average score of all institutions taking the ILT in Fall 2005. Each year, from freshman to senior, students at Northwest Missouri State University (Northwest) increased their average ILT score by 1% (see fig. 28) (Ury, Park, Baudino, & Ury).

CLASS	N	ILT Score
Freshman	6	64 %
Sophomore	33	65 %
Juniors	39	66 %
Seniors	64	67 %
Total	142	

Fig. 28. 2005 ILT score by class (Ury, Park, Baudino, and Ury, 261).

Northwest students receive course-embedded library instruction in four general education courses. The students who participated in the pilot study received upper level library instruction in the MIS course before taking the ILT. From the results of the pilot, we concluded that our instructional program is providing information literacy value to our students. Although the difference in scores is not statistically significant, each year at Northwest their information literacy score progressively increases.

In April 2007, the ILT was repeated with three classes of English Composition students and one upper level class from each Northwest college—including one class each in public relations, management, and psychology. We are currently in the process of analyzing the results of this test.

Conclusion

Owens Library uses both qualitative and quantitative assessments to improve our instructional delivery and materials. Some of our initiatives focus on specific curricula, such as a tutorial or lesson, while others seek to evaluate our overall program. We have found the process to be rewarding, time consuming, and challenging. Both students and faculty can, at times, be painfully honest. Statistics can reveal that quizzes contain questions which are poorly worded or that a tutorial/lesson doesn't adequately cover the information tested.

We hope that the methods and insights we have shared will help you as you develop qualitative and quantitative assessment plans. We would like to hear about your forays into the area of measuring instructional delivery. You may contact us at cjury@nwmissouri.edu.

Works Cited

Ury, Connie, Park, Sarah, G., Baudino, Frank, and Ury, Gary. "Taking Flight—Pilot Testing the Information Literacy Test." Sailing into the Future: Charting Our Destiny: Proceedings of the Thirteenth National Conference of the Association of College and Research Libraries. Ed. Hugh A. Thompson. Baltimore, MD: Association of College and Research Libraries, 2007. 256-263.

Developing a Digital Collection

Edwin B. Burgess
Director
Combined Arms Research Library

Abstract

The Combined Arms Research Library has been building a Digital Library, using the ContentDM platform. This paper will discuss the rationale behind development of this piece of the library, the selection process for the software and the considerations that now drive retention or replacement. It will also discuss the selection of material, and the effects and decisions that have cascaded from the initial conditions. Discussion of the CARL's efforts to publicize the site, and increase use of valuable historical and research materials, will include sections on OAIster and the major search services. Issues of preservation, both of legacy resources and digital resources, are critically important to the development. Copyright is a minor theme and will receive a short treatment, as most of the digitized materials in this collection are government publications. Finally, the presentation will cover short- and medium-term plans for continued expansion. A theme throughout will be the difficulty of ensuring integration of the materials into existing library resources and the differences between paper-based and digitized resources in library services.

Introduction

The Combined Arms Research Library (CARL) supports the U.S. Army Command and General Staff College, a graduate-level institution for the education of military officers. Its secondary mission is to be the public library for Fort Leavenworth, an Army installation in Kansas. This paper will discuss the decision points in the creation of the CARL Digital Library and the development process that resulted. The CARL Digital Library is available at http://cgsc.leavenworth.army.mil/carl/contentdm/home.htm.

In the following paper, I will briefly discuss the purpose, initial development, selection of a digital object management system, the collections mounted, lessons learned, challenges, outcomes, and expected future developments.

Conditions

The CARL had never pretended to be a cutting edge institution. It was late getting OCLC and used a Hollerith-card circulation system until well into the eighties. Nevertheless, in the mid nineties it became evident that things had changed. The Internet disrupted the way that libraries managed their collections. The CARL received thousands of documents a year via mail in the eighties; the institution was on the mailing list of every significant military organization and Non-Government Organization in our field. By 1998, all that had stopped. Producing bodies had started mounting their publications on the Web, and nearly all of them stopped mailing paper copies out. This produced two problems: finding out that the publications existed, and collecting

them. We had every reason to believe that these problems were common to most similar libraries, but didn't have a very good handle on how to manage an electronic document.

In addition, the Library was faced with a large collection of deteriorating materials. There are some 15,000 books in the CARL that were published between 1865 and 1923; most of them are experiencing oxidation and brittleness. There are also some ten thousand World War II documents, all in varying degrees of decay, and a few hundred dating back into the Inter-War Period. Something had to be done. The technology of choice was (and is) medium transformation; that is, scanning.

Another category of holdings under consideration was the complete collection of Master's theses generated by the College. Current production is in the vicinity of 150-200 papers a year. The program started in 1964, and there were around two thousand theses on the shelf. The College felt the need to publicize this research and enhance the public image of the institution. The research was actually available through the National Technical Information Service for a fee, but was not exactly in the public eye. Research that no one reads is of little use, and the College did not consider that it was getting the institutional credit it should for its students' efforts.

Historical materials relating to the College, the Fort, and the activities of the Army associated with Fort Leavenworth are another segment. This included a hundred or so monographs published by a military history organization on the installation, a number of photographs, and miscellanea.

Some digitization had already been done. Starting in 1995, the Center for Army Lessons Learned, on Fort Leavenworth, began scanning master's theses as they were produced. The CARL cooperated and eventually all two thousand theses were digitized and stored in a Convera database. This database was problematic for a number of reasons not relevant here, and the CARL decided to repurpose the work that had already been done to populate its own Digital Library. Where to put it? How to instantiate a digital library?

The CARL web site was growing nicely. The main argument against using it as the primary repository was lack of confidence in the permanence of the URLs, and a worrying dearth of metadata. The information management (IM) establishment of Fort Leavenworth had shown no reluctance to change drives, URLs, and structures, often without prior consultation. There was no site search function. A few resources had records in the CARL ILS, but we had already had to handle changes in the web structure imposed on us and indications were that storage would be a problem. We had every reason to believe that technical support for a server, or indeed acquisition of a server, was not going to happen

CARL management searched for solutions. A conventional process developed which can be briefly summarized in the following terms: search for stakeholders; identify requirements; match requirements against commercial systems; develop funding strategies.

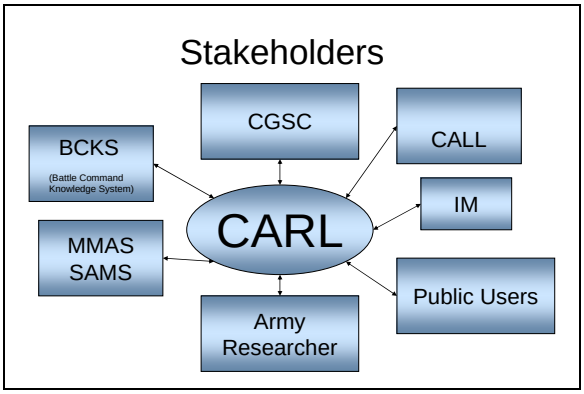


Fig. 1. Stakeholder scan

Figure 1 shows the stakeholders that the CARL staff initially identified. The block labeled "MMAS and SAMS" refers to two programs within the College that generate accredited Master's degrees. These two programs typically aggregated between 150 and 200 theses per year. The largest single user of our collection of Masters' theses was in fact the Master's program itself. While this might not bode well for the quality of the papers, it did allow us to focus on the needs of a discrete slice of students within CGSC.

BCKS, the Battle Command Knowledge System, is a knowledge management program that sets up communities of practice among serving U.S. soldiers. It was reasonable to expect that BCKS members would be interested in a place to go for definitive reference materials, and since BCKS members were worldwide, digital access was indicated. This was not borne out by experience.

CGSC refers to the flagship course of the College, in which about a thousand officers, mostly majors in the US Army but with a leavening of other services and foreign military, work for an academic year. Studying their craft, they work on higher command skills, leadership, tactics, logistics, and country studies, among other things. We expected the CGSC student body to be the largest user. Somewhat to our surprise, it has turned out to be a significant, but not leading, user. The Center for Army Lessons Learned (CALL) is an organization on Fort Leavenworth which collects lessons learned and redistributes those lessons to other units. The Information Management (IM) establishment on the post was a target more hoped-for than expected. Public users and defense researchers were the groups thought most likely to generate a large increase in use; this turned out to be the case.

Defining Requirements

Defining the requirements for a system, refining them, and removing the more fantasy-like elements took some time. In the end, nine core requirements surfaced (see fig. 2). None of the requirements were particularly exotic. Several vendors had some sort of system that at least advertised that they could meet these needs. Affordability was clearly going to be a problem.

Requirements

- Support multiple file formats - PDF, TIFF, TEXT, HTML, JPEG
- Allow for search and retrieval of individual records
    - Well indexed
    - Full text searching
- Web compatible
- Customize web interface
- Downloadable records
- Ability to edit or delete records
- Limited staff training
- Limited technical support
- Affordable

Fig. 2. Requirements of a digital library

Matching those requirements against commercial systems and then matching the commercial systems against our purse took some more time. Bureaucracies being what they are, and libraries being the mysterious creatures they are, it was a struggle to get our requirements recognized and validated by the IM department, the College management, and the library staff, but in time a sufficient consensus arose. DiMeMa, a company based in Seattle, looked like a good choice functionally with a product called ContentDM, but there were two serious issues. ContentDM did not, and still does not, search the full text of documents in native mode. Also, it was going to require investment in hardware and software that looked hard to raise, well over a hundred thousand dollars. Then the conditions changed.

OCLC became sole marketing agent for DiMeMa, and offered a hosting option. What's more, OCLC allowed us to get started for six thousand dollars. This was manageable. I was able to reprogram sufficient money to cover a year's service and had a reasonable expectation of having future appropriated funds to continue. The Library used an existing contract negotiated by an arm of the Library of Congress that provides a variety of services to libraries. This allowed us to move money during the current fiscal year from one executive agency—the Army—to a legislative branch office—the Library of Congress—and contract with OCLC for ContentDM service.

A couple of years later OCLC purchased DiMeMa outright, no doubt simplifying their internal structure, but not changing the business relationship at all. It continues to this day.

ContentDM, in the hosted version, requires little technical support from the library. All server maintenance, software updates, backup, and continuity are handled by the company. Some client software is loaded on the library's PCs. There have been some glitches, but the client software has been largely trouble-free. With minor issues of response time, the hosted database has worked well.

Compromise

ContentDM software makes only metadata searchable. Direct full-text searching of documents is not supported. Although this was at first regarded as a deal breaker, we came to see that there were advantages, and that the limitation did not have to be fatal.

Because the installation was being hosted at a contractor, and would be in the public view, a significant quantity of our document stock could not be entered. The military services apply distribution limitations to information in the same way it applies security classifications. These affect the way military libraries can collect, disseminate, and store information. The nascent digital library would be for publicly releasable material only.

Initially the database was not visible to web crawlers. Technical advances have since eased this, but we were concerned that the materials would not be easily discovered.

Third, and least, the library did not have physical control of the server. This caused some unease. Events have proven this worry unjustified, although the Department of Defense is constantly threatening to require all DOD information to be carried on DOD servers.

Metadata

After very little debate, the staff selected Dublin Core as the basic structure. This was indicated because OCLC actively supports DC; ContentDM accepts the structure conveniently, and everyone could understand it. OCLC also promised that they could harvest the DC metadata and convert it to MARC, facilitating discovery by enabling insertion of bibliographic records in most library-related systems.

We looked at several formats for subject headings and decided on a dual approach. One field would have LCSH, another would have free-text keywords.

The rest fell into place easily. Dealing with mainly textual material we wanted an author, a title, some version of a collation, an abstract, some sort of subject access, and a minimum of technical metadata. All DC, all pretty predictable. We threw in a call number field since we knew many of the documents would come from our collection and would have a paper as well as a digital presence.

Design Considerations

Designing the screen displays was an iterative process. ContentDM provides a default display format that does the job nicely. Users can designate a large number of collections, each with its own metadata structure. We used this for a while, and later began designing new page formats. Built into the structure are expectable tools like simple search, advanced search, browse within collections, and Boolean search.

Simple search is the tried and true single box with no query limits. This retrieves records from all collections. Users can drop to the collection level and search only within the collection.

Advanced search allows one to search specific fields. The designer may designate any field as searchable or not.

As always, you are searching metadata only. However, this can be quite inclusive. A "full text" field allows a cataloger to include a large amount of text, in effect several pages, which can be searchable. For short works, like poems or letters, this field will typically contain all the textual material. In the case of most of our documents, it contains an abstract, usually running 200-300 words.

What collections to create was the next question. The initial cut came to these categories:

- World War II Operational documents
- SAMS monographs
- MMAS theses
- Stability Operations and Support Operations
- Fort Leavenworth History

We later added collections of obsolete military doctrinal manuals, two military history categories, a set of 1930's student papers, and a collection of interview transcripts with returned veterans of Iraq and Afghanistan. Every one derived directly from the library's primary mission, to support the school and advance military science.

Lessons Learned

- Building a collection takes time and labor
- Analyze metadata issues thoroughly before committing
- Establish standards early
- Review lots of other people's collections
- Document procedures for a best practices manual
- Clearly define the scope of your collection(s) before populating the database
- Use the major search services—Google, Yahoo, MSN, OAIster

Challenges

- Continuing costs
- Labor intensive
- Significant investment in personnel training
- Oceans of material: legacy documents, preservation scanning, new acquisitions
- Discovery
- Long-term digital preservation

Nothing earthshaking here. We've all heard variations along the theme of "Just scan it, and then your problems are over." Librarians know, in the words of George Gershwin, "It ain't necessarily so." Registering with Google opened up a lot of channels for use. Linking to our ILS

opened up more; announcement in our RSS feed increased usage even more; harvesting our metadata and creating WorldCat records still more.

We have not adequately addressed the issue of really long-term preservation of the information. Our IT shop thinks in terms of two or three years, but this library is proud that it holds College writings done in 1882. Can we say we are confident of making the same statement a hundred years from now? Digital preservation is a complex problem that we probably can't solve alone. Institutional partners with money, clout, and longevity will be necessary.

Outcomes

The CARL Digital Library is a clear success. In 2006, with around 3,000-3,500 documents in the database, users from all over the world downloaded more than half a terabyte of documents. The upper management of the College recognizes that the Digital Library is a worthwhile initiative, appealingly technological. CARL and its parent school have gotten a good deal of visibility from it. Growth continues both in numbers of documents and in unique sessions.

Blackboard to the Rescue:
Use of Course Management Systems in Employee Management and Training

Marian G. Davis
Access Services Librarian
University of Central Missouri

Robert Hallis
Harmon Computer Commons Manager
University of Central Missouri

Abstract

Academic library service areas are typically staffed with a mixture of full-time employees, students, and graduate assistants. Each of these tiers of employees has different levels of experience and expertise. For some, this may be their first job, while others may have been at the same institution for decades. In addition, the high level of turn over for student workers requires a constant need for repetitive training. Blackboard provides a central place to store information in a single place to facilitate updating materials. In addition, the discussion board provides a communication forum, through which multiple lines of communication can be maintained through multiple threads. By creating Blackboard courses for unit management and training, the James C. Kirkpatrick Library of the University of Central Missouri is able to provide self-guided training modules, learning assessments, and a common area for policies, procedures and manuals in a 24/7 environment. Macromedia Breeze is a tool that enhances PowerPoint presentations in this environment.

Introduction

Successful service at the public service desks at the University of Central Missouri's James C. Kirkpatrick Library (JCKL) requires a cadre of well trained employees. The service areas within Access Services and the Harmon Computer Commons are staffed by ten FTE library assistants, six full-time graduate assistants (each working twenty hours per week), and approximately fifty student assistants during the fall and spring semesters. Staff turn-over in each level is high; usually one to two full time library assistants, two to three graduate assistants, and dozens of student assistants are replaced every year. Most of the new-hires have no previous library experience.

Procedures and training manuals initially were kept in paper-style manuals. Later, PowerPoint presentations were created for targeted activities. These methods proved problematic. Having more than one physical document necessitated updating multiple copies to provide access to employees needing the information. Training sessions were scheduled at fixed times, requiring all attendees to be present. Those who missed the training then needed individual instruction, thus taking up precious time in the manager's schedule. Blackboard provides a solution to these challenges and more.

As a Web resource, Blackboard is available via Internet connection. When documents are added to a course, they can be accessed by many individuals at the same time. In addition, the discussion board, announcement function, and email capabilities provide a richer environment in which to distribute information, and solicit discussion. Further, the management components permit one to see who is accessing the information, when, and how often. Consequently, when the University of Central Missouri (UCM) purchased Blackboard for classroom support, library managers at JCKL envisioned a management use for the software instead of simply a classroom tool. Campus Blackboard administrators established courses for the library managers to use in personnel management and staff training. The existing paper documents and PowerPoint presentations were then loaded into the courses. Eventually these documents migrated to interactive multimedia presentations which better capture the attention of employees. It is hoped that visual content is better retained by the young employee who is more oriented to visual learning.

Literature Review

A growing number of publications discuss library use of course management software in support of information literacy and reference services. WebCT is being used as a training resource for reference students at the Hardin Library of Health Sciences, University of Iowa (Skhal and Thureson). Little, however, has been published that addresses the use of such courseware as a library personnel management tool despite its brief consideration in a listserv discussion. A review of the CIRCPLUS-L archives reveals that between 2005 and 2007, ten libraries have postings that mention positive experiences using Blackboard or other course management software as a management tool.

In contrast, the business world has embraced e-learning, primarily for training purposes. They have found courseware for staff education to be more flexible and cost-effective over conventional seminars (Bills). Instructor led classrooms are still the method of choice, however self-study e-learning has increased more than two-fold in 2006 over 2005 (2006 Industry Report). Training groups today are shifting from a workforce of trainers to one more focused on support services, course design, and content development. New employees no longer need to wait for busy managers to clear their schedules for training when they can be directed to a technology-based training course, which enables them to enter the workplace setting more quickly (Harris).

A variety of delivery methods are used to provide access to this content, including webinars, online collaborations, employee-accessible Web sites, scenario-based and role-playing activities (Kooser). These formats appeal to the “TV workforce” (Cooper). Technology-based learning engages the student in a meaningful way, provides for repetitive review in a less stressful environment, and provides access to the best presentation of the material rather than a hurried once over by a supervisor. Consequently, learning can be quicker. John Hancock reported that learning and testing time dropped by one-half to two-thirds the time of a facilitated training session (Howard).

Another advantage was the repeated access to content. Over time, and without reinforcement, staff might forget certain things that were covered during training (Cooper). In a create once,

deploy many times theory (Cooper), frontline workers have continuous access to materials, and find current information when they need it to assist patrons standing at the desk (Weinstein).

Courseware Advantages

Universities invested a great deal to provide courseware to support distance learning initiatives, and the library benefits from the on-campus training, student and faculty familiarity with the software, and technical support. Moreover, supervisors can track which modules have been used, which employees have read material, and maintain a virtual dialogue through the Blackboard discussion board. Consequently, supervisors have free access to a powerful tool with which student workers are quite familiar.

Supervisors are entered as "instructors" of a course. This gives them the ability to design the interface, post documents, and monitor usage of the resources posted on Blackboard. There are several content areas and modules which the supervisor can enable, modify, or disable (see fig. 1). An announcement page can inform employees of payroll dates, available hours, or changes in normal operating hours or procedures (see fig. 2). A section devoted to staff information provides space for individuals to post office hours, contact information, and their responsibilities as a full-time staff employee. A handful of sections organize access to computer files that are arranged in folders, and a communication section contains an email system, employee directory [roster], and task schedule (see fig. 2).

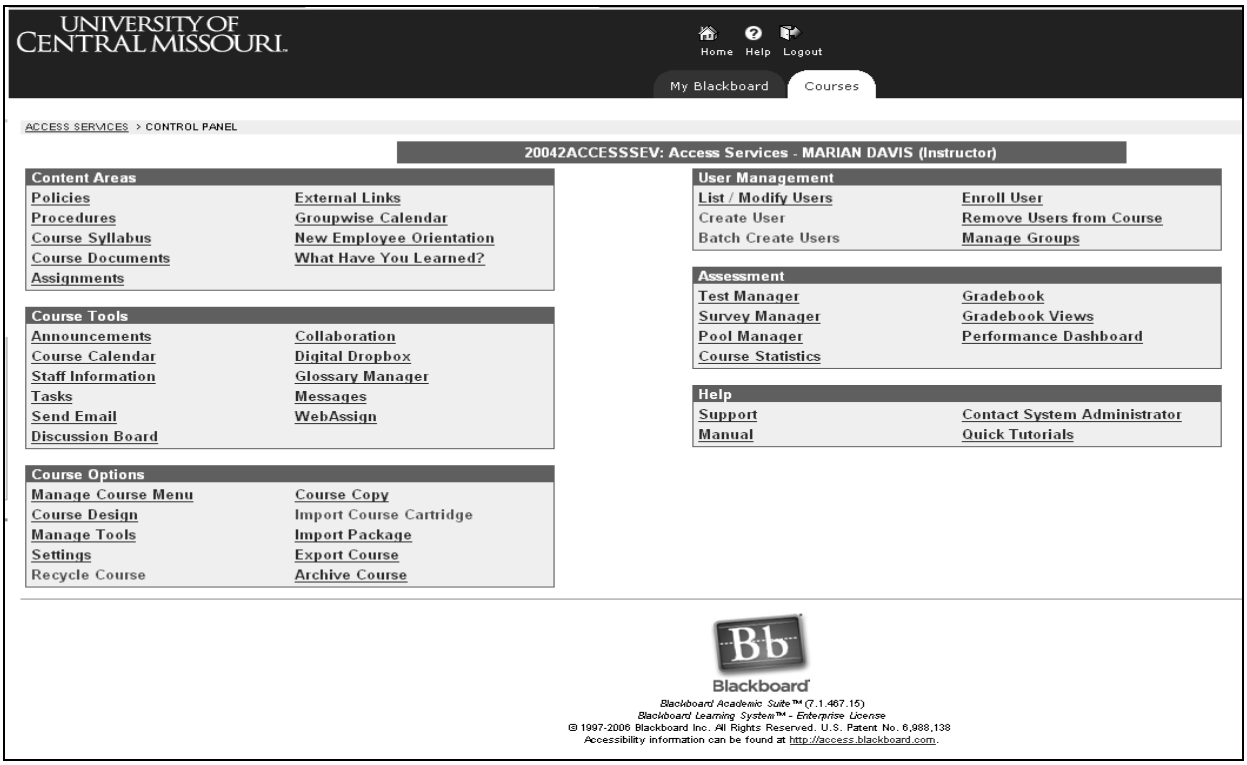


Fig. 1. Instructor's Control Panel View

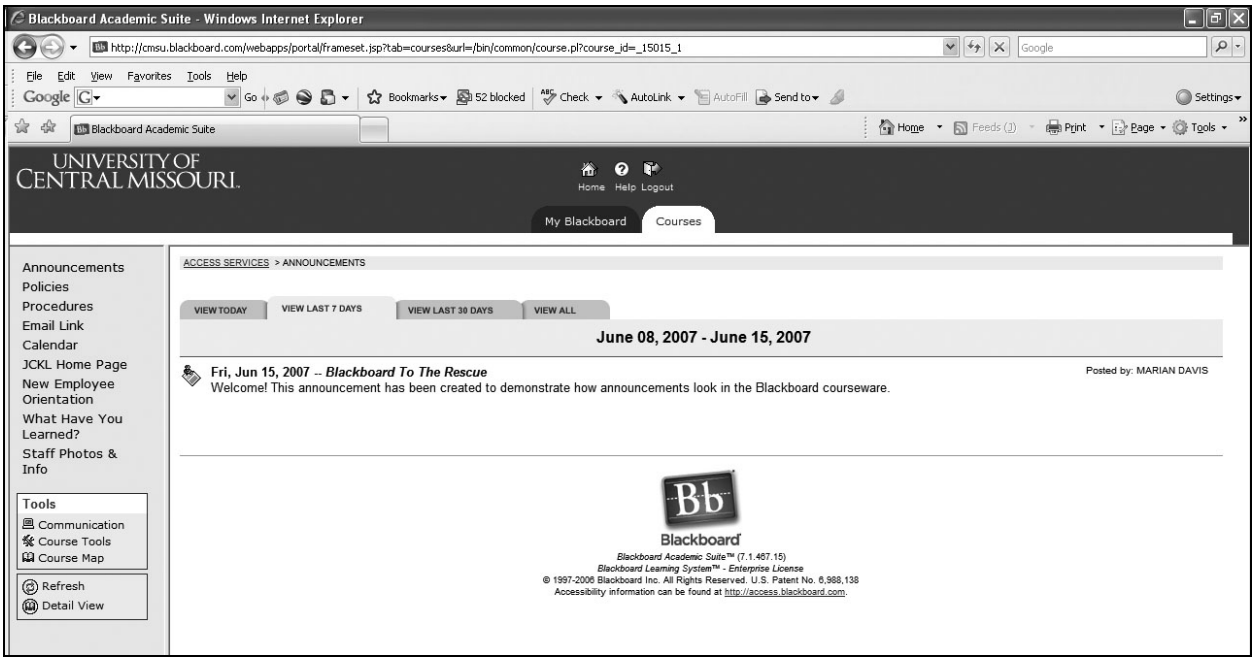


Fig. 2. Student's Home Page View

Students are already familiar with many of the features of Blackboard since it is used in their classes. Although staff will need to learn the system, Blackboard training for staff and students is offered through the University for anyone who desires it. Additionally, Blackboard comes with vendor-supplied tutorials. The University also provides Blackboard support to anyone with questions through email, online chat, or telephone. Consequently, this becomes an additional e-tool, like the online catalog, email, and a myriad of other electronic resources.

The announcement feature of Blackboard accommodates one central place for messages. All staff and students are instructed to check the messages when they arrive on duty. The library manager can post pertinent messages and the user can view them in increments of today, last 7 days, last 30 days, or view all. The system will retain all posted messages until they are deleted by the manager (see fig. 1).

The calendar feature can support desk scheduling. JCKL has three service desks in Access Services and one service desk in the Harmon Computer Commons. Individual desk schedules for each public desk are now integrated into one master calendar. At a glance all employees can see who is scheduled for any desk at any time.

E-mail addresses are part of the students' information. Once a student has been added to your "course," their email is quickly available. In addition, employees can be grouped into evening or weekend mailing lists, and information routed to each specific group. The e-mail groups created at JCKL are staff, graduate assistants, and students. We have graduate assistants and students in several areas which are sub-divided into groups by service area. All users are responsible for keeping their e-mail addresses up-to-date and thus the number of bounced emails is significantly reduced.

The content areas are most versatile, and facilitate access to a broad range of documents. Content area labels can be customized to meet the individual unit needs. Some of the uniquely labeled content areas include orientation, workshops & documents, policies, procedures, staff pictures, e-mail link, and calendar. The default course content areas still in use are communication, external links, and tools. The flexibility to create additional content areas, or modify existing ones, is crucial to the success of this management tool. All file types can be added under content areas, including text documents, PowerPoint, Breeze and a multitude of video-based formats. In addition, Blackboard will enable embedded linking to external Web sites of your choice. The variety of file types accommodated by Blackboard allows the library manager to develop interesting training tutorials and presentations. Some of the documents that have been created and/or posted at JCKL are skill level assignments (document creation/manipulation in a variety of software programs), job descriptions for all to see, policies, procedures, emergency weather procedures, etc. This arrangement overcomes several problems that had been encountered at UCM.

Previously, graduate assistants and students could not access any documents that were once stored on a library wide network drive; only full time staff could access those documents since network drives are dedicated to either staff, or students, but not to both. Graduate students and student assistants are scheduled during late evenings and weekends when no full time staff are scheduled. This places them at a disadvantage when odd situations arise. They could not refer to policies and procedures stored on the network drive, but now they can access this information in Blackboard.

Knowledge application and assessment can be built into the course through the test manager feature of Blackboard. When employees complete assigned readings and files they are then asked to apply their knowledge through testing. The library manager is able to monitor who has taken which tests, how they answered the questions, and see the test scores. Those with low scores can be required to go through the training material again and complete another test until acceptable levels are achieved.

Access to these materials is 24/7. No longer will one need to conduct individual training every time someone new is hired. There is a well-developed training package any time it is needed, complete with assessment and monitoring capabilities. In addition, familiarity with courseware navigation will give the employee another skill that can be added to their resume.

Courseware Disadvantages

There are several challenges to incorporating such a system, and individual elements of the online environment may not be relevant to all situations. Initially, there is a steep learning curve for a library manager who is not familiar with Blackboard. One needs to allow a significant amount of time to develop the course. However, once built, the additions and modifications can be quick. Experienced students can be used to modify and update content. Content will continually need to be modified, and those “enrolled” will need to be updated as personnel resign and are replaced. Furthermore, one may need to monitor if a student is doing Library courses or personal courses when logged into Blackboard, and providing training time may be a challenge.

Conclusion

In conclusion, the software has already been purchased, and there is no expense to the library. It's powerful. Students are already familiar with how to use it, and it provides a training environment in which consistent content can be delivered 24/7 to all employed in the library. What's not to like?

The use of courseware can enhance the training of employees at all levels, provide a systematic introduction to the tasks that will become routine for new hires, and provide a ready reference to remind one of obscure procedures. However, libraries are in the customer service business, and as such, interaction with patrons is our primary role. Familiarizing the new employee with the policies, procedures, and theoretical aspects of the job in a face-to-face method demonstrates the importance a supervisor places on each hire, provides an opportunity to directly observe interpersonal skills, and produces a mentoring environment that is not possible in a computer-based environment. Consequently, a blend of both e-learning and real-life experience will result in the best trained work force so needed at the public service desk within the library.

Works Cited

"2006 Industry Report." Training 43.12 (2006): 20-32. Academic Search Premier. EBSCOhost. James C. Kirkpatrick Library, Warrensburg, MO. 12 June 2007.

"Archives of CIRCPLUS@LISTSERV.BOISESTATE.EDU." 2007. LISTSERV.BOISESTATE.EDU. 11 June 2007 <http://listserv.boisestate.edu/archives/circplus.html>.

Bills, Steve. "N.C.'s First Citizens E-Training." American Banker 169.108 (2004): 18. Business Source Complete. EBSCOhost. James C. Kirkpatrick Library, Warrensburg, MO. 10 June 2007.

Cooper, Kenneth Carlton. "12 Unavoidable Truths about E-Learning." Chief Learning Officer 6.1 (2007): 42-5. Business Source Complete. EBSCOhost. James C. Kirkpatrick Library, Warrensburg, MO. 10 June 2007.

Harris, Derek. "Client Handling." E.learning age (2006): 24-5. Business Source Complete. EBSCOhost. James C. Kirkpatrick Library, Warrensburg, MO. 10 June 2007.

Howard, Chris. Enhancing Customer Service Through Learning Technology. Bersin & Associates, January 2006. 13 June 2007 <http://www.blackboard.com/clientcollateral/jh_case_study.pdf>.

Kooser, Amanda C. "E-Learning Gets Practical." Restaurant Business 106.3 (2007): 12. Business Source Complete. EBSCOhost. James C. Kirkpatrick Library, Warrensburg, MO. 10 June 2007.

Skhal, Kathryn J., and Catherine Thureson. “ICONic Training: Use of a Course Management System to Provide Continual Reference Student Education.” Medical Reference Services Quarterly 26.2 (2007): 15-25.

Weinstein, Margery. “How May I Train You?” Training 43.8 (2006): 28-32. Business Source Complete. EBSCOhost. James C. Kirkpatrick Library, Warrensburg, MO. 12 June 2007.

The MOBIUS-YBP Statewide Purchasing Plan: First Year Implementation Experiences

Dennis L. Goodyear
Technical Services Librarian
Avila University

Jean Eaglesfield
Regional Manager, Collectn Mgmt and Dev Group
YBP Library Services

Robert Frizzell
Director of Libraries
Northwest Missouri State University

Abstract

In 2006 the MOBIUS consortium of academic libraries of Missouri contracted with YBP Library Services for monograph and continuation services to member libraries. The history of the consortium's path to this project will be summarized. Two panel members will describe their experiences with services of the vendors system. There will be a description of the workflow of the selection, order and receiving process and the GobiExport service -- how it works at Avila University. Also, the experiences of Avila library staff and faculty with GobiAlerts (the sending of lists of new titles from the vendor's database automatically to faculty and the faculty recommendations) will be described. At Northwest Missouri State University, the experiences of a librarian who has written a notification slip plan covering numerous subjects will be described. The usefulness of the service will be summarized. The collection development and coordination functions of the vendor database will be shown. There will be increased use in these functions as additional MOBIUS libraries participate in this vendors database in the years ahead.

A Journey of Incorporating Portable Media Players into Library Services

Larisa Hart
Librarian
Ozarks Technical Community College

Amy Presley
Service Desk Assistant
Ozarks Technical Community College

Abstract

From cell phones that support mp3 files to the rapid flux of video players like the Video iPod and Creative Zen Vision, students are already plugged into portable media players. Small numbers of libraries and colleges are currently using this technology as a way to support either classroom learning or library type services. The Learning Resources Center at Ozarks Technical Community College felt the need to remain at the forefront of this cutting-edge technology, so we took the initiative to incorporate portable media players into our own library service. This session will showcase our journey; starting with the initial questions of which brand, what we can do, and who will want to use this, and ending with where we are now. Our ideas include a wide spectrum of uses that include areas from the sciences to the humanities. Students will be able to study art images, listen to musical recordings, view study skill videos and review rock formations for a geology class. We are excited to share all aspects of our trials, from challenges to successes.

Strategies for Preparedness for Library Disasters: The ILL Response

Sarah McHone-Chase
Information Delivery Services Librarian
Northern Illinois University

Abstract

A disaster can befall any library at any time, and the nature of possible disasters is varied: flood, fire, mold outbreaks, tornados, and others. Each disaster requires an individual response. Not even the most thorough of disaster plans can anticipate every possible difficulty that might be encountered in a disaster. Instead, libraries should concentrate on creating a flexible, realistic disaster plan that focuses on the safety of all library personnel as well as on continuity of services.

It is especially in regard to this last point that interlibrary loan (ILL) services are crucial: If library materials are damaged or otherwise inaccessible, interlibrary loan departments are capable of ensuring that users can still get the materials they need. In order to do this, however, it is important that an interlibrary loan department is aware of the details of its institutions disaster plan and has a complementary plan of its own.

In conjunction with a short discussion of disasters and library disaster plans, this poster presentation will discuss the need for interlibrary loan departments to maintain visibility within their institutions and promote an understanding of their function so that they can be recognized as an integral part of the disaster response. The fundamental aspects of an interlibrary loan disaster plan will also be discussed, with a focus on the unique problems that interlibrary loan departments must consider.

Introduction

Disasters are unpredictable in their nature, their degree of destructiveness, and their timing, making preparing for them especially problematic for libraries. Nevertheless, services to users must be continued, even when the library building or its collections are damaged or inaccessible. A library's best weapon in coping with a disaster situation is a flexible, current disaster plan that allows for unforeseeable variables and that is tailored to the circumstances, services, needs, and collections of the individual institution. As Miriam B. Kahn points out, a disaster plan does not safeguard against severe damage during a disaster, but it does increase the chances of a recovery for the institution (x).

A disaster plan assists institutions in assessing their vulnerabilities and priorities, and it addresses the disaster response, assessment, and recovery. It is this last concern, recovery, that is the primary focus of this paper. Camila Alire states that the critical services of the library should be re-established on a temporary basis even as the emergency disaster response is in operation so that there is less interruption to business (15). Although resource sharing—defined in the ALA (American Library Association) RUSA (Reference and User Services Association) STARS (Sharing and Transforming Access to Resources) bylaws as activities such as ILL, document

delivery, remote circulation, access services, cooperative reference, cooperative collection development, remote storage, and other shared library services—can be a major assistance during the recovery process to ensure the continuation of essential services, it is ILL services that are of specific concern for this paper. ILL is an essential method for supplying materials to users when the library's own collection is damaged or rendered inaccessible by a disaster. In order to best serve their institutions and their users, then, it is necessary for an ILL department to be aware of its institution's disaster plan, and to think about its own place within that document—to reflect on how key issues and service will be provided to users under recovery conditions.

Review of Literature

There are very many valuable resources that discuss the need to have a disaster plan, describe what should be in one, or help libraries write their own individualized disaster plans, and only a few very current and especially useful ones are mentioned here. ALA's website contains a page that offers many links to information about disaster preparedness and recovery, including links to disaster plans from other libraries, and to dPlan.org, which has a fill-in-the-blank program for institutions to write an individualized disaster plan.

An especially helpful resource is Miriam B. Kahn's Disaster Response and Planning for Libraries, which contains much information for the issues that should be considered in forming a disaster plan that addresses all the stages of a disaster from prevention to recovery, with appendices containing checklists and forms and lists associations, companies, and organizations whose services would assist in the recovery process.

An indispensable resource because of its vantage point (it was produced after Colorado State University's library was severely damaged by flood) is Library Disaster Planning and Recovery Handbook, edited by Camila Alire. The chapters in the book describe how many different aspects and departments of librarianship were impacted by the disaster, giving valuable advice for institutions to assess their own degree of disaster preparedness.

And yet, as Alire notes, little has been written about the partnerships, collaborations, and resource-sharing efforts of libraries in disaster recovery efforts, even though such relationships are essential (563). Several chapters in Library Disaster Planning and Recovery Handbook discuss different aspects of ILL as a part of the disaster-recovery process, namely Julie Wessling's "Public Services: Holding Up the Storefront," Tom Delaney's "There is No Normal Anymore: ILL / Document Delivery Services During Disaster Recovery," and Camila Alire's "Resource Sharing: A Requirement in Library-Disaster Recovery." In addition, Delaney has also addressed the role of ILL in his institution's disaster recovery in his article, "The Day It Rained in Fort Collins, Colorado." Finally, Lawrence L. Reger's "A Cooperative Approach to Emergency Preparedness and Response," from the 2003 IFLA (International Federation of Library Associations) Conference Preparing for the Worst, Planning for the Best: Protecting our Cultural Heritage from Disaster, discusses the need for a cooperative national strategy to assist libraries, archives, and other institutions cope with disaster. This paper is meant to tie together some of the larger issues from these various articles and chapters to outline important matters for ILL operations to consider in disaster recovery.

Interlibrary Loan Concerns in Disaster Recovery

If, as Alire states, libraries should focus on the continuity of service as a part of disaster recovery, then ILL should be recognized as a vital component of that plan. As Delaney writes, a disaster that affects a building or a collection means that "ILL will be the complete link between the users and the research/resource material" ("There is No Normal" 207). To effectively fill this role, however, ILL operations should be considering several issues before a disaster even occurs.

Partnerships and Agreements

A good first step for any ILL department in disaster planning is to find out what, if any, agreements exist with other institutions, for, as Alire reports, "The extent of and the time frame for …. assistance can be affected, to some extent, by whether or not resource-sharing components and/or agreements are already in place" (561). If a library is part of a consortium, partnership, or other agreement, conditions should be investigated to discover how ILL will be supported in disaster conditions—for example, in regards to communication and delivery methods (Alire 565). Wessling points out that the increase in ILL requests resulting from a disaster puts a burden on other institutions, especially consortial and partner institutions, to fill those requests (157), and such an issue should be contemplated and discussed before a disaster occurs. If a library has no established agreements or relationships with other institutions, communications with other libraries about forming a disaster-preparedness agreement together should be initiated. One component of this kind of agreement might be to have another institution in another region agree to be a contact in a disaster-recovery situation and communicate ILL needs for the affected institution to the library community.

Institutional Disaster Plan

The next step after examining agreements with other institutions is to examine the disaster plan of the home library. The basic library disaster plan contains current contact information for essential personnel, contact information for an assigned Recovery Coordinator for the library and for an assigned Communications Manager, and a fluid, general outline of procedures for recovery, including plans to resume essential services after a disaster. Also, it is important that libraries designate their salvage priorities within their collections for quicker and more efficient disaster recovery.

After reviewing agreements with other libraries and the institution's disaster plan, a better picture will be formed for how well the needs for ILL operations are provided in a disaster recovery scenario. Is important ILL information included, such as the institution's OCLC symbol and the name and contact information for the institution's OCLC representative? Are items currently on loan to the library from other institutions included in the salvage priorities? If ILL is not specifically referred to, are any provisions outlined at all as to how materials would be obtained for users after a disaster? If such issues are not addressed, then either the institution's disaster plan should be amended, or, if this is not possible, the ILL department should formulate a departmental disaster plan. Alire suggests that a "disaster-preparedness plan" be created to address resource-sharing needs in addition to the disaster plan of the whole institution (568), and the specific needs of ILL could be addressed in such a document. However and wherever ILL is

addressed, though, key issues such as technological and portability needs, space and equipment needs, and staff and services needs should be considered.

Technological and Portability Needs

In "There is No Normal Anymore," Delaney suggests that, even before a disaster strikes, ILL departments be willing to experiment with change, and with technological change in particular, so long as such changes result in improved services for users. He feels that having this attitude helped his ILL department in their role in disaster recovery. Indeed, this willingness to experiment with technology and the willingness to embrace change is an important foundation for ILL disaster preparedness because such an attitude reflects a fluidity that would be a valuable coping asset for an ILL department dealing with disaster recovery. For example, relying on automation to receive and process requests enhances service in the present time by improving efficiency and convenience in requesting, and would have added benefits in disaster recovery as well, namely that of making ILL operations portable. Delaney points out, for example, that if ILL operations are portable, which he defines as being able to run almost exclusively using the Internet and electronic means, all that is needed to return to service in a new location is the labor to move equipment and an Internet connection. He advises that ILL operations create a list of priorities that would need to be met if service is to resume after a disaster, and he suggests that those operations would find that their goals would be adequately met if measures towards portability were taken beforehand ("There is No Normal" 206-207). Such technology facilitates moving ILL operations to another location if a disaster damages the library building, enabling the restoration of services in a timely manner, and also helps ensure that requests are not lost.

Space and Equipment

A need that is related to portability is that of space and equipment—if ILL operations are portable, they must have some place from which to operate after a disaster, if necessary, and they need access to essential equipment as well: "Creating a work environment for interlibrary loan staff requires identification of physical space with workstations and connectivity to support your normal communication modes with other libraries," writes Wessling, and that space must also be able to facilitate ILL functions like receiving requests, answering questions, and sending and receiving mail and deliveries (155). In addition to this, Delaney warns that after a disaster there is likely to be an influx of requests, necessitating the procurement of additional terminals and connectivity for those terminals in order to process requests ("There is No Normal" 209-210). It should be pointed out that adequate space may prove difficult to plan, as a disaster that affects a library might also affect a campus, a town, or even a region.

Staff and Services Needs

Space and equipment needs are related to staff and services needs as well. If collections are damaged or inaccessible, lending will be impossible. Therefore, lending staff will need to be redistributed into other tasks, such as requesting materials, or working with on-campus delivery. With an increased amount of requests, the redistributed staff must have the equipment they will need to perform their new tasks. Not only this, but also new services may need to be developed to accommodate users—document delivery might be expanded, for instance. Wessling suggests that the recovery time is a good opportunity to be creative in services offered to users (156).

Such a sentiment is echoed in Delaney's "The Day It Rained in Fort Collins, Colorado," where he recounts some of the disaster-recovery steps that his department took with their staffing and services. For example, a programmer was hired to create a database for requesting journal articles, emergency staff was hired to handle requesting via OCLC, extra Ariel machines were ordered, and extra students were hired to assist in delivering requests to different departments on campus (67).

Conclusion

ILL operations have an important role in disaster recovery efforts within their library, a role that must be recognized and incorporated in some fashion into the institution's disaster planning. Disasters and their consequences cannot be predicted, but ILL departments can prepare to meet the challenge of a disaster by thinking about crucial issues that will impact their ability to provide service to their users during disaster recovery, such as technology and portability, space and equipment, and staff and service. In the case of disasters, an ounce of prevention is truly worth a pound of cure: by addressing how disaster recovery might be handled by their operations, ILL departments can help lead the way for their institutions' disaster preparedness.

Works Cited

Alire, Camile. "Resource Sharing: A Requirement In Library-Disaster Recovery." Library Disaster Planning and Recovery Handbook. Ed. Camile Alire. New York: Neal-Schuman, 2000. 561-73.

American Library Association. Disaster Preparedness and Recovery. 2007. 12 June 2007 <http://www.ala.org/ala/washoff/woissues/disasterpreparedness/distrprep.cfm>.

Delaney, Tom. "There is No Normal Anymore: Interlibrary Loan / Document Delivery Services during Disaster Recovery." Library Disaster Planning and Recovery Handbook. Ed. Camile Alire. New York: Neal-Schuman, 2000. 197-218.

Delaney, Thomas G. "The Day It Rained in Fort Collins, Colorado." Journal of Interlibrary Loan, Document Delivery & Information Supply 8.4 (1998): 59-70.

Kahn, Miriam B. Disaster Response and Planning for Libraries. 2nd ed. Chicago: American Library Association, 2003.

Reger, Lawrence L. "A Cooperative Approach to Emergency Preparedness and Response." Preparing for the Worst, Planning for the Best: Protecting our Cultural Heritage from Disaster. Proceedings of a Conference Sponsored by the IFLA Preservation and Conservation Section, the IFLA Core Activity for Preservation and Conservation and the Council on Library and Information Resources, Inc., with the Akademie der Wissenschaften and the Staatsbibliothek zu Berlin. Berlin, Germany, July 30-August 1, 2003. Ed. Johanna G. Wellheiser and Nancy E. Gwinn. München: Saur, 2005. 17-23.

Wessling, Julie. "Public Services: Holding Up the Storefront." Library Disaster Planning and Recovery Handbook. Ed. Camile Alire. New York: Neal-Schuman, 2000. 149-67.

Web Based Photo Database:
Creation and Maintenance on a Shoestring

Raleigh Muns
Reference Librarian
University of Missouri-St. Louis

Abstract

The University of Missouri-St. Louis Libraries and Western Historical Manuscript Collection (WHMC) have created, and maintain, a database of the descriptions of over 76,000 photographs, with over 3,500 photos presently scanned and viewable. A second photo database for the University Archives was created in January and has over 1,600 records with all photographs scanned and viewable. Both databases continue to add records and scanned images. No grant money or additional funds have ever been used to create or maintain either project. The hardware used consists of inexpensive PC's and hard drives. The software used is open source Linux - Apache - MySQL - PHP (LAMP). The level of technical expertise needed to set up and maintain these systems requires low to intermediate in-house computer skills. By creating a streamlined work-flow, minimal staffing and time is required for these ongoing projects. The University Archives Photo Database requires the part-time efforts of its sole employee. Metadata requirements are addressed minimally, while still allowing for future implementation of fuller descriptions. The rationale for minimally staffed and funded institutions to create similar databases is born out by increased in-house and e-mail contacts to WHMC, as well as an increase in the purchase of the rights to commercially reproduce the photographs.

Introduction

As free open source software becomes more capable and sophisticated, creating web based databases requires less expertise than ever. Expensive hardware and software are no longer barriers to implementing sophisticated projects. Similarly, a degree in Computer Science is also not a prerequisite. Implementing projects described in this paper does require a low-level background and basic experience in computer programming, as well as some familiarity with UNIX based operating systems (e.g., Linux). Despite the increasing ease in creating such projects, the implementation of a database of scanned photographs should not be considered trivial. Nonetheless, the skill set required, and the minimal cost of software and hardware make such projects within the reach of many small institutions.

Librarians at the University of Missouri-St. Louis (UMSL) have been creating a variety of web based databases for more than a decade. This paper will share the accumulated expertise derived from executing these various projects. Specifically, this paper addresses the creation and maintenance requirements of web based photo databases created for the Western Historical Manuscript Collection at UMSL and the University Archives. The databases were originally mounted on surplus personal computers with no outside funding or grant monies used.

Public access to the actual databases discussed in this paper is via the following Uniform

Resource Locators (URLs):

- http://tjrhino1.umsl.edu/whmc/
- http://tjrhino1.umsl.edu/umslarchives/

Building Blocks: Linux Apache MySQL PHP (LAMP)

The acronym LAMP refers to the solution stack consisting of the Linux operating system, Apache web server, MySQL database management system, and PHP scripting language. All four components are freely available for easy installation with most Linux based distributions (Ubuntu). It is not unusual to see the LAMP solution stack installed by default on many Linux distributions.

The effectiveness of the LAMP solution stack is primarily due to the fact that the four components were designed to work specifically with each other in the first place. The Apache web server, the single most popular web server on the Internet (Netcraft) was designed specifically for Unix based operating systems; the PHP scripting language was designed specifically to work with the MySQL database management system. All of the components are open source software, with large user bases and widespread documentation (Langley). Commercially published books and references are inexpensive and easily available for purchase. Titles can be acquired that are geared for the novice who wishes to learn how to create LAMP based applications (Rosebrook and Filson) to advanced reference works for the sophisticated user (Gerner et al.).

Institutions without Internet connectivity, i.e., who are unable to run their own Linux based Apache web server, can pay for monthly access from a variety of service providers who provide the LAMP solution stack. In those cases, administration is generally simplified, but will result in a lesser amount of control over the entire system. The costs for such third party hosted solutions vary enormously, and are usually based on the amount of bandwidth used monthly. Heavily used databases will result in higher costs.

Sources of Photographs

WHMC's collections are jointly held under the auspices of the State Historical Society of Missouri and the University of Missouri (ABOUT WHMC). There are WHMC branches at each of the four University of Missouri campuses in Columbia, Kansas City, Rolla, and St. Louis. The St. Louis based collections are extensive and varied, with a focus on materials relevant to the people and communities of the St. Louis area. Many of the collections have photographs included as part of wider holdings of other materials. WHMC also owns collections consisting almost solely of photographs. Through most of the last decade WHMC maintained an in-house database of photographs held in their collections. External access to the database was not possible. Records in the database described each photograph, identified the collection where it could be found, and supplied information regarding the photographer, format, and date the photograph was taken. In 2005, UMSL librarians created a web accessible version of this database. At that time the database contained descriptions of approximately 60,000 photographs.

The Associate Director in charge of WHMC also manages the single employee tasked with

maintaining the University Archives. With other materials, a large number of photographs are regularly deposited to the Archives for storage. Retrieval of these items normally requires a personal visit to the Archives. Typically, administrators would also communicate by phone or email to the archivist, who would then consult in-house finding aids to materials held in the Archives. Remote access to photographs in the collection did not exist. The number of photographs in the University Archives is also unknown.

Creating the Databases

The cost free PHP based program, phpMyAdmin, is one of the most indispensable tools for creating and maintaining MySQL databases. Using a graphical user interface, a phpMyAdmin user can easily define a database, create MySQL tables, and define specific database fields by size as well as other properties (e.g., numeric, text, date, etc.). Creating MySQL user accounts with specific access permissions, such as "search only" or "full administration" is likewise simplified. Users of phpMyAdmin can create any database with all necessary fields literally within minutes.

Following an examination of the existing database fields of WHMC's in-house database, a MySQL database was created with identical, congruent fields. The existing database was then exported as a simple comma delimited text file. Subsequently, phpMyAdmin's "import comma delimited data" feature was used to transfer the original database to the MySQL database. This initial application easily ran under LAMP, mounted on a surplus Pentium I personal computer with 1 gigabyte of memory, and a 40 gigabyte hard drive. In conjunction with phpMyAdmin, importing data from other applications is one of the simplest parts of creating a new LAMP application.

PHP coding was used to create web interfaces that transparently interface with the MySQL database. There are many commercially available books, as well as numerous online tutorials (Merrall), which directly address the process of using PHP with mySQL to create dynamic web pages. Using PHP, all photograph records retrieved from the MySQL database are presented as regular Hypertext Markup Language web pages.

PHP was also used to design an initial simple search interface allowing keyword searching from the photograph's description field in the database. Over time, more sophisticated searching, such as searching the other fields of a record, has been implemented. Users can now restrict searches to a specific collection, or search for photographs from a given time period. Once one becomes familiar with the initial simple search interface, more complex ones can, and have been, created.

PHP was used to design web forms for editing, adding, and deleting records in the database. These forms were placed within a password protected web directory so that only WHMC personnel can administer the database. Searchers only have "read only" access to the database records. WHMC staff do not need to have any special training or advanced experience in computer programming to perform database maintenance. These very simple web forms created for adding, editing, and deleting database records were implemented quickly. Over time, the database administrative modules have increased in their sophistication. Once a LAMP application is in place, incremental improvements and changes occur naturally.

The University Archives did not previously have an existing photograph database. The first step in creating their photo database was to duplicate the existing WHMC database. Only a few minor modifications were needed, e.g., associating the public and administrative web forms with a different MySQL database than the WHMC photo database. All University Archives database records have been manually entered within the last six months. In that time the database has grown to contain nearly 3,000 scanned photographs. All records added to this new database include scanned images.

The original WHMC photo database consisted only of descriptive records with no associated scanned images. That database has grown from the original 60,000 records to approximately 78,000 records today, and contains over 3,700 scanned images.

Maintenance and Work Flow

The work flow for creating records and scanning images requires an understanding of where images are stored, and how images are scanned.

The scanned images of photographs are not directly part of a database record. MySQL does have the capability of storing images as part of a field in a database. However, in the current design of these databases, the scanned images are stored on a separate web server. Each photograph is given a unique record identification number to reference in the database. The same number is used as part of the name of the scanned image. A photograph identified by the unique number 12345 will be stored in an external web accessible directory under the names 12345.jpg and 12345t.jpg. The letter "t" is used to indicate a smaller thumbnail version of the same photograph. Numbers are automatically generated sequentially and ascending. Thus, the photograph following 12345 will be photograph 12346.

Since all photographs are stored in the same place, PHP is used to generate the appropriate URL for display as an inline image in a web page. When a scanned image exists, a thumbnail image is displayed (e.g., 12345t.jpg). When the thumbnail image is clicked, the larger image is retrieved. Thumbnail images are typically less than 20 kilobytes in size, with the larger, browsable image seldom exceeding 40 kilobytes.

The basic work flow for updating the database consists of breaking up scanning and database entry into three "batch" components. First, a batch of photographs are scanned, named, and saved. Second, the scanned images are uploaded en masse to the hosting web server. Finally, descriptive database records are entered for each of the uploaded images. Scanning, naming, uploading, and creating records for each image individually is not efficient.

The currently established work flow consists of these specific steps:

- Set aside a batch of photographs to be scanned and entered into the database.
- Associate the first photograph to be scanned with the "next number" in database.
- Sequentially assign ascending numbers for all subsequent photographs.
- Scan each photograph sequentially.

- Save one medium quality version named with the appropriate number (e.g., 12345.jpg).
- Save one smaller version of the same photograph as a thumbnail (e.g., 12345t.jpg).
- After processing a batch of photographs, upload all to the directory on the storage server.
- Access the administrative module of database and add database records sequentially.

Note that high definition images are not normally scanned at all. With most flatbed scanners it takes a significantly longer amount of time to scan them. The subsequent files are usually in the TIFF format and consist of file sizes of twenty or thirty megabytes. Such high definition images can be scanned in yet another, separate, work session. Alternatively, high definition images can be scanned upon request. A database searcher can identify an image, then request the higher version. WHMC charges a fee for such processing, as well as various "rights to publish" fees, depending upon the intended use of the photograph. As available human resources permit, images are scanned in TIFF format and stored on DVD's. High definition processing fees only apply to those images not yet scanned.

Separating the location of the scanned images from the database containing their descriptive records allows the database to grow quickly. The issues regarding storage of images, some quite large, is addressed separately.

Metadata

Entering complex metadata for database records can be labor intensive. In the case of the existing WHMC database the problem of retroactively entering missing metadata is magnified. When the available human resources are limited, the difficulty in adding required metadata to individual records can significantly slow down database growth. This does not deny the importance of metadata at all. By definition, metadata of some kind must exist for the database to be functional. Questions arise when the local metadata does not reflect metadata requirements from broader administrative entities.

The author considers use of the Dublin Core metadata standard (Dublin Core Metadata Initiative) to be extremely important. The Dublin Core metadata elements are established standards that are universally recognized as useful for communication and information exchange. Specifically, the State of Missouri's Virtually Missouri databases require Dublin Core data elements in order to integrate existing databases into the Virtually Missouri project (Virtually Missouri).

This problem of metadata being a barrier to implementation of a project is addressable, albeit imperfectly. First, by using phpMyAdmin, fields in a database record can be created for the missing Dublin Core elements. Doing so at least creates the possibility of filling in the appropriate information retroactively. Dublin Core elements exist as fields in every record; it only remains to find the human resources to enter the appropriate values at some time in the future. Note that newly created records could immediately incorporate the required metadata information.

Conclusion

Not all institutions are capable of creating, and maintaining, projects such as those described here. But as the cost of such technology continues to decline, and as the level of expertise needed to create and maintain such projects continues to be less onerous, more institutions may wish to start considering similar projects.

It must be noted that no new personnel were hired to create, or maintain, the databases described herein. However, there are hidden costs associated with such projects, including the ongoing cost of using existing infrastructure (the lights are still on and someone pays the electric bill). Another hidden cost includes the time dedicated by, in this case, librarians who might otherwise be involved in different projects. A friendly administration that fosters creative projects makes things easier.

The hopeful conclusion of these activities would be to eventually obtain funding in order to increase the amount of materials and information included in the database. These photo databases exist, are useful, and continue to grow. Explicit funding would only serve to accelerate the growth of existing databases. Without such funding, these databases will nonetheless continue to exist.

Works Cited

"ABOUT WHMC." Western Historical Manuscript Collection. n.d. University of Missouri-St. Louis. 24 June 2007 <http://www.umsl.edu/~whmc/whmabout.html>.

Dublin Core Metadata Initiative. 6 Aug. 2007. 24 June 2007 <http://dublincore.org/>.

Gerner, Jason et al. Professional LAMP: Linux, Apache, MySQL, PHP Web Development. Indianapolis, IN: Wiley, 2006.

"June 2007 Web Server Survey." Netcraft. 2007. 24 June 2007 <http://news.netcraft.com/archives/2007/06/08/june_2007_web_server_survey.html>.

Langley, Nick. "From Hobby to Ubiquity: Linux Continues to Expand." Computer Weekly. 23 January 2007. Academic Search Premier. EBSCOhost. University of Missouri St. Louis Lib., St. Louis, MO. 24 June 2007.

Merrall, Graeme. "PHP/MySQL Tutorial: Overview." Webmonkey: The Web Developer's Resource. 2007. Lycos Inc. 24 June 2007 <http://www.webmonkey.com/programming/php/tutorials/tutorial4.html>.

Rosebrook, Eric and Eric Filson. Setting up LAMP: Getting Linux, Apache, MySQL, and PHP Working Together. Alameda, CA: SYBEX, 2004.

Ubuntu LAMP Server Installation with Screenshots. 15 Oct. 2006. Debian Admin. 24 June 2007 <http://www.debianadmin.com/ubuntu-lamp-server-installation-with-screenshots.html>.

Virtually Missouri: Digitization Guidelines. n.d. Virtually Missouri. 24 June 2007 <http://www.virtuallymissouri.org/guidelines/guidelines.aspx >.

Author/Title Index