

**brick & click**  
an academic library symposium



EDITOR: FRANK BAUDINO



maryville, mo  
northwest missouri state university

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# **Brick and Click Libraries**

An Academic Library Symposium

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Northwest Missouri State University

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# Redefining Relevancy in the Electronic Age: The Library as a Real Place

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## Abstract

The Cunningham Memorial Library at Indiana State University (hereafter ISU) has made the “library as place” one of its top priorities in its recently written strategic plan. The library’s motto, “your campus living room,” has resonated with students and faculty alike. Can you make your library more relevant to campus? Sure you can add more books, more electronic resources, and other wonderful points of information access, but can you convince students (and sometimes faculty) that the library is still relevant to the campus community? This session will look at how the ISU Library has made strategic changes in its facilities, services, resources, and programs to not only attract users into the library but to meet the research and recreational needs of students and faculty. Attendees will take away ideas that can be implemented in their own library without having to build a new library or hire a cadre of new librarians.

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## Introduction

A few years ago, Cunningham Memorial Library was a typical college library. They offered the usual services: reference, circulation, interlibrary loan, etc. Although the library held an extensive collection of artwork, the gray block walls, typical of 1970s architecture, were dreary. The furniture was a hodgepodge of colors and styles, none very pleasing to the eye. Although there were some “browsing” types of material, these amounted to some popular novels and selected non-fiction. While there were vending machines in the library, buying something beyond a soda and candy bar meant leaving the building. All in all, the library was not an inviting place in which to study or relax.

Changes were necessary, but what did users expect? To discover the needs of its users, in the past five years Cunningham Memorial Library has conducted two LibQual surveys, a national web based survey offered by the Association of Research Libraries (“Major Initiatives: LibQual+”) as well as focus group sessions. In these fact gathering sessions and surveys, users said they needed the Library to be the place to gather, meet friends, and study. They wanted places in the library where they could be noisy in group study gatherings and places where there was total silence for those times when intense concentration was needed. They wanted to be able to check out movies and light reading as

well as get research help. They expected a bookstore atmosphere and staff who were friendly and helpful.

What a difference a few years can make! Today the library not only looks different, it feels different. There is a hum of activity and excitement that was absent a mere five years ago. What happened? No new library building was constructed, no additional staff were hired, no new funds were allocated; instead, the library staff, making incremental changes, repurposed what they already had and paid for it with existing dollars.

## Facility Changes

Cunningham Memorial Library began by establishing a Building Committee comprised of staff and faculty from across library units; while committee members had different talents, all held an interest in enhancing the library environment. The Building Committee met regularly to discuss not only how to improve aesthetics but to do so in a way that would improve workflow. A few of the changes were huge and involved getting many stakeholders on board while others were smaller and had less employee impact. While some of the projects took several years to complete and involved the University’s Facilities Unit or outside contractors, many others were shorter term and were completed by library staff themselves.

Their initial project, and one of the largest tasks that was undertaken, was reconstructing the first floor. The first floor was comprised of the administration office, the reference desk and reference librarian offices, the circulation desk and its staff, the cataloging department, and interlibrary loan. Walking in the library's front door and looking across the floor, one saw a muddle of office space that cut in and out across the area. The only bathrooms on the first floor were for staff and were not ADA compliant. The reference desk was tucked around a corner and was difficult to locate. Behind the circulation desk were tall book ranges and tucked in among these ranges were the desks of the circulation staff. In addition, although the library had a collection of current fiction and non-fiction, the area where they were housed did not offer comfortable seating.

To make the first floor more attractive and user centered, major changes were needed. The Cataloging Department that had taken up about one-third of the first floor was moved to a lower level. Interlibrary Loan which incorporated a large area on the first floor was eventually moved to share space with the Cataloging Department. The walls that had surrounded these two units were demolished. Eventually glass walls were installed to separate the new Events Area (see Programming Changes section) from the computer cluster. The reference desk was moved into the center of the floor and, with its neon sign that features a large red question mark, is easily seen as soon as one walks into the library. The book ranges were removed from behind the circulation desk and replaced by low, attractive cubicle walls. A circulation desk, matching the new reference desk in color and style, was purchased. The browsing area was moved to the opposite end of the first floor where there was more room to add comfortable seating. First floor walls were painted; this took some convincing of campus personnel who kept saying, "But it will lose its 1970s look" and library staff kept replying, "Yes, that's our intention." Finally, after much discussion, the walls were painted. Artwork was moved around to better showcase the pieces. In addition, first floor bathrooms were reconfigured from small, dark non-ADA compliant restrooms to more attractive, ADA-compliant restrooms. (Note: Restrooms were constructed using extra funding provided by the

University, while the other projects listed here were completed using current library dollars.)

However, it takes more than just a comfortable setting to please users. They want food! The library had a large entryway and, after some negotiations, a coffee shop moved in to that area. The first two years were not very successful since the café did not serve food. An agreement was reached with Sodexo, the University's catering partner, to take over the operation. The café, with its small bistro tables and wide assortment of food and beverage offerings, is now the busiest non-student union café on campus. Tables are almost always filled with customers. It has become a gathering place for faculty to meet with their students and for friends to meet to chat.

Changes were also made on other floors. One of the most onerous projects embarked upon was to separate the journals from the regular stacks and place them on a different floor. This decision was made for several reasons but the major one was the number of print journals migrating to electronic format. As the back issues of these journals became available in an electronic format, past volumes were often weeded from the collection. This necessitated the constant shifting of stacks which was very labor intensive. With the print journals in a separate space, plans for stacks changes could be more easily handled and less shifting would be needed.

Another change was made to the teaching materials area. The teaching materials area, holding a large number of children's books, had high shelving and adult seating. The area was not only unattractive but could not easily be used by children. Although an academic library, children often come into the library with their parents who are faculty, staff, students, or community members. Facilities Management cut the shelving from 90 inches to 60 inches in height, a size designed to be more child friendly. Children's furniture was purchased for the area and bright pictures and rugs will soon be added.

Other projects are currently under discussion. For example, Special Collections has outgrown its space and needs to greatly expand. Since such a project will be quite expensive, the library has made it a priority to raise funds to achieve this goal.

## **Changes in Services**

The library not only made aesthetic improvements but also added new services. Stephen Young, reference librarian at the Catholic University of America Columbus School of Law in Washington, D.C., wrote that libraries are still often viewed as “one-dimensional warehouses of books” by administrators (18); however, he warns against “chipping away at library space” and repurposing the space to meet university needs such as for classrooms and faculty offices (18). Cunningham has been careful to add only services that have a connection with its core mission and long-range planning. Two such services that have recently been added are the Writing Center and the Commuter Lounge. The Writing Center opened a satellite operation in the Library about four years ago. The center’s mission and the library’s mission closely coalesce, so much so that when the Writing Center needed a coordinator for its library site, the library transferred one of its own staff lines. The library satellite site has been so successful that the other Writing Center location was closed this spring.

Another service added was the Commuter Lounge. Enclosed behind glass walls, this service is located on the second floor. The Commuter Lounge was opened to help commuter students who make up a large percentage of the student body. The lounge not only provides a place they can conduct research and writing but offers an opportunity for them to talk to other students who may face issues that are unique to commuter students. Like the Writing Center, the mission of the Commuter Lounge aligns itself with that of the library’s mission.

This fall the library will partner with other campus units to establish a Student Research Center. Filling the gap between what the current Reference/Instruction Department and Writing Center provide, the Research Center will be based on the first floor of the Library and will offer peer assistance for hands-on research. Although its mission has not been fully defined, its core mission of research aligns with that of the library.

## **Changes in Resources**

Just as the library has had a number of changes in facilities and services, so too have changes

occurred in its resources. While the library had long housed a wide selection of current fiction and non-fiction, its holdings in other popular types of material were limited. Popular movies, books on CD, music CDs of all genres, graphic novels, and electronic games were added to the collection. Although the library has had some complaints about “wasting its money” on such non-research fare, the movies and games have proven to be very popular items and not with just the students; faculty often check out movies also. The library believes it is important to provide such popular offerings to campus for several reasons. One, it gets students into the library and once inside they may decide to take advantage of other resources and services such as reference help. Two, many students are working their way through college and do not have discretionary funds to go to the movies so free entertainment provided by the library is a retention tool, albeit on a small scale. Three, the library needs to provide learning tools in many different ways and forms and such offerings as graphic novels and movies are an alternate but legitimate way of learning.

Another major change in resources occurred in the way resources are managed and selected. A few years ago, the Collection Development Committee took an in-depth look at the division of labor for the journal collection. Although the print selection was shrinking and the electronic selection rapidly growing, as many as six people were working with print journals while no one was truly in charge of the electronic holdings. The library repurposed an open faculty line to create an electronic resources librarian position. In addition, the library also moved a support staff line into electronic resources. Once the Collection Development Committee began to have a true understanding of what was held electronically (and with 50,000 electronic journals and databases this was no easy feat), they realized that some high cost titles were not being used and that some disciplines had an overabundance of title choices while others had few offerings. At about the same time, the library’s material budget was decreased significantly. The committee knew major changes were indicated and that faculty input would be essential to making wise decisions. The committee alerted college faculty that the library had to eliminate some subscriptions. The library pledged to list all proposed changes on a website

and allow faculty a semester in which to respond to the proposals. Working with faculty, journal and database costs were greatly reduced. In addition, in the past three years the library has shifted journal holdings from print to electronic wherever feasible.

This past year the materials budget was reduced yet again and the library had to make some very difficult decisions. This time it was more than just cutting high priced underutilized titles, it meant eliminating some titles that were more heavily used. In addition, the library still had not addressed the issue of the funding disparity among colleges. With that in mind, in fall 2010 the Library established the Collection Development Task Force. The task force consisted of the Library's Collection Development Committee and one representative from each of the colleges with two representatives from the largest college, the College of Arts and Sciences. The charge of the task force was to create an allocation formula that would equitably divide the materials budget across the colleges. Although the colleges had previously held responsibility for monograph and media purchase choices, spending of journal and database funds had remained at the discretion of the Library. Under the new allocation formula, the colleges, working with library liaisons, would choose not only their monographs and media orders but would select their journals and databases. Moreover, they would also choose how their library budget would be divided among monographs, media, and journals and databases. For example, one college might spend 90% on journals and databases and 10% on monographs and media while another college might have a 50/50 split. By encouraging faculty to have a voice in how funds are distributed, the library anticipates that, although the budget and thus the holdings will be smaller, the collection will better meet the research and teaching needs of the campus.

### **Programming Changes**

Another important role the library has recently assumed is serving as a destination for programs and events. When the library first started offering a variety of programs, the Dean would assemble a library committee to "dream up" event ideas. The library would then host the event and invite campus to participate. The library tried a number

of ideas from movie nights to jazz evenings to reading clubs. Some programs were more successful than others. At first the events were held in a somewhat open area on the first floor; however, each time there was an event, furniture had to be rearranged which disrupted library users. Once the Events Area was created (as outlined above, block walls were demolished, library staff was moved to another floor, and glass walls were installed), it became easier to host events. Knowing that the library planned to continue hosting events, a position was repurposed to that of program coordinator. With one person in charge of all events (from ordering food to resetting the Events Area, to overseeing public relations) and the availability of a large easily-adaptable room, college departments, student groups, and community organizations have asked the library to host their events. Last year the library held 122 programs with 14,000 people attending.

The library still holds a few events of its own. Three events in particular stand out. One event is a luncheon for library staff and faculty who have retired. This lunch event, now entering its third year, is very popular with retirees. It is a good way to say "thanks" to former employees, many of whom have invested years of service to the Library. A second event is the Authors and Artists Reception which has been held for 26 years. Faculty, staff, and students who have published or edited a book or performed or created a major artistic offering in the previous year are honored at a reception. This event is highly anticipated and well attended. The third event, Extravaganza, is the largest Library event by far. Extravaganza, which started off as a small welcome back to campus, has grown into a large fall event that brings about 5,000 people into the library. Attendees learn about library resources, are eligible for prizes, receive free handouts, and can consume free pizza, popcorn, and soda. Local businesses help sponsor the event.

By offering a variety of events and programs, the library draws attention to the services and resources it offers. It also brings in people who might not otherwise use the library. In addition, it provides cultural experiences and teaching and learning opportunities. Lastly, it provides a bridge between town and gown through its community engagement outreach.

## Conclusion

Libraries and their roles are changing, but their relevancy can remain high if libraries meet their users' needs. For Cunningham Memorial Library this meant finding out what those needs were through surveys and focus groups; however, assessment of current services and resources must be a continuous process. The library plans to employ the same survey tool (i.e., LibQual) every two to three years to make certain that, as users' needs change, they continue to develop to meet those needs. The way the library's facilities, services, resources, and programming are utilized will no doubt continue to evolve. The lesson that Cunningham Memorial Library learned is that, with planning, reorganization, and using existing funds in new and ingenious ways, a library can remain relevant for its users. In the 2010 OCLC (Online Computer Library Center, a research organization) report, OCLC reported that

students wanted the library to be updated and modern, or as they phrased it, they wanted the library to "be cooler" (Perceptions). Serving as the campus living room, Cunningham Memorial Library believes that it has indeed become a "cooler" place for its faculty, staff, students, and community users.

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## E-science and Libraries (for Non Science Librarians)

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### Abstract

As librarians, it is important to be aware of the nature of changes in the world of research. This presentation is specifically geared towards librarians without a background in science. It will include a brief overview of e-science as well as why this emerging area is important for libraries. The paper discusses current trends and possible future trends in roles for libraries. Many issues identified have a direct relationship to the Humanities and Social Sciences.

Information Technology is rapidly changing the world of scientific research. We have entered a new era of science. Some call it e-science (Taylor) while others call it the 4th paradigm of science (Hey, Tansley, and Tolle). Scientists, with the aid of technology, are continually amassing larger and more complex datasets. These data are accumulated at an ever-accelerating rate. How will this information be organized? What, if any of it, should be preserved for future use? How will it be preserved? If it is preserved, how will it be made publically accessible? The NSF and others describe solving problems such as these as some of the major challenges of this scientific generation. They also state that tackling these problems will take expertise from many fields, including library and information science (“Sustainable Digital Data”).

A recent movement of this new era of science is an increasing requirement for scientists to archive and make their research data public. For example, the National Science Foundation (as of January 18, 2011) is requiring scientists to articulate how they will accomplish these goals within data management plans that must be submitted with each grant proposal (“Grant Proposal Guide”).

What role can libraries play in this new realm of science? What role are libraries already playing? Several libraries have taken the lead in initiating efforts in assisting scientists with a variety of data management needs (“Transforming Research Libraries”). This presentation will include a brief overview of the current trends as well as possible future directions in librarianship that this new era of science may lead.

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### Introduction

It is important for librarians of any discipline or area of specialization to stay abreast of changes in the world of scientific research, as these changes inevitably will affect libraries and the services that libraries provide. Information Technology is rapidly changing the way in which scientific research is being done. Technology has not only allowed scientists to collect larger and more complex datasets, but it has opened the possibility for scientists to share data very quickly across a global scale. Science and technology have become intertwined giving rise to what has been called e-science.

The Association of Research Libraries (“Transforming Research Libraries”) has adopted the following definition of e-science from the UK

National e-science Centre (Taylor), “...the large scale science that will increasingly be carried out through distributed global collaborations enabled by the Internet...”. Some have argued that these changes in the world of science are so significant that we have entered a new era of science. Jim Gray (xviii) calls the new era the Fourth Paradigm of science, the Fourth Paradigm being the fourth major phase of how science has been conducted throughout history.

One excellent example of e-science in action can be found in the field of astronomy. Digital images from the night sky are now available online to scientists as well as the public (SDSS.org). With the help of these public data, some professional and amateur astronomers are observing outer space, not by looking out of their own telescopes, but by looking at images created

and recorded electronically. With the Internet making these images accessible to a worldwide audience, the number of eyes examining the night sky via these high-powered images has increased enormously. This, in turn, has vastly increased the possibility of new discoveries, and new discoveries have indeed occurred. For example, *ScienceNews* reported that amateur and professional astronomers working together have discovered a new type of galaxy (“Astronomer Unveils the Mysteries of ‘Green Pea’ Galaxies”). In this case, science and technology have truly intertwined and as a result, opened new possibilities for scientific discovery.

### **New Trends for Preserving/Sharing Science Data**

Traditionally, most of the scientific information available for research purposes, as well as that which was saved for perpetuity, was found in the form of published research findings. This came mainly through research articles in scientific publications, which were (and still are) available to anyone with access to expensive subscriptions of peer reviewed scientific publications. However, the traditional primary output of science found in peer reviewed scientific journal articles represents only a small portion of the scientific information that is produced through the process of scientific research.

In the various subfields of science there have been tremendous amounts of data that have never been seen by anyone other than the researcher that conducted the experiment. When the researcher retired or passed away, most, or all of their data was lost forever. For example, even a single experiment that might have been conducted over a period of several months might have a vast array of data files associated with it. These data were likely summarized into a graph, table, or a few sentences in a scientific publication. Therefore, the scientific community, and certainly the public, never had a chance to see the corresponding scientific data in its raw form.

Recently, however, there has been an overall trend in the scientific community toward making data more open. Just within this past year, there have been increasing requirements for scientists to archive and make their research data public. For example, as of January 18, 2011, the National Science Foundation (NSF) has required

scientists to articulate how they will accomplish these goals within data management plans that must be submitted with each grant proposal (Grant Proposal Guide).

Another example of the trend of data becoming more open is the *Dryad* repository. *Dryad* (Dryad.com) is an international repository composed of a group of 84 journals in biology, which include many core journals in the fields of molecular, evolutionary, and conservation biology. As of January 2011, authors submitting papers to journals belonging to *Dryad* have been required to also submit the data on which the research is based. The submitted data resides in a public online archive and can be accessed and viewed alongside the research publications. In the half of a year since the onset of the *Dryad* repository, 1,908 data files have been added (Dryad.com).

### **Advantages of Preserving/Sharing Data**

But why bother with preserving and sharing data? The answer lies in the many advantages and opportunities that archived and open data bring. One advantage is that the more eyes that are scanning data, looking for trends, and connections, it increases the possibilities of new discoveries and new understandings. The sharing of data also opens a wide range of possibilities of combining data sets from multiple studies and multiple scientific disciplines in order to investigate large scale questions.

The NSF (“Sustainable Digital Data”) points out that data collected in an experiment can often be used to generate new scientific questions. One example that helps to demonstrate how data collected for one purpose can sometimes be used in new ways comes from a famous American author and naturalist. When Henry David Thoreau lived on Walden Pond, he took careful notes of his observations of the natural world that surrounded him. Among other things, Thoreau made notations of the timing of wildflowers as they bloomed in the spring. A group of scientists at Harvard University and Boston University (Willis et al. 17029) have recently used Thoreau’s data and linked it with present day observations in order to investigate the effect of global warming on plant species in the Walden Pond area. The research paper reporting these results appeared in the prestigious science journal, *Proceedings of the National Academy of Sciences*



*of the United States of America.* This research study has resulted in more than an important scientific discovery; it also has served to demonstrate the great value of historical data. It is doubtful that Thoreau could have anticipated how his notes would be used in new ways. Researchers today similarly could be collecting data for a particular purpose, only to have their data be of value for a completely unforeseen purpose in the future.

Another advantage of preserving data and making it accessible comes from the nature of science itself. In the field of science it is important that experiments can be replicated and that discoveries can be verified. Both replication and validation can be more easily done if one has the data from the original experiment. A researcher wishing to replicate an experiment will likely have a greater understanding of how the original work was conducted if they have the data of the original experiment on hand, since having the opportunity to examine the data opens avenues for a greater understanding of the subtleties of the original research. Also, having widespread access to data more easily enables consensus and fact checking throughout the greater scientific community.

### **Challenges and Possible Roles for Libraries**

With the aid of technology, scientists are continually amassing larger and more complex datasets. Since data are accumulating at an ever-accelerating rate, the scientific community, in general, is experiencing an overabundance of information. A single research group, for example, could very quickly find themselves inundated with an overwhelming and constantly growing pool of data. This ever-expanding accumulation of information creates several concerns. For example, how is one to go about organizing, securely storing, and backing up all of this data? Additionally, will the researcher be able to easily retrieve the data a week, a month, or even years from now?

In this age of e-science, questions that will need to be answered include: What data should be preserved for future use? How will it be preserved? If it is preserved, how will it be made publically accessible? And if it could be shared and made publically available for the future, would others be able to make sense of the data? This brings up the important point that any data

that are going to be preserved need to be sufficiently annotated with descriptive information (metadata, data dictionaries, and other supporting documentation) such that scientists unfamiliar with the particular study can correctly interpret the various categories and codes within the data.

The NSF and others describe the solving of these big picture problems as some of “the major challenges of this scientific generation” (“Sustainable Digital Data Preservation”). They also state that tackling these problems will take expertise from many fields. One of the fields that they mention specifically is library and information science.

Tracy Gabridge (15-6) frames the curation of scientific data within research libraries as “the last mile” of the librarian liaison role. Gabridge points out (15-6) that a major challenge for research libraries is creating the place or infrastructure within the library system to house the data. Another challenge depends on the success of liaison librarians as they work with research faculty with these new data services. Indeed, it will not be an easy task for the library to be seen as “the place” for faculty to turn to for data management needs.

Despite the challenges of forging new ground, libraries have taken the lead in the e-science arena. One example of this is reflected in the creation of new positions, with titles such as “data librarian” or “e-science librarian” that have been created in some libraries. These relatively new positions center on data management and data preservation responsibilities.

As mentioned earlier, the NSF is now requiring scientists to include data management plans as part of their grant proposals. Librarians at some institutions have become involved assisting researchers with the creation of these documents. For example, librarians at University of Virginia (Scientific Data Consulting) are providing data management plan templates that lead researchers through questions or prompts for categories that the NSF requires as part of the data management plan.

Many academic libraries have created pathfinders or subject guides for data. The content on the guides varies but in general include information and assistance in organizing data, backing up

data, storing data, creating metadata, and citing data sets.

One of the barriers with this new area of librarianship is, because it is so new, few librarians are trained in this area. However, some library and information science programs are starting to make strides in this capacity. For example, the Graduate School of Library and Information Science at University of Illinois offers a degree in data curation (Master of Science: Specialization in Data Curation) which in turn will help to pave the way for a new breed of librarianship.

### Conclusion

Academic libraries have seen vast changes over the last several decades. And the one certainty of academic libraries of the future seems to be that changes will always be on the horizon. Despite this climate of uncertainty, one promising future role for academic libraries is the curation of the unique research products of each institution's research faculty, especially those products that lie beyond the official research publications. In the sciences this can include the vast array of data produced throughout the process of scientific research.

Data preservation and the openness of data is a new area for scientists. In fact this represents a major change in the way that science has operated in the past. Data preservation is a new area for libraries as well. However, libraries playing a role in the organization and preservation of information are not new. Working out the details of how this will be accomplished with scientific data collections will undoubtedly take active communication and cooperation between scientists and librarians. This new realm of e-science has opened new avenues for libraries and it is up to librarians to welcome the changes and play a vital role in assisting our research faculty in this arena.

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# The Ins and Outs of a Multicultural Library Orientation Session

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## Abstract

When presenting information during a library instruction session, do you notice some international students appear to be lost? While working at the reference desk, do you notice international students do not seem to understand the instructions given? This presentation is about understanding the language and cultural barriers that may be present in these types of interactions.

The author discusses issues which may occur when delivering library instruction to international students and/or working with them at the reference desk (both physically and virtually). These students come from a variety of different backgrounds and may not understand an American style of presentation, the vocabulary of such a presentation and/or the examples used in the presentation. The paper presents some ideas on how to handle these types of issues in regards to the library instruction session and working the reference desk (both physically and virtually). The author discusses ways to explain library terminology to international students. Finally, the paper covers ways for collaborating with various on-campus international student organizations, clubs, etc. There are numerous international student organizations, clubs, etc. that you may not even be aware of because they do not contact the library or they seek help somewhere else. The reader will gain insight into how to find these international student organizations, market services to these groups and ways to adapt library services within reasonable accommodations.

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## Introduction

Libraries today are faced with ever-changing demographics. International students have become such a phenomenon that we have come to expect it (Jacobson 628). Libraries need to provide services, resources and instruction to these international students. Providing the need for the students can be a rewarding, yet a challenging experience, especially for international students with a different culture and language all librarians may not have experienced. Librarians are mandated to provide services, resources and instruction regardless of nationality and other protected statuses. The reward of offering services, resources and instruction to international students is the satisfaction of assisting them with their information needs, as well as learning how to relate and treat all individuals equally. The challenge comes in how cross-cultural communication is handled by the librarian and the international student. Cross-cultural communication involves “communication between members of different cultural groups, who may bring different language practices or ways of speaking, and

different expectations and cultural understandings to an interaction” (Intercultural Communication). Cross-cultural communication is the biggest challenge faced when serving international students. “Culture can be a veil that prevents us from understanding students from other backgrounds and cultures, and it also can prevent them from understanding us. Unfamiliarity with cultural communication differences can lead to misinterpretations, misunderstanding, and even unintentional insult” (Osa, Nyana and Ogbaa 23). This challenge can be met with work and diligence on the part of the library and the librarian. Carder, Pracht and Willingham (68-69) indicate eight things librarians need to keep in mind regarding international students:

- 1) These students have traveled great distances and left family and friends to study at your school.
- 2) All will suffer culture shock at various times while in your institution.
- 3) Many of these students would much rather ask friends for information than a librarian.

- 4) Many of your students will have varying attitudes towards the status of librarians as well as towards female librarians.
- 5) The idea of doing library research may be new and developing good library skills may seem irrelevant to them.
- 6) Most of these students would benefit from hands-on practice in your BI programs.
- 7) Librarians need to assess audiences immediately.
- 8) English skills can be easily taught in library activities. Dunbar (5-6) further provides observations regarding international students:

- Language barrier makes it difficult to keep up with lectures or group activities.
- They hesitate to ask questions or take part in discussions for fear they may appear unintelligent.
- They have problems locating resources and services in the library, chiefly because they are not always aware that those resources and services are available. They also may not be familiar with the layout of the library.
- They sometimes have problems with terminology. They do not know what to ask for because they do not know what the object, concept, service or resource is called.
- The U. S. system is unfamiliar. Many students admit they have done little or no library research, or have used no resource other than their textbooks and class notes and lectures.
- They are responsive to instruction-in social and communication skills which will improve their interaction with library staff.
- They want to learn about the library early in the term, sometimes before they know they have a library assignment.
- They will return for assistance when they have specific assignments.
- Usually one thorough walk through the library will familiarize them with its layout.
- Many international students want to take notes while on tour or during consultation.
- They are very responsive to lectures, seminars or workshops sponsored by the Office of International Student Affairs.
- More international students return to say “thank you” than any other group of students.

This author discusses library instruction issues with international students, including working

with them at the reference desk. The article provides insights in assisting international students in understanding library terminology and concludes with learning how to collaborate across the campus in serving this diverse group of students.

### **Library Instruction Issues with International Students**

International students enroll in American universities and colleges with pre-conceived ideas which are polar opposites of reality. Library instruction is a great place to start in combating the pre-conceived notions and barriers faced with cross-cultural communication. Library instruction can take place in a formal setting, a classroom, or in an informal setting, such as the reference desk. It is vital this interaction be pleasant to both parties and each individual leaves with mutual respect and understanding. However, what often happens is that the librarian sees an international student(s) and starts to fret about communication problems. The international student is not used to asking for assistance (Helms 297) and they are also anxious about possible communication issues. This begins the interaction on an uneasy foundation and usually ends with both parties frustrated because communication was not done properly and the information needed may not have been addressed satisfactorily. Sometimes just “being aware of speech patterns of our international students, listening to their words rather than intonation, being tactful in what we ask of and say to them, understanding the real and sometimes exaggerated backgrounds of some foreign nationals, and taking classes in foreign language and culture will go a long way in helping us deal better with international students” (Sarkodie-Mensah 216). Librarians need to understand body language and gestures may mean different things in different cultures so this too can impede effective communication. For example, when Americans provide directions, we usually point with one finger which way the individual needs to go, but in many countries, this is offensive. There are other body language gestures we do in America that people in other countries find offensive or it means something totally different. Librarians need to be keenly aware of these gestures when presenting library instruction sessions. Learning about all these things is quite a task and there is no one way to learn them. Communicating with international

students can be learned through reading about different cultures and interacting with individuals from these cultures. Librarians must also “become adept at cultural appraisal and cultural empathy” (Kflu and Loomba 527). This sounds like a lot for librarians to comprehend and deal with, but it can be done through self-awareness. “Self-awareness is vital in order to be more fully aware of what we bring to our intercultural interactions” (Downing 48). Librarians and library staff both share the responsibility of understanding international students. (Hill 91; Hoffman and Popa 359; Kaikai and Kaikai 95). In other words, any employee who comes into contact with an international student needs to understand cross-cultural communication.

“To understand international students better, one must note that most international students are accustomed to lecture, recitation, rote memory, and recall, while American students are accustomed to analyzing, synthesizing, critiquing, and expanding” (Macdonald and Sarkodie-Mensah 426). It is also to be understood, “in general, Asians do not understand that reference librarians are there to help them, and that they should ask for assistance” (Lewis 268). Sometimes libraries have ignored international students due to fear and frustrations. Ignoring this growing group of students only compounds the issue and prevents the fulfillment of the libraries’ vision and mission statements. International students are reluctant to ask for assistance and therefore turn to their peers (Jacobson 629). Librarians have observed international students use the library mainly as a place to study. These students understand this usage from their own countries and campus international units encourage this type of usage. This is not a bad use of the library, but international students need to understand it is not the only use.

Sometimes a librarian can learn about cross-cultural communication but will continue to experience problems in reference interactions with international students. “When it becomes evident that no amount of repetition will clarify the request, asking students to jot down their questions or phrases in log books, avoids having them feel conscious about their pronunciation or accents, and makes it seem more like recordkeeping” (Souza 46). Writing for the purpose of recordkeeping will limit the amount of frustration for the international student and the

library individual trying to assist them. The recordkeeping also allows the department to use it as a learning tool for future interactions with international students.

Librarians can easily work with international students by understanding simple ideas and issues as well as understanding the different concepts these students have of library services, resources, facilities, personnel, etc. American libraries have open stacks and professional librarians while many foreign libraries are closed stacks to protect the material, or the material is outdated as well as having no trained individual to provide library services. University libraries usually use the Library of Congress classification system and foreign libraries use a different classification system. Research and writing is conducted in American universities according to a prescribed style: APA, MLA, Chicago, etc. For international students, these research and writing styles create additional learning that American students may not need. Students in other countries are encouraged to do patchwriting. Patchwriting is cutting-and-pasting a document as a practice of subject mastery and it should not be considered cheating, but is considered flattery towards the author (Chen and Ullen 210). American universities consider this to be plagiarism. So, international students need to be taught the proper way to write a research paper, document sources and avoid plagiarism in the research process.

“To achieve academic success, these [international] students must use our sophisticated library systems, often as soon as they arrive from their native countries” (Greenfield, Johnston and Williams 227). The library systems create library anxiety for international students who do not want to appear unintelligent or do not know they can ask for assistance. Library anxiety affects international students because they have no idea on how to use the American library for research assignments and projects. “Some international students face an additional hurdle in their attempts to conduct research: they come from societies with a strong oral tradition and which even today may have limited literacy” (Kaikai and KaiKai 94). These issues all lead to cultural misunderstandings. Cultural misunderstandings create problems and frustrations for international students and librarians.

On the other hand, international students do have the desire and capability to learn how to use the library correctly. Librarians need to do what we do best: teach students how to use library resources, services, facilities, etc., in library instruction sessions and during the reference interview. "Emphasizing the importance of cultural awareness is extremely relevant to the planning and development of library services in today's society" (Hill 87). However, "a single instructional program on effective use of the library is not adequate for all students" (Perason and Frandsen 33). Faculty members, in recent years, do encourage effective library instruction programs for international students (Lin 168). Librarians should use this encouragement from faculty to develop sessions for international students.

Greenfield, Johnston and Williams (230) suggest some ways to improve communication in library instruction:

- Avoid using complex sentence structure and vocabulary.
- Define and repeat important words or concepts. Use synonyms for difficult words to help explain their meanings.
- Avoid using library jargon unless absolutely necessary.
- Avoid using slang, allusion, metaphor, jokes, and unfamiliar references.
- Check often for comprehension. The presenter should maintain eye contact and question students directly about points which have been covered.
- Use visual aids such as posters [today it might be PowerPoint slides] and handouts to make the presentation more effective. Students in general will often learn more quickly with exposure to visual aids. This is especially true of foreign students, many of whom come from cultures where learning takes place through observation and emulation.

Librarians should incorporate the above suggestions in every session with international students, as well as, not allowing our ethnocentrism to creep into our library instruction sessions. "Ethnocentrism is a belief that one's own culture is central, and therefore superior, to others. Teaching foreign students from an ethnocentric standpoint alienates them. Naturally,

stereotyping any patron in the process of working with him or her prevents the attentive and open communication necessary to solve their library use problems" (Boers 94). Ethnocentrism will further damage the interaction, as well as create even more frustration between the librarian and the international student. We can overcome ethnocentrism by learning about libraries from different countries. "Libraries in developing nations are often relatively small and contain many outdated books. Users may even be charged a fee to borrow from their own college libraries. Often librarians are not considered professionals and the library administrator is frequently a male faculty member with little or no training in the profession" (Liestman 365). Libraries are different throughout the world. "Most of the libraries in private academic institutions in the Middle East are relatively new and have similarly small in-house collections that provide access to targeted subject areas; online collections make up for the sparse collection" (Leshner and Abdel-Motey 441). In Latin America, "certainly, the development of university libraries in the region is directly related to the prevailing conditions in each country, which, of course, have influences on the funding these libraries can hope to have allocated to develop their collections and hire personnel" (Martinez-Arellano 385). "Although very diverse, higher education and research libraries in Europe are, mainly because of the increasing importance of electronic resources, undergoing noticeable change...Libraries are now considered more and more essential to efficient scientific policies in Europe, being sometimes at the heart of national strategies that have been established in last years in the fields of access, dissemination and preservation of scientific data and production" (Blin 342). "African university library collections and facilities' are described as woefully inadequate and deteriorating" (Raju and Raju 64). In Asia, "it is clear that political, economic, religious, and educational factors have an impact on the growth and development of academic libraries and their services in different countries" (Kaur 175). If students are from these areas, then we need to ensure instruction teaches them to understand American libraries as well as address the differences between their home library and the American university library. "Many instructors [and librarians] mistakenly think that if they simply sprinkle some multicultural

examples throughout their classes, then they have multiculturalized their classes” (Downing 57). This fake multicultural attempt demonstrates to the international students our own lack of understanding, or unwillingness to learn about multiculturalism.

What is included in an international student library instruction session depends on the focus of your particular session at your campus. Some ideas are, but not limited to:

- Finding books, articles, etc.
- Copyright
- Plagiarism
- Research process
- Documentation format and style
- Evaluation of Web resources
- Library orientation
- Scholarly vs. popular journals
- Boolean operators
- Subject headings vs. keywords

Teaching international students in library instruction sessions and working with them at the reference desk can be frustrating. But, with understanding about cross-cultural communication and a willingness to learn about libraries from the international student(s) home country, it can be done. Librarians are trained in assisting individual; now we need to adapt our ways to assist international students.

### **Library Terminology for International Students**

Terminology is a part of every profession and libraries are no different. Library terminology is confusing to everyone. Librarians use it without considering American students don't understand it. Librarians should use a library instruction session and a reference encounter to explain library terminology. Librarians should “introduce the vocabulary in context by emphasizing the word, pronouncing it several times to insure the correct pronunciation and introducing it in a complete sentence” (Chattoo 355-356). This methodology has proven to be successful when learning new vocabulary.

It may be a daunting task to explain how to use the library and defining terminology in a single library instruction session. “Providing overseas [international] students with a glossary of common terms can go a long way to overcoming

any language difficulties or problems with library jargon” (Robertson 47). The glossary should include a standard definition and spelling, alongside the foreign language translation. There are universities that have a glossary on their website for international students. Troy University in Troy, Alabama, has such a glossary (“Troy University International Student Library/Writing Glossary”). “International students require a good deal of instruction in background information that will help them understand key concepts and terminology necessary for library research” (Dunbar 7). The glossary is a good tool to use as a joint collaboration with other campus departments. Librarians can get the definitions of the library terminology and campus international student organizations/departments can assist with translations. This collaboration helps the library to get “buy in” from other campus departments in order to reach more international students.

The library can provide handouts, pathfinders, and libguides as methods for learning about library terminology, technology, resources and available services. These library tools can be developed with international students in mind and written especially for their needs. Handouts are useful because they allow the individual to refer to them in the future (Liestman 372). Handouts are not the only tool international students can refer to for future assistance; virtual library tours should also be made available in various languages (Chen and Ullen 209).

Library instruction is beneficial to international student, but only if they understand the concepts and terminology presented. If there is no understanding, then the library instruction session was useless and a waste of time. Library tool, such as handouts, pathfinders, libguides, and virtual tours can be used to enhance and further the library instruction session when presented in an understandable manner.

### **Campus Collaboration When Working with International Students**

Campus collaboration is imperative when working with international students. Collaboration will ensure the campus is meeting all the needs of these constituents. “There has to be interaction between the international student office and the libraries as they prepare for these library skills workshops. The librarians may

choose to take a proactive role in initiating interaction and ongoing communication between the international student office and the library” (Kumar and Suresh 331). The form that collaboration takes varies depending on the campus and on the social makeup and collegiality. This section will list several examples found on campuses across the country. The amount of collaboration is not as important as the quality of collaboration efforts on campuses. A liaison to international students should be assigned just as it is to other departments (Kumar and Suresh 333). This will allow the international student to have one individual they know who can help them, just like the academic department has one individual to assist them with library resources and services.

Here are some ideas of campus collaboration:

- International Student Coffee House
- Get involved in international student organizations
- International student committees and associations
- Work with ESL department
- International festivals and holidays
- Do an international translation of short stories and poetry presentation
- Multiculturalism Week
- International Book Club
- International Coffee Tasting
- ESL Clubs
- Cultural Awareness Day
- Fulbright Scholar, if one is on campus
- International Faculty expertise to assist with ideas about various cultures
- Displays of international events, holidays, customs and costumes in library
- International classics as part of the regular library collection
- Activities associated with International Education Week

Some organizations and associations to learn more about working with international students:

- Institute of International Education’s Open Doors Report
- ACRL International Student Interest Group
- NAFSA – Association of international Education
- Institute of International Education

- International Relations Roundtable (IRRT) of the American Library Association

Here are some listservs for gaining insight on working with international students:

- ALA-World
- International Federation of Library Associations mailing list

These are a few ways of campus collaboration found when browsing the Internet. There are numerous ways to collaborate with others on the campus not mentioned. It does not matter how you collaborate, just that you do collaborate for the benefit of the international students and the campus units involved.

### **Conclusion**

When working with international students in the library, whether in an instructional session or at the reference desk, it can be challenging. However, a willingness to learn and adapt to new ways of communicating with international students can assist in overcoming this challenge. Not only is it important to have library instruction sessions for international students, it is vital to provide handouts, glossaries and other library tools, translated in an understandable manner for international students. Instructional sessions and efforts of working with international students in the library can be enhanced by participating in collaborative efforts across the campus.

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## **Student Assistants 2.0: Utilizing Your Student Assistant's Capabilities**

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### **Abstract**

Are your library student assistants underutilized? Have you ever wondered if there were other jobs you could assign to them? Are there tasks that students can accomplish that you never considered before? Student assistants work in all types of academic libraries, and engage in a wide variety of tasks while on the job. This paper presents the results of an extensive survey of responsibility level tasks assigned to student workers. We review relevant literature and discuss the results of our survey sent to all types of academic institutions, including junior colleges, 4 year colleges, and universities, regarding the duties student assistants are asked to accomplish. The survey is broad in scope, including circulation, acquisitions, cataloging, reference and interlibrary loan, and asks the respondents to rank the responsibility level of the tasks assigned. The authors expect through this project to discover new tasks and ideas for utilizing a student assistant workforce, regardless of institutional size.

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### **Introduction**

Student assistants have worked in academic libraries in the past and assuredly will continue to work in them for the foreseeable future. The larger question in a time of shrinking budgets and changing technology is what kind and quality of work they will be doing. The overriding theme in the history of student assistants in academic libraries centers on the benefits gained by students and libraries when both training and responsibility are given to students with the expectation that they will provide quality service to patrons.

### **Review of Literature**

Searches of Library, Information Science & Technology Abstracts (LISTA) (1965-present) and Library Literature & Information Science Full Text (1984-present) yielded numerous relevant results. There is literature available on the topic of students and their evolving role as student assistants in libraries, along with their employment within various departments in libraries.

In her article "Student Assistants in Academic Libraries: From Reluctance to Reliance," White traces the history of library student assistants back to the 1800's (93-97). The role of student assistants in academic libraries has increased from limited menial tasks to include staffing services desks and more. She discusses the emergence of three major philosophical trends regarding student employment (94). These trends run the gamut from the basic student assistant as "expediter of library processes and procedures" to the extreme where the student assistant is utilized as a pseudo-librarian (93).

Gregory's article, "The Evolving Role of Student Employees in Academic Libraries," also provides an extensive overview of the student assistant and their role in libraries throughout history. Going back to the early 1900's, this study indicated that over the years, tasks of increasing complexity have been assigned to student workers (3-27). As early as the 1920's, librarians saw the intrinsic value of students as assistants: they had intimate knowledge of instructors assignments, made the library "popular" and "cordial" to fellow members of the student body,

with student assistants serving as connections between the library and the student body as a whole (6). In this detailed history, Gregory's emerging theme is benefits can be gained for both the academic library and the student assistant (19). Student assistants are visible to their peers, bringing a face to the library that other students can relate to, a marketing and service benefit for the library (20). Conversely, libraries provide students with training in a professional work environment as they obtain their education (3-27).

Tolppanen and Derr conducted a comprehensive survey of student assistants in Access Services departments in academic libraries (313-323). Their online survey identified nineteen core tasks for Access Services student assistants, and ninety-three percent of those who responded indicated their students' job performance was good or excellent. This survey also collected information on wages paid to student assistants, and those who responded that their student workers were "excellent" were also more likely to be those who paid their students more than minimum wage (315-316).

### **Survey Methodology**

A web-based survey was created based on a review of library literature and by adapting questions asked by Tolppanen and Derr (313-327) in their survey of student assistants in Access Services. The first portion of the survey collected demographic information from respondents in terms of geographic location, institutional type, and size. This portion of the survey also gathered information regarding the total number of student assistants employed in an average semester, a rating of overall job performance, and whether students are worth the investment.

The remaining sets of questions were divided into five categories of tasks: General, Circulation, Interlibrary Loan, Reference, and Technical Services/Acquisitions. Prior to responding in each section, respondents were directed to indicate their comfort level with answering questions regarding the supervision of student assistants in a specific library department. If they answered no for any department, the survey moved them on to ask about their comfort level with the next department, and so on. In each grouping of questions, respondents were asked to indicate if their students engaged in certain tasks, and if so,

what level of responsibility they assigned to each task: low, medium, high, or N/A (not applicable). Low responsibility tasks were defined as needing little to no training, medium responsibility tasks were defined as needing an average amount of training, and high responsibility tasks were defined as assignments critical to the operation of the institution which require extensive training and experience. Additionally, respondents could choose N/A for tasks not assigned to students within their institution. Respondents were also given a blank text box to write in additional tasks not included in the survey list .

This web-based survey was tested by nine librarians to obtain feedback on the clarity of questions and to determine the functionality of the survey. Some modifications to the wording of the survey were made after the test.

A link to the survey was sent out via email to six different listservs in May of 2011, in order to gather responses from a wide range of library departments. The survey link was sent to the listservs ACQNET-L, CIRCPLUS, AUTOCAT and ILL-L. Each of these listservs reaches library staff in acquisitions, circulation, cataloging, and interlibrary loan, respectively. It was also sent to two ALA-affiliated listservs, collib-l@ala.org, and cjc-l@ala.org, which serve College libraries and Community and Two-Year Colleges, in an attempt to reach those populations.

### **Results**

There were a total of 534 respondents who participated in the survey, although not all respondents answered every question. Twenty-four percent of those who responded were from 2-year colleges, 33% were from 4-year colleges, and 43% were from Universities. Sixty-three percent of those who responded were at institutions with 5,000 FTE or less, 20% were at institutions with 5,001 to 10,000 FTE's, 6% at institutions with 10,001 to 15,000 FTE's, 5% at institutions with 15,001 to 20,000 FTE's, and 6% at institutions with 20,001 or more FTE's.

In regard to the other introductory questions on the survey, an overwhelming 95% of respondents indicated that some of their students are worth the investment in terms of training and supervision for the returns provided. Additionally, 63% indicated overall job performance of their students was good, and 25% indicated it was

excellent. Twelve percent indicated the students' overall job performance was fair.

Respondents were also provided space to add additional comments on the quality of student job performance. Forty-eight percent provided comments, which were helpful and mostly positive. Twenty percent of those respondents' comments can be summarized as follows: student assistants' performance on the job is directly related to the quality and amount of training they receive. Respondents provided tips for trying to obtain better quality student assistants, such as hiring students as freshman because their job performance increases over time with training. Also, they indicated that giving them responsibility and ownership of projects helps develop good student assistants. For some students, this is their first job; behavior has to be modeled and expectations made clear, including treating the position as a "real" job. Other feedback includes having a stringent interview

process, testing filing and call number reading abilities, and being willing to "weed" out the students who underperform after their first semester/year on the job.

The main part of the survey included five sections of questions regarding tasks students completed as part of their job in the library. Of the respondents that answered questions in each section, some questions were skipped. However, in each section, only small percentage (maximum of 2.2%) did not answer every question.

In the section of General questions on student tasks, less than 40% of those responding indicated they had students engaged in high responsibility tasks. Nine of the thirty-one tasks were listed by at least 50% of respondents as not completed by students working in this area (see table 1).

Table 1  
General Student Tasks and Responsibility Level Survey Responses

	Low	Low %	Medium	Medium %	High	High %	N/A	N/A %
Q8. Student assistants independently operate public service desks (without direct staff supervision)	21	4.7%	188	42.2%	175	39.2%	62	13.9%
Q9. Adds holds and recalls of items	41	9.2%	132	29.7%	72	16.2%	199	44.8%
Q10. Answer telephone at the service desk	109	24.3%	198	44.2%	96	21.4%	45	10.0%
Q11. Answer directional/informational questions for patrons (ex. where is the computer lab; explain general library policies)	114	25.6%	214	48.0%	92	20.6%	26	5.8%
Q12. Library greeter	159	35.7%	66	14.8%	48	10.8%	173	38.8%
Q13. Help patrons find items on shelves	53	11.9%	277	62.1%	79	17.7%	37	8.3%
Q14. Supervise special rooms (library lounge, art gallery, music listening room, etc.)	49	11.1%	70	15.8%	28	6.3%	296	66.8%
Q15. Accept completed item request forms from patrons (interlibrary loan form, storage retrieval, etc.)	85	19.1%	142	31.8%	58	13.0%	161	36.1%
Q16. Book and/or schedule study rooms/carrels	49	11.1%	92	20.8%	31	7.0%	271	61.2%
Q17. Light tidying of building (push in chairs, pick up trash, dust, bulletin boards)	290	65.3%	52	11.7%	46	10.4%	56	12.6%

	Low	Low %	Medium	Medium %	High	High %	N/A	N/A %
Q18. Clean stacks and books (dust or vacuum)	258	58.4%	58	13.1%	37	8.4%	89	20.1%
Q19. Clean equipment (computers, microfilm units, monitors, keyboards)	213	48.2%	100	22.6%	38	8.6%	91	20.6%
Q20. Operate security desk	17	3.9%	44	10.0%	30	6.8%	349	79.3%
Q21. Student assistants independently supervise operation of library detection gates (without direct staff supervision)	46	10.5%	145	33.0%	66	15.0%	183	41.6%
Q22. Oversee library detection gates and respond to alarms - alarms are physically isolated from staff populated areas	34	7.7%	111	25.2%	52	11.8%	243	55.2%
Q23. Assist with emergencies (fire alarms, evacuation of building)	46	10.4%	122	27.5%	91	20.5%	184	41.5%
Q24. Respond to problem patrons in building	45	10.2%	83	18.8%	117	26.5%	197	44.6%
Q25. Maintain and organize Lost and Found	158	35.9%	118	26.8%	30	6.8%	134	30.5%
Q26. Assist patrons with using computers and printing	53	12.1%	234	53.4%	99	22.6%	52	11.9%
Q27. Assist patrons with using photocopiers	74	16.8%	244	55.5%	76	17.3%	46	10.5%
Q28. Maintain equipment (ex. refill paper for computers, photocopiers, coin, etc.)	157	35.6%	165	37.4%	67	15.2%	52	11.8%
Q29. Opening/closing the building with staff supervision	61	14.0%	177	40.6%	93	21.3%	105	24.1%
Q30. Open/close building without staff supervision	16	3.6%	61	13.8%	133	30.0%	233	52.6%
Q31. Open and distribute departmental mail	54	12.3%	127	28.9%	31	7.1%	277	51.7%
Q32. General departmental photocopying and collating	130	29.3%	152	34.2%	41	9.2%	121	27.3%
Q33. Record "Hours" voice mail message	40	9.1%	31	7.1%	6	1.4%	362	82.5%
Q34. Monitor departmental email account	26	5.9%	23	5.2%	21	4.8%	371	84.1%
Q35. Review & suggest changes to library procedure	56	12.8%	96	22.0%	94	21.5%	191	43.7%
Q36. Record statistics (gate count, etc.)	127	28.9%	125	28.5%	54	12.3%	133	30.3%
Q37. Senior student assistants formally supervise other student assistants	17	3.8%	34	7.7%	119	26.9%	273	61.6%
Q38. Senior student assistants formally train new student assistants	26	5.9%	59	13.3%	145	32.7%	214	48.2%

In the Circulation section of the survey, fourteen out of the thirty-four tasks were listed by at least

50% of respondents as not completed by students working in this area (see table 2).

Table 2  
Circulation Student Tasks and Responsibility Level Survey Responses

	Low	Low %	Medium	Medium %	High	High %	N/A	N/A %
Q40. Shelf stacks and periodicals collections	28	7.7%	230	63.2%	98	26.9%	8	2.2%
Q41. Shelf other collections (media, unbound periodicals, reserves)	25	6.9%	239	65.8%	92	25.3%	7	1.9%
Q42. Sort and pre-shelve materials for shelving	67	18.4%	213	58.5%	73	20.1%	11	3.0%
Q43. Shifting	66	18.2%	178	49.2%	98	27.1%	20	5.5%
Q44. Tidy/straighten stacks and other collections	179	49.2%	135	37.1%	45	12.4%	5	1.4%
Q45. Search for books and other items (missing, lost, claimed returned)	27	7.4%	216	59.5%	106	29.2%	14	3.9%
Q46. Shelf reading (automated or physical)	39	10.8%	215	59.4%	95	26.2%	13	3.6%
Q47. Building pick-ups /In house collection of materials	140	38.9%	109	30.3%	37	10.3%	74	20.6%
Q48. Create new book display from scratch	35	9.7%	64	17.7%	56	15.5%	206	57.1%
Q49. Sort and maintain new book display	52	14.3%	103	28.4%	30	8.3%	178	49.0%
Q50. Retrieve items from book drop	213	58.8%	65	18.0%	45	12.4%	39	10.8%
Q51. Deliver/retrieve library materials to faculty/departments across campus	74	20.8%	57	16.0%	17	4.8%	208	58.4%
Q52. Deliver/retrieve library materials from storage facility or branch libraries	26	7.2%	43	11.9%	14	3.9%	278	77.0%
Q53. Retrieve library materials from open stacks for patrons	79	21.9%	182	50.6%	31	8.6%	68	18.9%
Q54. Retrieve library materials for patrons from closed stacks	32	8.9%	82	22.7%	28	7.8%	219	60.7%
Q55. Check out/renew/check in library materials	47	13.0%	218	60.4%	80	22.2%	16	4.4%
Q56. Sign out equipment to patrons (digital cameras, etc.)	28	7.7%	148	40.9%	63	17.4%	123	34.0%
Q57. Add new library patrons to library system (student, staff , faculty or community patrons)	17	4.8%	95	26.7%	106	29.8%	138	38.8%
Q58. Update existing patron records in the library system (ex. new address)	14	3.9%	115	31.8%	102	28.2%	131	36.2%
Q59. Issue replacement library cards	18	5.0%	66	18.2%	50	13.8%	228	63.0%
Q60. Verify patrons for remote access to online databases	17	4.7%	51	14.1%	33	9.1%	261	72.1%
Q61. Provide change to the patrons for photocopiers, etc.	122	33.7%	59	16.3%	28	7.7%	153	42.3%
Q62. Accept payment of library fines/fees	30	8.4%	112	31.2%	49	13.6%	168	46.8%

	Low	Low %	Medium	Medium %	High	High %	N/A	N/A %
Q63. Sell supplies to patrons (pens, copy cards, etc.)	33	9.3%	34	9.6%	13	3.7%	276	77.5%
Q64. Communicate (by telephone, email, etc) with patrons on circulation related issues (overdues, etc.)	26	7.2%	108	30.0%	86	23.9%	140	38.9%
Q65. Accept reserve items from faculty for addition to collection to be processed by the staff	57	15.9%	163	45.4%	72	20.1%	67	18.7%
Q66. Accept reserve items from faculty for addition to the collection to be processed by the student	15	4.1%	31	8.6%	49	13.5%	267	73.8%
Q67. Accept thesis for binding from patrons for processing by staff	22	6.1%	21	5.8%	8	2.2%	309	85.8%
Q68. Accept thesis for binding from patrons for processing by student	12	3.3%	9	2.5%	4	1.1%	336	93.1%
Q69. Accept lost items from patrons	154	42.5%	105	29.0%	54	14.9%	49	13.5%
Q70. Stuff and address envelopes	183	50.4%	44	12.1%	19	5.2%	117	32.2%
Q71. Make announcements -public address system	42	11.8%	38	10.6%	22	6.2%	255	71.4%
Q72. Generate library notices or reports	19	5.3%	28	7.8%	28	7.8%	285	79.2%
Q73. Send library notices via email or U.S. Mail	41	11.4%	41	11.4%	21	5.8%	258	71.5%

In the Interlibrary Loan section of the survey, four out of the twelve tasks were listed by at least 50% of respondents as not completed by students

working in this area. Five respondents wrote in that no students were used for any tasks in the Interlibrary Loan department (see table 3).

Table 3  
Interlibrary Loan Student Tasks and Job Responsibility Survey Responses

	Low	Low %	Medium	Medium %	High	High %	N/A	N/A %
Q76. Pull books and other items for ILL	42	16.4%	141	55.1%	43	16.8%	30	11.7%
Q77. Check out ILL materials to patrons/borrowing libraries	17	6.7%	103	40.6%	53	20.9%	81	31.9%
Q78. Renew ILL materials	11	4.4%	58	23.0%	35	13.9%	148	58.7%
Q79. Communicate (by telephone, email, etc.) with other libraries on circulation related issues (overdues,	13	5.1%	22	8.7%	36	14.2%	183	72.0%
Q80. Work with staff on ILL problems	14	5.5%	78	30.6%	68	26.7%	95	37.3%
Q81. Preliminary processing of ILL request forms	13	5.1%	73	28.7%	58	22.8%	110	43.3%
Q82. Pack/unpack ILL shipments (OCLC or other)	50	19.6%	93	36.5%	37	14.5%	75	29.4%
Q83. Order ILL materials	10	3.9%	19	7.5%	45	17.6%	181	71.0%
Q84. Photocopy/scan ILL articles	47	18.6%	105	41.5%	43	17.0%	58	22.9%
Q85. Process and send ILL articles electronically, fax, mail	12	4.7%	68	26.8%	61	24.0%	113	44.5%



	Low	Low %	Medium	Medium %	High	High %	N/A	N/A %
Q86. Process physical ILL books and items	23	9.1%	79	31.2%	60	23.7%	91	36.0%
Q87. File ILL paperwork	31	12.2%	67	26.4%	32	12.6%	124	48.8%

In the Reference section of the survey, three out of ten tasks were indicated by at least 50% of those surveyed as not completed by students working in this area. This section has respondents indicating only 33% had students engaged in

high responsibility tasks. In fact, eight respondents indicated they do not use students in their reference departments at all (see table 4).

Table 4  
Reference Student Tasks and Job Responsibility Survey Responses

	Low	Low %	Medium	Medium %	High	High %	N/A	N/A %
Q90. Answer directional questions	91	34.3%	113	42.6%	33	12.5%	28	10.6%
Q91. Assist patrons with online catalog	20	7.5%	140	52.8%	64	24.2%	41	15.5%
Q92. Assist patrons with database usage (print or save, etc.)	19	7.2%	108	40.8%	88	33.2%	50	18.9%
Q93. Assist patrons with basic reference questions	16	6.0%	89	33.6%	73	27.5%	87	32.8%
Q94. Answer a detailed and involved reference question	18	6.8%	6	2.3%	77	29.1%	164	61.9%
Q95. Help patrons find materials in open stacks	38	14.3%	156	58.9%	39	14.7%	32	12.1%
Q96. Teach patrons the basic use of a specific database	15	5.7%	65	24.6%	78	29.5%	106	40.2%
Q97. Maintain listing of periodical holdings	15	5.7%	29	11.0%	22	8.3%	198	75.0%
Q98. Assist in distribution of a collection (organize items, pull items requested by others, etc.)	28	10.6%	89	33.6%	25	9.4%	123	46.4%
Q99. Assist patrons with microform units	18	6.8%	75	28.5%	38	14.4%	132	50.2%

In the Technical Services/Acquisition section of the survey, four out of the ten tasks as were listed as not completed by students working in this area by at least 50% of respondents. However, sixteen

respondents wrote in the copy cataloging and physical processing of items, five added authority control, and three added government documents processing and gift book processing (see table 5).

Table 5  
Technical Services/Acquisitions Student Tasks and Job Responsibility Survey Responses

	Low	Low %	Medium	Medium %	High	High %	N/A	N/A %
Q102. Add tattle tape to materials	76	28.7%	96	36.2%	23	8.7%	70	26.4%
Q103. Add book covers to books	39	14.7%	104	39.1%	30	11.3%	93	35.0%
Q104. Basic book repair (taping a book, etc)	27	10.2%	95	36.0%	42	15.9%	100	37.9%

	Low	Low %	Medium	Medium %	High	High %	N/A	N/A %
Q105. Advanced book repair (tipping in pages, gluing a binding, etc)	13	4.9%	31	11.7%	70	26.5%	150	56.8%
Q106. Receive/process purchased materials	15	5.7%	91	34.3%	43	16.2%	116	43.8%
Q107. Pack/unpack shipment to outside bindery	39	14.7%	64	24.2%	17	6.4%	145	54.7%
Q108. Pull unbound periodicals for bindery/discard	37	14.1%	81	30.8%	30	11.4%	115	43.7%
Q109. Weed/recycle newspapers	81	30.6%	82	30.9%	27	10.2%	75	28.3%
Q110. Alter records in online catalog	8	3.0%	18	6.8%	75	28.5%	162	61.6%
Q111. Alter records in OCLC	8	3.0%	3	1.1%	36	13.6%	217	82.2%

Overall, approximately 29% of those surveyed indicated they assigned students medium responsibility tasks, 16% high responsibility tasks, and 15% low responsibility tasks. An average of 40% indicated these tasks were not

completed at all by their students. Close to 200 of respondents surveyed provided comments on additional tasks completed by their student assistants and not listed in the section of the survey they completed (see table 6).

Table 6  
Summary of Tasks Not Listed in Survey

accept donations (1) activate holdings in SFX (1) authority control (5) building rounds (1) call in building problems (1) call/email patrons regarding overdue ILL (2) check in periodicals (1) check returned laptops for damage/problems (1) cleaning items: CDs, DVDs (2) clerical/filing (3) copy cataloging (17) count patrons in building prior hourly prior to closing (2) create and pay purchase orders/invoices (3) create flyers/brochures for library events/services (1) creating training material for other students (1) distribute surveys (2) gift book processing: unpacking, cleaning, search/see if library owns (5) government document processing (3) inventory (6) laminate items for patrons (1) maintain packing/workroom supplies (2) maintain website (2)	make photo ID cards for students (6) manage guest computer use/log in (2) monitor group studies (1) organize book sales (1) organize office supplies (1) physical processing of items: labels, stickers, stamps, due date slips (23) pre-processing: duplicate checks, finding bibs, etc. (5) preview trials (3) rearrange furniture/rooms for events (1) remind patrons of rules (1) research articles in electronic databases for patrons (1) scanning: reserve materials, items for digital repository, for staff/faculty/students (4) search catalog/databases for local holdings for collection development (4) sort recyclables (1) special projects (7) statistics (7) take lost items to campus safety (1) water plants (2) weeding/packing discards (6)
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## Conclusion

The data gathered from this survey provides some insight about types of student assistants' duties and the responsibility level librarians assign to those tasks. Eighty-eight percent of survey respondents indicated their student assistants were good or excellent workers in regard to the wide variety of tasks they are currently completing within academic libraries. In each category of the survey, there were also a number of tasks in which student assistants were not engaged. Furthermore, there were 42 additional tasks added to the survey that can be considered as possible tasks for student assistants. The good to excellent rating of the work of student assistants opens an avenue of discussion about additional tasks which might be assigned within individual institutions. The responsibility levels assigned by librarians polled offer a rough estimate of time and training involved when adding additional specific tasks to student responsibilities. There is a wide range of tasks at varying responsibility levels that can be examined in order to employ student assistants effectively in academic libraries. During difficult economic times, this research offers a basic template of the possible tasks, time and training involvement related to those tasks in order to better utilize a student assistant workforce.

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# Bridging the Gaps: Teaching Transliteracy

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## Abstract

One of the continual demands of library instructors is the need to cover a range of competing skills and abilities. From basic tech skills to the way the digital environment shapes search behaviors, information literacy classes go well beyond mere database demonstrations. The difficulty is in balancing how we should approach the range of technological, social, and cognitive skills needed to become information fluent. This paper introduces transliteracy as a pedagogical framework for library instruction.

“Transliteracy” has been defined by Thomas, et al. as “the ability to read, write and interact across a range of platforms, tools and media from signing and orality through handwriting, print, TV, radio and film, to digital social networks.” This concept is on the rise, though many library instructors still don’t know how it is relevant to informed pedagogy. Briefly, transliteracy points to a need to move the focus of information literacy (and hence the focus of library instruction) away from the demonstration of discrete skills and towards the cognitive processes that allow the information fluent to shift effortlessly between media. We know that students maneuver between touch-screens and keyboards with ease or between Facebook and Blackboard (often during class!). Yet, students struggle in making the cognitive switch from Google to library resources. Transliteracy may hold the key.

This paper addresses transliteracy as a pedagogical framework for library instruction. Taking cues from cognitive psychology, epistemology, and sociology, the transliterate approach to library instruction seeks to harness students’ existing social and digital literacies as a platform for effective library instruction. To this end, the transliterate classroom uses familiar media such as Facebook or Wikipedia, tools such as smart-phones, and communicative methods such as text messaging, to draw analogies and integrate library resources into students’ existing web of literacies.

The paper begins with an overview of transliteracy, including its provenance, current debates, and exemplary cases. Next, the author discusses the multiple literacies encountered in the typical library instruction session and the problems most commonly faced. He then proposes the adoption of transliteracy as a methodology for designing information literacy classes, focusing on three core areas: incorporating multiple media into the curriculum, teaching the interaction between information sources as opposed to the differences, and encouraging transferable skills. The session will showcase the information literacy program at the University of Tennessee at Chattanooga as an example of a library instruction program based in a transliterate approach.

Library instruction practices and techniques are ever changing to meet the social and technological demands of students. However, the stated goal of “information literacy” has remained the same even as our conceptions of “information” and “literacy” have diverged. In emphasizing the social, technological, and cognitive occurrences that underlie information literacy, transliteracy is a means of adapting traditional pedagogical practice not just to the current digital environment but also to future information systems.

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## Transliteracy Introduced

The concept of transliteracy has its roots in the Transliteracies Project, an interdisciplinary collective of scholars from the University of California-Santa Barbara dedicated to studying

the myriad ways in which online reading has changed traditional conceptions of literacy (Ipri 532). In essence, the relatively recent spread of digital media has complicated the traditional sense of literacy to the extent that mere reading

and writing are no longer sufficient conditions for ascribing literacy.

Research in transliteracy begins with the premise that with a multiplicity of communication media come a multiplicity of skills needed to navigate the information ecosystem. Information comes in forms as varied as print books, scholarly journals, Wikipedia articles, YouTube videos, Twitter hashtags and more. Mere understanding of these diverse media is valuable, and often discussed as having *multiple* literacies, but transliteracy goes one step further and focuses on the interplay between media types. As Ipri explains, transliteracy is “about understanding the ways various means of communication interact (533). It is in this interstitial realm between competing media that transliteracy finds its footing. Rather than focusing on the skills specific to a medium, the transliterate perspective looks to the skills needed to track information *across* media. Understanding how best to use each media platform is one thing; understanding how to combine and synthesize a range of platforms is quite another. Transliteracy is, at heart, simply about understanding the ways we navigate an ever-increasing array of communication and information resources.

Unfortunately, the newness of transliteracy is often its downfall. The term is frequently misapplied or used so broadly that it functions as little more than a trendy buzzword. Mere acknowledgement of Web 2.0 media does not equate to transliteracy. More worrisome, many of the extant accounts of transliteracy seem to conflate the concept with the more familiar concept of information literacy; critics are quick to argue that information literacy already entails cross-media information evaluation skills. As such, it is incumbent upon any practitioner of transliteracy to answer how transliteracy differs from information literacy.

### **Literacy, Information Literacy, and Transliteracy**

With the recent proliferation of competing senses of literacy, there is good reason to question whether transliteracy contributes anything new. From information literacy to digital literacy, media literacy, and beyond, library instructors are awash in a sea of possibilities. Perhaps the best way to situate transliteracy within the current literacy ecosystem is to begin with the concept of

*literacy* itself. Specifically, transliteracy draws attention to the distinction between the communicative and evaluative aspects of literacy and situates itself firmly on the side of communicative literacy.

### ***Literacy as Communication***

Consider the canonical meaning of ‘literacy’: possessing the abilities to read and write. However, the frequent invocations of literacy with respect to visual media, digital artifacts, and other extra-linguistic entities, point to the need for a more general definition that is not tied specifically to written language. Holme provides an exemplary definition, such that literacy “deals with activities that emerge from the processes of encoding and decoding language and meanings as visual signs” (4). This language of “encoding and decoding” is the dominant theme in much of the current literature on literacy and it allows a simple grouping of many common literacies, ranging from the encoding and decoding of visual artifacts (visual literacy) to written languages (print literacy) to body language (signing) to mathematics (numeracy) to effective use of social media (digital literacy) and beyond.

Of course, framing literacy in terms of encoding and decoding is only appropriate when two conditions have been met: the framework must explain *what* is encoded/decoded, and *why* the coding takes place. As to the former, the simplest, yet broadest, explanation is that literacy deals with the encoding and decoding of *information*, the raw “stuff” that persists through the encoding/decoding process. But, *why* do we encode and decode to begin with? Barton frames literacy as a social activity and posits that “literacy is based upon a system of symbols...used for communication, and as such exists in relation to other systems of information exchange” (42). Hence, we encode and decode information in order to communicate, and literacy can be defined as the ability to communicate meaning by encoding and decoding information. Each of the literacies so far discussed represents a different means for communicating meaning.

### ***Literacy as Evaluation***

However, there are many, common uses of the term ‘literacy’ that have little to do with the communicative aspects of encoding and decoding

information. For example, the oft-discussed *scientific literacy* is neutral with respect to whether the information in question is available in print, digitally, as a video, or any other medium. The National Science Foundation describes scientific literacy as

the knowledge and understanding of scientific concepts and processes required for personal decision making, participation in civic and cultural affairs, and economic productivity. (National Research Council 22)

Similarly, health literacy is defined as,

the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions. (“Health Literacy”)

Neither definition makes reference to particular communication media. Rather, the core competency is *evaluative*. The focus on evaluating (rather than communicating) allows another simple grouping of all those putative literacies that take evaluation as their focus. From scientific literacy to health literacy to economic

literacy, each is essentially a literacy of evaluation.

Moreover, many evaluative literacies are blind when it comes to subject-areas as well. Newcomers such as critical literacy, media literacy, or cultural literacy advocate for particular approaches to information evaluation, regardless of subject area. These literacies refer to evaluative skills aimed at deconstructing meaning, identifying hidden biases, or understanding intersubjectivity, respectively. Taken together with the more subject-specific literacies, the common thread is still the same: literacy as evaluation.

### ***Transliteracy vs. Information Literacy***

At this point, neither transliteracy nor information literacy have been situated as either communicative or evaluative in nature. However, when literacies are grouped according to whether they describe a means for communicating or a means for evaluating, the distinction becomes obvious (see fig. 1). The key insight here is that, though transliteracy and information literacy both invoke the term ‘literacy’, they apply to very

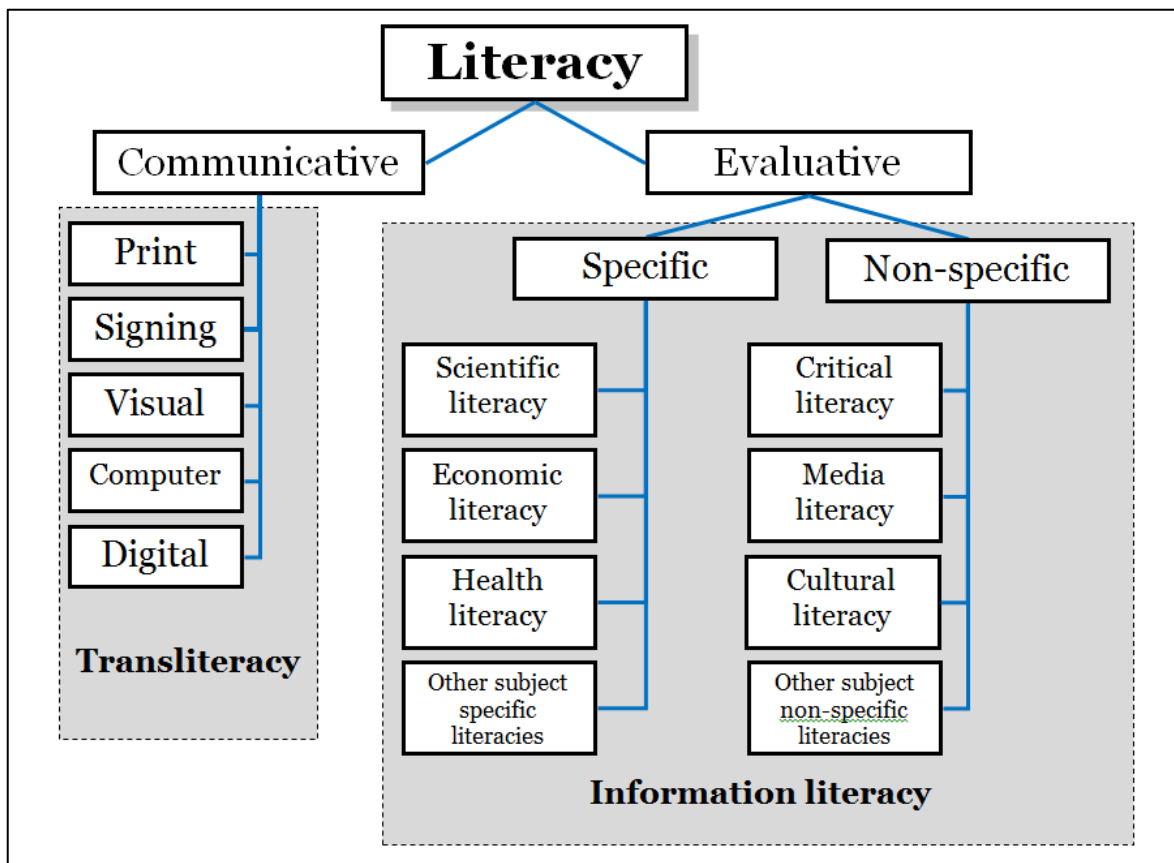


Fig. 1. A taxonomy of literacies.

different types of literacy, and thus are not coextensive terms.

In keeping with traditional library usage, 'information literacy' refers to the set of skills that allow individuals to "recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information" (American Library Association). It follows from the definition that information literacy is, first and foremost, about information. In the strong sense, information can be defined as well-formed, meaningful data and, in the weak sense, as simply recorded data (Floridi 46). The means of recording and communicating that data are of secondary importance in information literacy; evaluating context, form, and meaningfulness are the primary concern. In contrast, transliteracy is not necessarily tied to any particular means for evaluating information, because information in itself is not the focal point. Rather, transliteracy focuses on the procedural knowledge and skills required to communicate information (regardless of its content) across multiple media.

By way of example, consider a student researching the following topic: the impact of the internet on social revolutions. For a large topic like this, she can discover information in academic articles, books, blogs, YouTube videos, newspapers, discussions on Twitter, and more. The student exercises information literacy when she considers a particular piece of information (e.g., a peer-reviewed article) and determines the extent to which it meets her information need, its accuracy, the credibility of the author, its relation to other available information, and so on. In contrast, she exercises transliteracy when she identifies Wikipedia as a source for keywords to use in an academic database, when she watches a video lecture by the author of a peer-reviewed paper, and when she creates an RSS feed to notify her of recently published news articles. By effectively combining her skills across multiple media, she opens new pathways to get to the information she needs. Put simply, information literacy deals with the conceptual aspects of information, and transliteracy deals with the practical aspects. Neither supplants the other.

## **The Pedagogical Implications of Transliteracy for Library Instructors**

The current generation of college students has a range of communication skills, many of which did not exist even a decade ago. No longer do students merely read and write when they interact with information. Now, students also upload, download, tweet, like, text, and watch information, in addition to the classical model of print literacy. These new "literacies" combine to form a network of communicative media through which students access, create, and share information. Thus, as a unifying theory of literacy, transliteracy begins by harnessing these various literacies and emphasizing how they fit together.

Of course, harnessing communications media is easier said than done. The advantage to adopting transliteracy as a pedagogical perspective is that transliteracy suggests conceptual tactics to make it much easier to work within a framework of multiple literacies. In particular, transliteracy offers three pedagogical principles that can guide effective library instruction: embrace that information is spread across multiple information sources, understand that information sources work best when they interact with one another, and teach research skills that transfer across media.

### **Communication is Distributed across Information Sources**

There is no single, best source for information, and that includes the library. Yet, librarians are often hesitant to offer instruction in such "popular" services as Wikipedia, blogs, Google, or similar websites. Or, if they do, such instruction is tangential and presented in contrast to research using library resources. Transliteracy begins by removing the library from a place of privilege and acknowledging that information is available from a variety of sources. Further, given that transliteracy focuses on using information across multiple media, it follows that multiple media must play a significant role in the transliterate classroom.

Information is like water. It flows around us as an amorphous flood of data, something to be tapped into as our needs permit. Of course, the way we interact with water depends on how we tap in. A bottle lets us store water for later use, a glass lets

us drink it, a hose lets us water the plants, and a snorkel lets us swim beneath the surface. By analogy, we have several means for tapping into the ocean of information. Books, databases, blogs, social networks, videos, photographs are all different means of interacting with the same stuff: information.

Consider the student researching the influence of Plato's philosophical theories on modern life. The raw information about Plato's influence is formless and unusable in the absence of an appropriate filter. So, the student chooses a medium appropriate to her information need. For example, she may read Plato's *Republic*, she may look at an article on Wikipedia, she may scan a few articles in JSTOR, she might search Twitter for the #Plato hashtag, she might visit a prominent philosophy professor's blog, or she might watch a lecture on YouTube. Each of these activities is a different access point (or way of "tapping in") to the information she needs. Importantly, the information *itself* is never completely captured by any one medium. By using multiple media to examine a topic, the student is gathering a variety of perspectives on the same underlying information.

Notice that the library only figures into part of the network of information sources. The books and databases in an academic library may in fact be the most credible or most accurate sources for some information, but they do not hold a monopoly. More popular information sources like Google or Wikipedia are deeply entrenched parts of how students interact with and communicate information, and trying to supplant them with the library (and the library alone) only serves to build a wall between students and library resources. Indeed, since Mellon's groundbreaking article in 1986, this "library anxiety" has come to be taken for granted.

Several factors play into student apprehension about library resources, but the relevant factor in this discussion is perceived library incompetence, defined by Onwuegbuzie as an "increase in anxiety levels resulting from a student having a negative perception of her/his ability to utilize the library effectively" (16). Kwon has shown that this self-doubt persists despite students' preexisting comfort with internet research to which students routinely compare the library (123). The common thread underlying most student apprehension regarding library resources

is that they are comparing the library to what they know, namely, the internet, and the differences can be overwhelming.

By focusing on multiple literacies, transliteracy offers library instructors a way around student apprehensions about the library. Incorporating familiar information sources like Wikipedia or YouTube as primary components in the curriculum can set students at ease, while still allowing fruitful discussion of information literacy skills. To put it another way, rather than focusing on information literacy instruction using library resources, a multiple media approach encourages teaching information literacy skills using both library and non-library resources which has the advantage of engaging students with something familiar.

### **Information Sources do not Stand Alone, they Interact**

Of course, embracing multiple media is not unique to transliteracy so incorporating multiple media into library instruction is necessary, though not sufficient, for a transliterate pedagogy. Merely adding non-library resources to the curriculum without the appropriate framework can be just as detrimental as leaving them out. As an ability to communicate meaning *across* multiple media, transliteracy requires that instructors focus on the interaction between information sources, rather than the differences.

As described above, library anxiety often arises due to simple unfamiliarity, and meeting the students on familiar grounds can help alleviate the apprehension. Many library instruction programs already incorporate some discussion of Wikipedia, Google, or other familiar resources. However, more often than not, these resources are presented solely by way of contrast. Again and again, librarians invoke popular resources by way of binary opposition: popular versus scholarly, print versus digital, Wikipedia versus expertise, the library versus Google, and so on. Placing these various information sources in opposition to one another is at odds with the idea of moving across or between them.

Wikipedia is often introduced in order to highlight its deficiencies. Google is often introduced as an example of information overload. Blogs are presented to illustrate bias or lack of authority, and YouTube is presented as



entertainment alone. Again and again, non-library resources are portrayed as substantially different, and usually negatively so. However, the transliterate approach suggests that instructors should downplay the differences between library and non-library resources and instead emphasize how these resources interact in a more holistic research process.

Different resources play different roles in research. Though a popular website like Wikipedia may be inappropriate for discovering original research, it can be a great place to look for keywords that can be used in an academic database. Likewise, an academic book may present the most current and highly conceptual research at the time it was published, but authors routinely use personal websites to elaborate, provide supplementary materials, or continue important ideas in the months and years that follow initial publication. In both cases, the differences between media are less important than the way the media can support one another. This is the key insight of the transliterate approach to resources; different media should be used in combination rather than placed into silos.

Perhaps the best current example of this focus on interaction can be found in the various ways instructors can use social media to leverage information literacy instruction. As Greg Bobish argues “Web 2.0 tools support the constructivist ideas upon which the ACRL standards are at least partially based” (56). Bobish goes on to provide concrete examples of social media use in library instruction, ranging from the use of word clouds for discovering keywords to following notable scholars on Twitter. In each of the 87 activities Bobish suggests, a familiar social media platform is combined with an academic resource in a way that supports student understanding of each.

### **Focus on Skills that Transfer**

By incorporating multiple media into instruction and focusing on how those media fit together in the pursuit of information, library instructors operate within a transliterate framework. However, given the limited time that instructors usually have with students, it would be unreasonable to simply demand that librarians add social media instruction on top of the already crowded list of demands. Thankfully, a transliterate approach provides a way to simplify the incorporation of multiple media, by

encouraging instructors to focus on transferable skills.

Current research in cognitive psychology supports the theory that student retention of learned skills is specific to the manner of instruction and that deviations from the initial training conditions are often detrimental to skill transfer. As Kole et al. explain:

Training is only truly successful to the extent that its effects withstand time and modifications to the task; training individuals on a task seems hardly worth the effort if minor changes to the task negate any positive effects yielded from training. (78)

In the context of library instruction, minor changes to a task can range from a different database interface to different search syntax and beyond. Major changes are even more worrisome. Given that the vast majority of students will not have access to the tremendous resources of an academic library after graduation, the very value of library instruction can be called into question if students do not learn skills that transfer outside of traditional library research.

Luckily, there are principled means for ensuring that students can effectively apply the skills acquired in library instruction to a wide array of resources. The concept of transferable skills holds promise as the key to making library instruction stick. In the weak sense, transferable skills are those tasks that can be repeated in relevantly similar circumstances (Johnson 353). They can be extremely broad skills such as critical thinking and information literacy, or they can manifest as more particular skills, such as keyword searching or identifying bias. Importantly, skill transfer is enhanced when instruction is based on broad concepts instead of discrete procedures and when the topic used for demonstration is held constant across research media (Kole et al. 79). By focusing on broad concepts that apply across several domains, a conceptual ability like information literacy is more effectively retained by students.

The relationship to transliteracy should be apparent. Because transliteracy is based in the ability to transfer meaning *across* or *between* different media, a transliterate pedagogy emphasizes transferable skills by definition. It follows that transliteracy offers a pedagogical

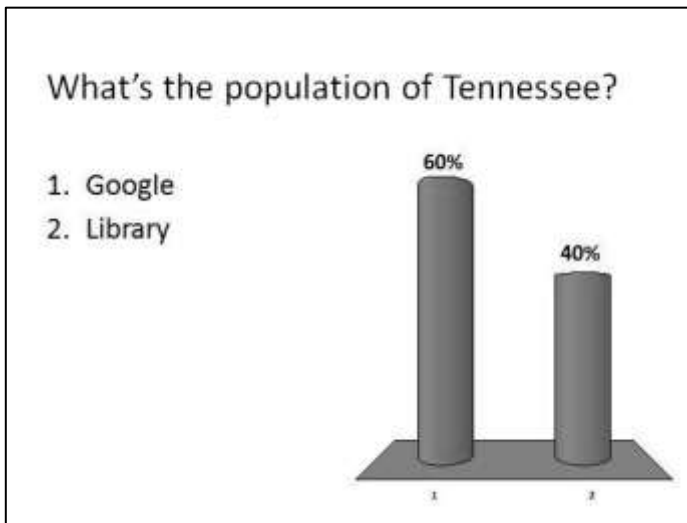


Fig. 2. Sample responses from Composition I clicker game.

approach that encourages student retention of skills. So, rather than spending valuable classroom time demonstrating the procedural differences between searching in JSTOR and PsycINFO, for example, the transliterate perspective advocates focusing on the similarities between these resources and teaching to the skills they require in common.

Treating information resources as conceptually distinct only compounds the demands placed on library instructors. If two information resources are presented in contrast, then two search strategies must be taught, subtracting from valuable class-time. Rather than teaching skills specific to such-and-such a resource, the transliterate approach is to teach the skills that apply across platforms. Hence, resources as varied as Wikipedia, Web of Science, and Twitter can fall under the same lesson plan, provided they are taught from a position of interaction, rather than difference. Wikipedia provides keywords to search for articles in Web of Science that scientists are discussing on Twitter. The issues of bias, currency, accuracy, and veracity carry across each medium, and are more valuable than the idiosyncratic deficiencies each medium may display. In sum, transliteracy *qua* pedagogy urges instructors to embrace multiple media, demonstrate how media can interact to the student's advantage, and to teach in terms of skills that students can apply across resources.

### Transliteracy in Practice: Examples from Lupton Library

The instruction program at the University of Tennessee at Chattanooga makes it a point to rewrite the entire curriculum for library instruction every two years. In the summer of 2010 the instruction team wrote a new curriculum that focuses on transferable skills and multiple media. The term 'transliteracy' was not yet common among academic librarians, so the curriculum was not specifically designed with transliteracy in mind. However, library instruction for Freshman Composition I and II is a prime example of transliteracy in action. Though a complete description of a two semester instruction curriculum exceeds the scope of this paper, the following activities are prime examples of a transliterate approach to library instruction.

Library instruction for Composition I begins with a pre-class worksheet requiring students to research a topic of their choice using Wikipedia. Students are asked to look for unique or important words in the Wikipedia article and write them down on the preformatted worksheet. Students submit the worksheet to their instructor prior to the day of library instruction, and the instructor returns the worksheets in class. Not only does the worksheet allow instructors and librarians to vet problem topics prior to coming to the library, but students are more willing to engage with a familiar medium, and participation rates are above 90%. The activity implicitly introduces students to the idea of keywords and encourages students to limit Wikipedia use to only the most basic discovery phase of research.

Instruction continues in the classroom with a multiple choice quiz utilizing interactive clickers from Turning Point. Both Composition I and II sessions include multiple choices, though with different pedagogical aims. First semester students are asked to decide between Google and the library as the most appropriate choice for research (see fig. 2). Second semester students are presented with a more complex set of choices for common research questions (see fig. 3).

Importantly, there are no clear-cut correct answers. Students are asked to reflect on general search behaviors, rather than the specifics of a particular resource. Each question generates

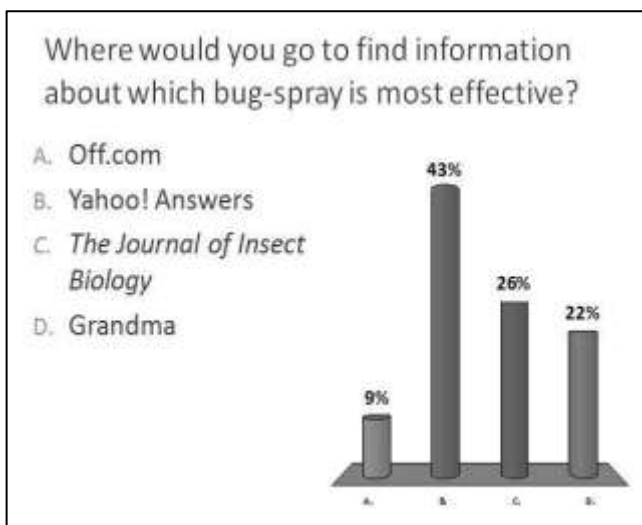


Fig. 3. Sample responses from Composition II clicker game.

discussion that reinforces concepts that apply across all media, not simply library resources.

As a final example, each session includes a video related to information literacy. These PRIMO award winning videos are designed to demonstrate the interaction between media and to reinforce cognitive skills that transfer between media. In the “Keyword Searching in Omnifile” video, the analogy of a board game is used to demonstrate how the keyword worksheet and Wikipedia fit into an academic database. In “The World of Information” popular and scholarly research are presented as similar endeavors, rather than different domains. This video encourages students to reflect on the skills they use to evaluate popular information resources (blogs, Wikipedia, etc.) and to transfer those skills into academic research. Strengthening evaluative skills at the academic level then transfers back to stronger skills at the popular level. The videos, extensive classroom discussion, and pre-class activity are combined with a slight bit of database demonstration and ample time to search. More details are available at the Lupton Library instructional website (“UTC Library Instruction”).

### Conclusion

Transliteracy exists in two domains. On the one hand, it can be a buzzword haphazardly applied to any invocation of social media in libraries. On the other hand, it can be a well-researched pedagogical approach based in multiple media and transferable skills. Whether the term

‘transliteracy’ is consigned to the dustbin of bad library jargon remains to be seen. At the very least, a clear case can be made that transliteracy, as a pedagogical approach, merits some attention by library instructors. Given the newness of the concept, it remains to be seen whether transliteracy holds any transformative promise for library instruction. However, at the conceptual level, transliteracy seems to meet a host of criteria that library curricula sorely need.

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## **Proactive Approach to Embedded Services**

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### **Abstract**

Embedded librarian programs provide the perfect opportunity to expand reference services by creating personal connections with students who utilize online learning platforms. At Wayne State College's Conn Library (Wayne, NE), librarians have discovered that a "wait and see" policy for questions in such classes is ineffective. They now proactively engage both distance students taking online courses and on-campus students using online components in their classes through the use of tips tailored to specific classes, useful databases, assignments, and frequently asked student questions.

In this session attendees will learn how librarians at Conn Library manage online discussion forums with posted tips containing links to previously developed printed resources and live screen capture demonstrations. Based on course syllabi and instructor/student needs, attendees will learn how to develop their own proactive tips using Jing, an open source screen capture program, and web-based resources from their own library. They will also learn strategies to store, update, and maintain their tips for future courses.

As a result of this proactive approach, Conn Library has discovered that students are more likely to contact librarians because students are more familiar with the course librarian. Students have also indicated that they appreciate receiving relevant information before they become frustrated with their research. Plus, students have begun to ask questions about specific resources and services that they had not previously discovered on their own. These things combine to create a collaborative learning environment that extends beyond the individual class and the library.

## **Weed the Stack, Feed the Collection and Harvest the Space**

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### **Abstract**

The doors to higher education have been blown wide open by the winds of an economic downturn as well as education reform which expand Pell grants. The doors have been blown right off their hinges at two year colleges and state systems.

At Suffolk County Community College, a multi-campus college that is part of the State University of New York system, fall 2010 enrollment was over 23,300 – up more than 9% from the prior fall. We have begun to offer courses at 6 a.m. as well as courses that run until 10 p.m. We have managed to accommodate nearly all of our applicants for admission. Our problem is that we have literally run out of physical space. Nowhere is this problem bigger than in the Ammerman Campus Library. Students jam the library from the moment it opens until it closes. Students wait in line to access library databases and the OPAC.

We recently cleared space in reference by thoroughly weeding and shifting the collection. This project allowed room for additional tables, chairs and computers. We brought the number of student-use computers in the area up to 26 and the total number of seats to 52. Unfortunately, twenty-six computers were not enough.

Our circulating stacks take up 75% of our net square footage. We knew that our users would be better served with a more up-to-date collection and with more tables, chairs and computers. We knew what had to be done. We had to weed and feed the collection in order to harvest the space.

We used our recent reference weed as a model for our circulating stacks weed (we are 70 % through the process). Weeding the reference collection is a spectacular way to imagine how to complete a thorough weed of the circulating stacks and permits the library faculty and staff to work out the bugs (there will be bugs). This method also enabled us to visualize and measure how much physical space could be freed up. We received compliments from students thanking us for making more space in the reference area and we intend to hear the same compliments once we complete the weeding and shifting on the second floor where our circulation stacks are housed.

Every library that was built prior to 1979 has a space issue. It may be physically grueling and emotionally difficult to pull the weeds that have become part of the collection, but by weeding we grow a better collection and our users reap the benefits of having space that they can work in and better resources to work with.

Learning outcomes:

- Participants will be able to consider how they can physically reconfigure their libraries in order maximize space.
- Participants will gain a better understanding as to the importance of their collection management policy in order to allow them to weed their collections more thoroughly and without fear of repercussions.
- Participant will identify and articulate action plans for weeding their collections by utilizing the Library of Congress classification system as a guide.

## **Making an Impact: The Who, What, Where, Why, and How of Creating a Genre Based Popular Collection in an Academic Library**

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### **Abstract**

B.D. Owens Library has embraced change in a big way, all in the pursuit of student success. With the historic change in administration, as well as the addition of a justification component for expenditures, our mission and function as a library evolved. With a new University President, new Provost and new Director of Academic and Library Services, the Library was challenged to rethink existing collections and learning spaces. Challenged by the director to re-think how a library should live and breathe, the library staff was charged with redesigning the first floor layout on a minimal budget. This process grew to incorporate redefining the existing first floor book collections to further support scholarly and personal development of students, faculty and staff. Every Library employee contributed to the planning and successful implementation of the redesign and development of the collection, which combined with numerous campus partners helped design, build, and configure the resulting space and collection. The purpose of the first floor space and collection were defined to support student success with synergy, organic spaces, and sustainability in mind. The resulting concept of a Popular Collection emphasized connecting learners to resources and enhancing pathways for learning. Change was embraced across the Library with the demolition of existing first floor furniture arrangements and shelving units, the identification of the genres and item selection for the Popular Collection, and preparation of the call number scheme and consortial catalog specifications. Throughout the process, components continued to evolve, from genre sizes and shelving design to delegation of management responsibilities and project duties. After the construction phase was completed, consideration was given to student employee training, expansion of topics included in the Popular Collection, and maximized effectiveness and efficiency of shelving locations. Looking to the future, factors being contemplated include circulation, age, and size of the collection while still focusing on student success. The realization is the Popular Collection will be continually changing and the ongoing need for strategic change will endure as the impact reaches the campus community.

## Info on the Go: Using QR Codes to Enhance the Research Experience

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### Abstract

Aside from face-to-face sessions, it can be hard for today's librarians to reach preoccupied students with the tools they need to become information literate. Students are often running from one class to the next or too busy checking Facebook updates on their smartphones to stop by the library for assistance. This is especially true at a commuter college, where students are often on campus for a short amount of time during the day.

That's where QR Codes come in. QR Codes (short for "Quick Response") are a common sight in many Asian countries, but they've only recently begun appearing on advertisements and street signs in the United States. This presentation will examine what exactly QR Codes are and how they are being used in academic libraries to strengthen and enhance the research experience. In addition to highlighting uses at other libraries, the presenter will describe how she has used QR Codes to provide research assistance to students who are often too busy to stop in the library for help.

Strategic placement of QR Codes on library instruction handouts, in buildings across campus, and in the library's stacks has allowed students to take control of their own learning and access important research tools (such as mobile databases and online subject guides) as they walk to class or head home for the day. Come prepared to discuss strategies for implementing this no-cost emerging technology on your campus!

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### Introduction

Finding the time to equip students with the tools they need to become information literate seems to become more challenging every year. Hiring freezes mean librarians are responsible for teaching more information literacy instruction sessions, and rising tuition costs mean more students are working while attending college. Librarians often face difficulty finding the time to reach students outside of face-to-face instruction sessions especially when so many things are demanding their attention. If only there was a way to provide students with the tools required to perform research on the go, at the exact time and place of the information need. Enter the QR code. QR codes, short for "quick response," are 2D barcodes that store data; when scanned with a smartphone or other mobile device, the code will direct the user to a website, telephone number, block of text, or other type of data. When used strategically, QR codes provide a free and easy method of connecting with students on their own time and at their point of need.

### Emergence of QR Codes

Japanese company Denso-Wave invented QR codes in 1994 to inventory automobile parts (Lehan). Denso-Wave still holds the patent but allows anyone to use the codes license-free. One of the biggest benefits of using these 2D codes is the quick turnaround: a consumer (or worker) scans the code and immediately gets results. This allows for on the go advertising and puts the information into the hands of the consumer. The codes are commonplace in Japan; they advertise the latest fashions on billboards, hold a person's email and phone number on their business cards, and direct users to the current routes and timetables at a bus station (Holmquist 63). Because of their ability to hold hundreds of characters, QR codes are particularly ideal gateways for long or complex URLs. Creating a QR code is quick and easy; the first step is choosing a generator such as *BeeTagg.com*, *Kaywa.com*, or *bit.ly* (Mallon). Simply paste in the data (a URL, a phone number, block of text, etc.) to be converted, and the generator will produce a small square barcode. Most QR codes



are black and white, but some generators allow for customization of color and/or size. The QR code can be saved as an image file, or copied and pasted into a document.

In order to read the data stored in the QR code, a person needs to have a smartphone or other mobile device equipped with a QR reader or “scanner.” Not everyone has access to these devices; however, a Pew Research survey showed that at the start of 2010, 93% of adults between the ages of 18-29 had a cell phone. Of this group, 81% reported being wireless Internet users and 55% said they accessed the Internet on their cell phone (Lenhart et al. 4). College campuses are no exception to the prevalence of smartphone use. A recent study conducted by the University of Colorado found that 53% of college students own a smartphone (Dean). Students are using their phones for a variety of reasons, including communication and Internet access. Michael Hanley, journalism professor at Ball State University, found that “90% of smartphone owners use their phones to access the Internet [and] 97% use their phones to take and send photos” (Truong). Due in part to this confluence of adults with smartphones, many businesses, including those in marketing and higher education, have begun using QR codes to reach their mobile users.

As QR code adoption becomes more prolific, Americans’ interest is increasing, most notably among the younger generation. A survey conducted by marketing firm MGH found that out of 52% of smartphone consumers between the ages of 18-34 have seen a QR code (Odell). Nearly 50% of survey respondents said they had scanned a QR code, while 70% reported that they would scan a QR code in the future, regardless of if they had done so in the past (Goff). No matter where QR codes are placed, they provide a unique form of public interaction that is expected by today’s consumers and young adults.

### ***Consumer Culture***

As in Japan, QR codes are gaining popularity with advertisers in the United States: they can be found leading consumers to more information on a product in magazines and on billboards, on banners in stores, and on television commercials. The QR codes are used in printed advertisements to “drive traffic to the home page, register new users for email lists, download coupons to be

used online or in-store, [and] even launch a YouTube video of the product being used” (“Print to Mobile” 12). The Washington Post has used QR codes in the food section to link readers to holiday recipes, and garden stores are using the codes to direct consumers to information on plant care.

QR codes are also used in entertainment and pop culture. Museums and bookstores utilize QR codes to provide more information on a work of art or a synopsis of a book, respectively. Rapper Lupe Fiasco used a giant QR code in New York’s Union Square to provide fans with limited preorders for his 2011 album, “Lasers” (Odell). One of the pulls of QR codes is their mystery; for the most part, a person must scan the code in order to find out what prize or message the creator is offering.

### ***Higher Education***

College campuses are also seeing an increase in the use of the 2D codes. Developers at Abilene Christian University have begun using QR codes to connect students, faculty, and staff with promotional videos, help desk information, and various online content. The University has even created their own in-house QR reader that is provided to their constituents at no cost (“Quick Response”). By capitalizing on the use of mobile devices, faculty members and librarians on university campuses can use QR codes to “foster active techniques for varied learning styles” and engage students in new ways (Godwin 211).

### ***Academic Libraries***

Due in part to their functionality and portability, QR codes provide the perfect opportunity to link physical spaces with electric resources by facilitating communication and adding “significant value by improving accessibility to information for those using mobile devices” (Robinson 81). This can be as simple as using a QR code on a flyer to link users to a text-a-librarian number or posting a QR code that links to a study room reservation form by the room itself.

While QR codes are still fairly novel in the library setting, their use is increasing as more librarians become aware of the codes’ potential for marketing library services and connecting with patrons. One of the first articles detailing the use of QR codes in libraries appeared in the

November 2010 issue of *College & Research Libraries News*. Ashford provides an introduction to the technology and offers suggestions for using QR codes in academic libraries. Since the publication of Ashford's article, even more librarians have shared how they use QR codes on *Library Success: A Best Practices Wiki* ("QR Codes"). Uses reported on the wiki range from adding QR codes in the library catalog that link to call numbers at Bath University Library to using QR codes in library exhibits that link to external media at Abilene Christian University Library.

In addition to the many uses of QR codes in libraries, best practices for using the codes are also emerging. Pulliam and Landry suggest three uses for QR codes, including to "promote library events/special collections; make services more discoverable; [and] create digital 'wayfinders' in the stacks" (72). I followed these recommendations and consulted the many examples found on the *Best Practices Wiki* when planning my QR codes pilot project.

### **Pilot Project**

#### ***Background & Goals***

Wichita State University (WSU) is an urban-serving campus with a student population of just under 15,000. Most of the undergraduate students are commuters, with 92 percent living off campus ("Wichita"). Of these students, many work full time and are on campus only to attend class. In the spring 2011 semester, I began utilizing QR codes to make the WSU Libraries' research tools more accessible to students. Placing the QR codes in various locations throughout the main library and on campus provides students with a quick and easy way to find relevant resources at their point of need. This means students with limited time can easily access the same materials and electronic resources that a librarian would recommend if the student were to visit the reference desk.

In addition to providing easy access to research materials, a secondary goal of this project is to increase the mobile and technological literacy of students. Introducing students to this emerging technology while they are in school will empower them as they become conscious consumers and begin entering the workforce. QR codes will likely become more abundant in the

next decade, and students that understand this technology and its uses will be at an advantage.

#### ***Placement of QR Codes***

For the pilot project, I identified four venues for placing QR codes: on online research guides, on instructional materials used in information literacy instruction sessions, on signs placed in buildings around campus, and on signs placed in the library. On most of my online research guides, I have added an image of a QR code that, when scanned, links users to the library's mobile site which, in turn, provides access to our mobile catalog, databases, and more. The image is paired with the heading, *Take the library with you! Scan the QR code on your mobile phone.*

The QR codes used on instructional materials link students to one of two places: the library's mobile catalog and/or a course specific subject guide I created for the instruction session. When distributing the handouts to students, I encountered several students who would take the handout, scan the QR code, and give the handout right back to me. I entertained the idea of just passing around a QR code linking to the course guide but determined the course guide would be more accessible if I included a URL on the handout, in the event that students do not have a cell phone with them in class.

The signs placed around campus and in the library advertise research guides for three disciplines: Communication and Mass Media, English Literature, and International Business. Each sign begins with similar text, *Researching English Lit?* [or other subject], followed by the QR code linking to the online research guide, followed by the phrase, *Do the smart thing. Scan the code.* At the bottom of the sign, in smaller font, is the sentence, *Wondering what this is? Ask at the library reference desk!* I posted all three subject-related signs in general locations on campus, including WSU's Rhatigan Student Center. I also targeted areas on campus specific to each discipline; the Communication QR signs are posted around the Elliott School of Communication's building, the International Business signs are located in the two campus buildings where the majority of Business classes take place, and the English Literature QR code is



Fig. 1. QR code linking to resource page with suggestions for generators, scanners, and additional examples.

displayed in the lobby of the English Department's student lounge.

In the library, I posted the research guide QR code signs in the lobby and on bulletin boards on different floors. I also decided to try a more direct approach. I placed the signs on the end of the stacks corresponding to the Library of Congress subject area. For example, the English Literature QR code is positioned at the end of the PR-PS call number range. This encourages students to blend in-person and virtual research by accessing electronic databases, books, and other resources on the go. Examples of all signs created, as well as recommended QR code generators and scanners, are available on my website (Mallon) or by scanning the QR code below (see fig. 1).

As mentioned earlier, QR codes allow for a large number of characters to be encoded. However, the more characters there are, the harder it becomes for the mobile device to scan and read the data. In situations where a URL is very long, using a URL shortener is recommended to limit the number of characters encoded in the QR code (Lehan). Any URL shortener will work; I use *bit.ly* to create my QR codes because in addition to shortening the URLs, it also provides usage data on both the dates the codes were scanned and the number of people that scanned them. While I assumed that the signs targeted to Communication students would be the most popular, I found that the QR codes linking to the English Literature subject guide were scanned the most out of all the QR codes I posted. Between January 2011 and May 2011, twenty people scanned the QR code. Fifteen people scanned the Communication QR code between January 2011 and the end of June 2011; only one person scanned the International Business code during the same time period. Although I know that these

signs were posted in the library stacks and around campus, I am not able to determine which location garnered the most scans. In order to truly assess the usefulness of using the QR codes to provide research tools on the go, I will need to determine a way to gather location specific usage data.

### **Education**

One of the most important components of a QR code campaign (or any project that utilizes new technology) is education. I utilized campus newsletters to inform the university community about QR codes. I wrote articles for both the University Libraries staff newsletter and the faculty and staff newsletter for the School of Business. These articles explained what QR codes are and went into more detail on how the codes are being used by the WSU Libraries. In library instruction classes that included a QR code on the handout, I briefly introduced the codes and demonstrated how to scan them.

Since I am unable to advertise QR codes entirely by word of mouth, I also created an online guide that explains the history of QR codes, how to use them, and how to create them. This page is used for educating library staff that might have to field questions. I can also use the guide in future advertising efforts. Staff training is especially important, since each of the QR subject guide signs include the statement, *Wondering what this is? Ask at the Reference Desk!* Additional suggestions for educational text are available, such as: "Scan this code with your mobile phone. You'll need a free reader – download it here: [URL]." (Lehan). Regardless of the wording used, patrons will benefit most if the instructions are kept simple and clear.

### **Reflections**

As with any pilot project, especially one that utilizes an emerging technology, some issues have become apparent during the first semester the QR codes were displayed.

### **Potential Issues**

While there is little to no cost involved in creating and sustaining QR codes, they do require use of a mobile device for scanning. Despite the increasing ubiquity of smartphones and other mobile devices, it will be important for librarians implementing QR codes to remember that not all students can afford these devices. One way

around this is to have devices equipped with QR scanners available for students to check out from the library. Both Apple's iPod Touch and iPad are examples of Wi-Fi enabled devices that do not require complicated phone or data plans. Since many libraries already have laptops available for students to check out, it seems logical that mobile devices could also be offered.

In the same vein, libraries using QR codes should carefully consider their endgame. My QR codes, for the most part, direct students to research guides and other online content when scanned. Many of these sites, including the WSU Libraries Catalog and several subscription databases, are mobile-friendly. The research guides, however, are not; we use an open source software called SubjectsPlus. While most smartphones allow for zooming, some students may find it frustrating that the guide appears on their phone the same way it appears in a desktop web browser. This issue will become increasingly relevant as the mobile web takes off. Springshare, makers of LibGuides, the popular tool for online research guides, offers a mobile version for all guides created with their product ("LibGuides"). Ideally, more vendors will follow suite and offer options for creating mobile-friendly guides.

Another potential issue with using QR codes is sign maintenance. Signs placed around campus are more vulnerable to vandals, the weather, and bulletin board schedules than signs posted in the library where employees can monitor them. I placed several of my QR code signs on large columns near parking lots and gathering places on campus only to have them disappear. The replacement signs were subsequently soaked during a rainstorm. Despite these issues with upkeep, placing the codes outside of the library is an important part of providing research assistance on the go and should not be overlooked.

### ***Future Plans***

In keeping with the idea that students need access to research resources at their point of need, I plan to use QR codes to direct users to even more dynamic content. WSU Libraries has recently begun creating short videos and tutorials for our University's YouTube channel. The URLs to these videos can easily be turned into QR codes that can then be embedded in Blackboard, on course syllabi, or posted at strategic locations throughout the library. Peter Godwin also sees

this as a potential use for QR codes; he suggests posting the codes on handouts and displays in the library (210).

In addition to brainstorming new venues for QR codes, I will need to come up with a better method of evaluating the codes' effectiveness and assessing whether or not they provide valuable research assistance. I am investigating several ways to do this, including utilizing Google Analytics to track website visits and creating surveys to evaluate students' comfort level and interest in using QR codes to access research materials.

### **Conclusion**

This pilot project has been limited to using QR codes to provide on the go access to research tools, but there are many additional opportunities for using the codes to market library services, provide enhanced access to mobile content, and to foster connections with faculty and staff. As with any new technology, libraries should remain cautious about overuse of the QR codes. The more QR codes students see, the more likely they are to overlook them.

Despite this danger, QR codes are great resources for libraries to utilize since they offer, more or less, instant gratification for students on the go. When planning a QR campaign, libraries will benefit from remembering three important guidelines: defining and understanding their target audience, educating users on the use and relevance of QR codes, and providing useful content (Odell). QR codes are both engaging and instructional when placed strategically and used to link students to content that will help them succeed in their research.

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## Tweet-a-Librarian: How to Use Twitter for Free Text Messaging Reference

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### Abstract

Reference services are advancing. Libraries now offer reference through email, chat, and even text messaging. Earl K. Long Library at the University of New Orleans has been providing two of these three methods and is now covering the third method-the elusive and often expensive text reference at no cost and with little effort through Twitter and TweetDeck.

Twitter is cell phone-friendly. This means that users can send Twitter messages and updates through text messaging. They can also send and receive direct messages to/from their cell phones. With the help of a free program called TweetDeck, libraries can utilize this Twitter function to provide advanced virtual reference. TweetDeck allows the Twitter user to view multiple columns that relate to one or more Twitter accounts all on one screen. There are columns for direct messages to the user (tweets that contain D ekl\_library), messages about the user (@ekl\_library) and messages that contain a certain term or hashtags (#unolib).

Hashtags can be used like subject headings to group tweets on the same topic together. Libraries can choose a specific hashtag for their users to use with their questions, making it easier for the library staff to find questions directed to the library. Once these tweets are located, the library staff can respond directly to the user with the answer to his/her question. By responding directly to the user, Twitter will actually send a text message to the user with the librarian's response.

Twitter can offer libraries a wonderful future. Libraries can have their own hashtags or work with other libraries using a group hashtag. In the future, librarians may even work separately across the world with the same hashtag-something simple like #libref or #ref. Much like the popular "Slamming the Boards," librarians could assist Twitter users with everything from questions about the weather to questions about research.

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### Introduction

"The only things certain in life are death and taxes." Benjamin Franklin was right about that, but he forgot to mention budget cuts. It seems as though the only certainty in libraries is budget cuts. The number of librarians who have grown weary of the phrase "do more with less" grows with each passing fiscal year. After all, there comes a point where libraries cannot even offer services they usually do, let alone do more. Utilization of Twitter won't increase the book budget or prevent the cancellation of serials but it

can expand the way libraries offer reference. Twitter is a free and relatively easy way for libraries and librarians to offer text message reference: all it takes is an email address, a distinct keyword, and librarians willing to explore uncharted territory.

### Twitter

Some people have heard the word Twitter, along with other vocabulary involving the service (e.g. follow, tweet, fail whale), but they aren't sure what it is. According to the Twitter site, "Twitter is a real-time information network that connects

you to the latest information about what you find interesting” (“About Twitter”). In other words, it is microblogging—sharing ideas, thoughts, or news within the scope of 140 characters. While that may seem impossibly short, it is actually the perfect size: long enough to get the point across, but short enough that readers don’t need to spend several minutes reading in order to understand the author’s point of view. It’s also the perfect size for creating dialogue. In other words, Twitter is a collection of conversations online.

Signing up for Twitter is easy and only requires an email address. Simply sign up at [twitter.com](http://twitter.com) with your name, email address, and a password. From that point, users are asked to create a Twitter handle. Once you do that, you are officially a Twitterer!

Twitter, like any Internet venture, has its own jargon. The service is called Twitter, and the posts are called tweets. As with the word post, tweet is actually a verb and a noun. You tweet a statement, and that statement is called a tweet. Members of Twitter can be called twitterers or tweeters.<sup>1</sup> Instead of subscribing to a particular twitterer’s tweets (as you would with online newsletters), you follow that twitterer.

Now that we’ve gotten through that, let’s try some words that do not start with tw. The first one is hashtag. A hashtag is similar to a subject heading. It is a way for twitterers to label a particular tweet, making it easier for other twitterers to find tweets about a particular topic. It is, essentially, a keyword marked by the pound sign (#).

Hashtags are used every day, but garner more attention when a particular event is occurring. For example, twitterers at this past ALA Annual Conference in New Orleans used the hashtag #ala11. This allowed librarians to comment on different events at ALA and actually discuss the conference in real-time. ALA Annual Conference even has its own personal Twitter account (American Library Association). This feature is not limited to conferences or planned events. In fact, natural disasters (such as the recent New Mexico fires, #nmfire) or political upheavals (the recent Egyptian revolution, #Egypt, #Jan25, #Tahrir) can cause twitterers to spontaneously create hashtags. In fact, in the case of political upheavals, Twitter itself can actually encourage a revolution as tweets create more and more frenzy

among local twitterers. It also allows the common twitterer to gain exposure across a country, as well as across the globe. That’s a lot of power for 140 characters.

We’ve mentioned that Twitter allows for discussion on the Internet among the entire world. In addition to using hashtags, there are other options. You can send out a completely original thought with or without a hashtag. That would be just tweeting. But what if someone else tweets something absolutely brilliant that you agree with and would also like to share with the world? Then you can actually retweet that twitterer’s tweet. All you have to do is click on the convenient “Retweet” link under that particular tweet. That tweet will then be tweeted from your Twitter account with the handy RT marking before the original tweeter’s handle (see example 1a in table 1).

Again, Twitter encourages discussion. However, in real life, people have the option between public discussions and private discussions. If you are interested in a public conversation with another tweeter, you can reply to or mention that tweeter using the @replies option. Mentions and replies are very similar: both use the @ symbol (e.g. @ekl\_library) and both can be viewed by other users. The difference is in the location of the designation. What does that mean? If a tweet starts with @username, that tweet is a reply to the other user’s tweet. If a tweet contains @username somewhere else, it is a mention. Think of it as an email—sending an email to someone versus ccing them on an email. When you send an email to someone, you usually begin the message with that person’s name. When you are ccing someone on an email, you don’t usually address them in the beginning of the message. In fact, you are more likely to simply acknowledge them later in the message (see examples 1b-c in table 1).

The word private and Twitter don’t usually go together, but what if you do want to have a private conversation with another twitterer? It is possible, and the feature is called direct messaging. Direct messaging (or DM) is a private message sent via Twitter. To do this, you can send a message through the Twitter site interface, or you can simply preface your message with “D username” when tweeting by phone. The catch is that you can only direct

message a twitterer who is following you (see example 1d in table 1).

Table 1  
Twitter Examples

Example 1a.	ekl_library: Come have donuts in the library after 7pm!  bunnyburnstein: RT ekl_library Come have donuts in the library after 7pm!
Example 1b.	pixieparfait: Do you have laptops for checkout? #unolib  ekl_library: @pixieparfait Yes, we do—three day check out
Example 1c.	feddocs: Remember to check out our blog! <a href="http://feddocs.blogspot.com">Http://feddocs.blogspot.com</a>  ekl_library: Check out <a href="http://feddocs.blogspot.com">http://feddocs.blogspot.com</a> . @feddocs has a great blog!
Example 1d.	proflonghair: Is Faith in today? #unolib  ekl_library: D proflonghair No, she is out sick today. Can I help you?

### Twitter for Reference

Because of the features explained in the previous section, Twitter can be used for free SMS message reference with relative ease. All a librarian/library needs is a Twitter account and a designated hashtag. The hashtag will be used for easily identifying questions directed to a specific library.

Once a librarian signs up for Twitter, he/she can start the process of turning the account into a reference tool. When signing up, the user has several options for a username. Some twitterers use their actual names (e.g. @sonnetireland for Sonnet Ireland, @nypl for New York Public Library); others use an alias (e.g. @bunnyburnstein for Sonnet Ireland’s Second Life Avatar). You can use whatever is the most comfortable for you and your library.

The most important part is picking a unique hashtag. When choosing a hashtag, the library/librarian should use one that is simple yet easy to distinguish from other more generic terms.

The Earl K. Long Library at the University of New Orleans, for example, uses #unolib. Using terms like #library or #reference are likely to draw tweets that are not directed to your particular library.

Once a hashtag is selected, it is important that the library make an effort to advertise that they are now using Twitter for reference. Signs with the designated hashtag and the library’s handle are great tools for attracting users. It is also important that staff understand how to use Twitter--this way they can make themselves available to users who need assistance setting up an account.

The way it works is simple. Users who link their Twitter accounts to their mobile phones can send and receive tweets through their Twitter account. When they need help with a question, the users simply tweet the question and the hashtag. Librarians, meanwhile, use a search for their library’s hashtag to identify questions directed at them. After finding those tweets, the librarians can reply to the tweet (or direct message the tweeter, depending on the nature of the question) with the answer. The user then receives a text message from Twitter with the reply to his/her tweeted question. This means that the librarian can offer text messaging reference without a cell phone plan or any expensive software.

The main thing that librarians will need to remember is how a user’s settings should look. When users sign up for Twitter, it is important that they have their accounts linked to their mobile numbers. If they do not, they will not receive text messages from Twitter. They are still free to send questions to your library via the Twitter web site, but it will not function as a text messaging service.

Users have many options when receiving text message notifications from Twitter. They can enable mobile notifications for tweets from certain twitterers. This is a good option, but it does mean that they will get a notification every time the library sends a tweet. This might get annoying, depending on how active the library’s account is. It is important to note that the user can limit when he/she receives a text message by clicking the “Turn off updates during these hours” box and selecting specific stop and start times (see fig. 1).



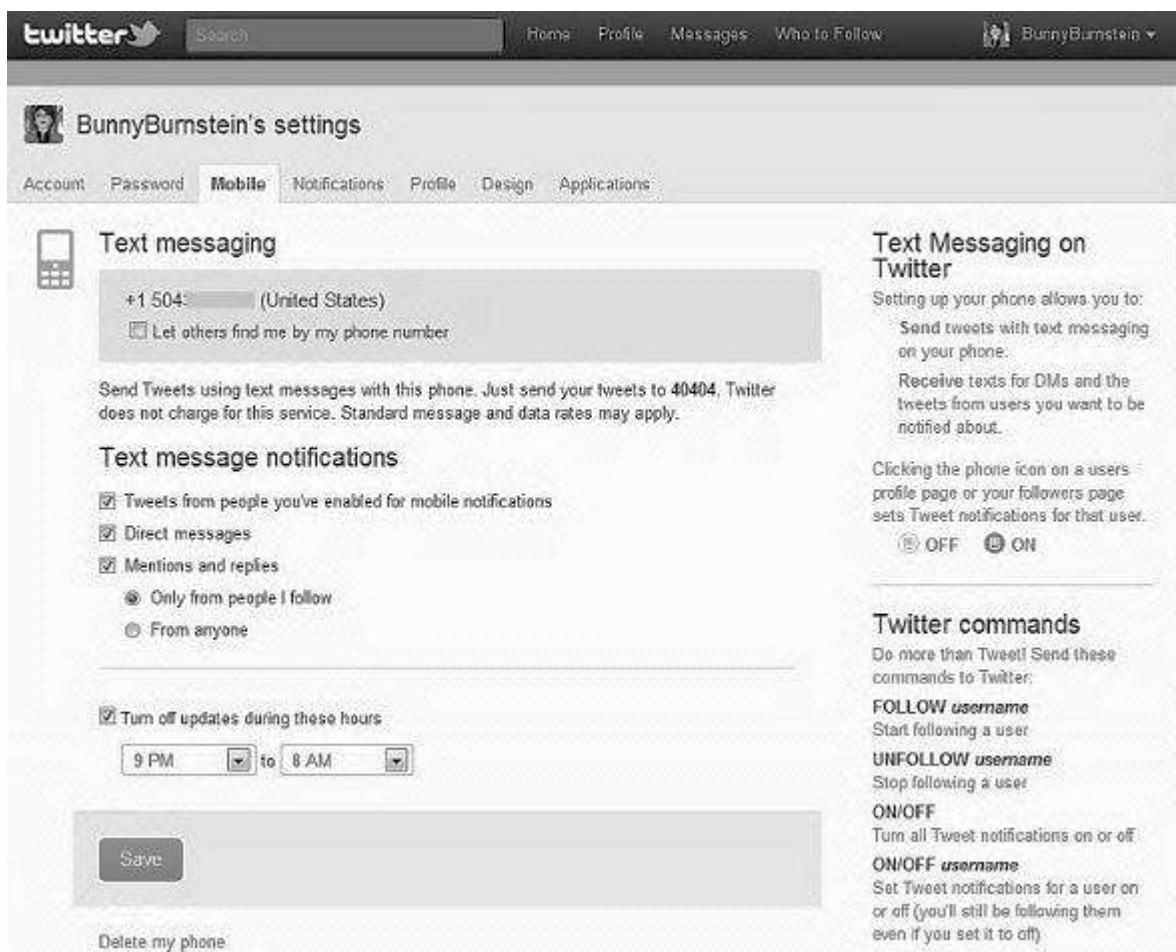


Fig. 1. Settings for BunnyBurnstein's Twitter account.

The next two options are probably more palatable to users. One allows the user to receive text notifications for any direct messages sent to his/her account. The second allows the user to receive a text notification when another tweet mentions or is sent in reply to her or him. The second option can be further limited to ensure that text messages are only received from twitterers that the user follows. This is particularly a good option for reference, as often a twitterer will ask a question that may be useful to other twitterers.

There are many tools that librarians can use to make the Twitter reference transaction easier to use on their end. These tools, along with the types of questions that can be answered via Twitter, will be covered in the next sections.

### Types of Twitter Reference Transactions

First, Twitter is not meant to replace other forms of reference; it is simply meant to enhance reference service. Phone reference did not replace

in person reference; it simply added another access point for patrons. Likewise, Twitter reference will not be the appropriate format for all reference questions. Just as there are times when a patron cannot be helped over the phone and must come to the library in person, there will be times when librarians will have to tell patrons via Twitter that they must contact the library through another medium. That being said, Twitter can actually work for a variety of reference questions, especially with the growing use of smartphones.

Most text reference questions are simple transactions that many libraries refer to as informational, directional, and/or ready reference. These are questions that would take the reference staff a few minutes or less to answer. Questions involving the hours of the building, the location of items, and various library policies are easy to ask and answer via text messaging and Twitter. This is especially useful to students who are unable to talk on the phone but can manage to send and receive a quick text. This is also useful

for finding out short, factual information (see examples 2a-d in table 2).

Table 2  
Twitter Examples

Example 2a.	brendaflora: What time do u close #unolib  ekl_library: @brendaflora 9pm, but we will be closed Monday for 4th of July.
Example 2b.	bethwbzzz: Call no for American Monroe by Baty #unolib  ekl_library: @bethwbzzz PN2287 .M69 B38 1995 and is currently available
Example 2c.	nanmccarthy: How many dvds can I get at a time? #unolib  ekl_library: @nanmccarthy You can check out 3 at a time for one week.
Example 2d.	tprncess: Who is the prime minister in UK #unolib  ekl_library: @tprncess David Cameron

While these questions seem like an obvious choice for Twitter reference, Twitter can actually be used for more involved questions too. With the advent of smartphones, patrons can now easily access library resources from the palms of their hands. If a student is in the early stages of writing a paper, the librarian can easily send that student links to the appropriate databases, subject pages, and/or libguides through Twitter. If the student has a smartphone, he/she can actually access those sites from the phone. If not, he/she can pull up the site via his/her Twitter account from a computer. Of course, links can take most of the 140 allotted characters. Using a free url shortening service (Twitter now offers this option through their own site), librarians can send the link and advice in one tweet. Even proxied links can be shortened for tweets. Along with the links to various resources, the librarian can also refer the student to the appropriate librarian (see examples 3a-c in table 3).

Table 3  
Twitter Examples

Example 3a.	seiffxiv: Need help researching Ecuador #unolib  ekl_library: @seiffxiv Try this libguide <a href="http://twurl.nl/6kpady">http://twurl.nl/6kpady</a> as a starting place, contact Sonnet Ireland sebrown3@uno.edu for more help
Example 3b.	tweetsbymlotfy: Need the treaty of guadalupe hidalgo #unolib  ekl_library: @tweetsbymlotfy can be found here <a href="http://twurl.nl/lppngz">http://twurl.nl/lppngz</a> need uno id and PIN to access off campus
Example 3c.	Gratia_Plena: @ekl_library don't know password #unolib  ekl_library: @Gratia_Plena <a href="http://twurl.nl/blrqlo">http://twurl.nl/blrqlo</a> enter student id followed by 00. PIN will be emailed to you

Of course, there are some questions which cannot be answered via Twitter and will require referring the patron to another form of reference. It is important that these interactions are not viewed as a negative aspect of Twitter reference. Keep in mind that librarians often switch mediums during a reference transaction. For instance, someone needing to renew books that are past due is often not allowed to do so online or even over the phone. In those cases, the patron is told he/she must bring the books into the library for assistance. Those instances do not negate the use of phone or online reference transactions (see examples 4a-b in table 4).

Privacy can be an issue with Twitter. One solution is to direct message the tweeter. A more secure option is to refer the tweeter to another medium of reference, as shown in the example 4b above. Questions shown in examples tables 2 and 3 do not require privacy based on content. If the user wants more privacy, however, he/she should be directed to use another means for contacting the library.

Table 4  
Twitter Examples

Example 4a.	mochimento: Can't log on to jstor account blocked #unolib  ekl_library: @mochimento For assistance please email (libref@uno.edu) or call (504-280-6549) with your student id number.
Example 4b.	jrdoyon: I need to pay a fine so I can register for classes #unolib  ekl_library: @jrdoyon We are currently unable to take payments online or over the phone. Please see Circ to pay fine. For more info 504-280-6355.

### Tools for Twitter Reference

Libraries do not need any software to run a Tweet-a-Librarian service. Some programs, however, make it a lot easier. Even better, all of those services are free. Here are some of the programs that can make Tweet-a-Librarian easier for everyone involved.

#### *TweetDeck*

TweetDeck “is your personal browser for staying in touch with what’s happening now” (“About TweetDeck”). Once downloaded onto your computer, TweetDeck allows you to search for tweets based on a variety of factors. The user can set up their account in TweetDeck to continuously search for particular hashtags and/or text within a tweet. This is a great way to develop a following. The librarians at the University of New Orleans regularly conduct a search through TweetDeck for any tweets that contain the phrase “University of New Orleans.” The results of those searches often include students or faculty from the university. Once those tweeters have been identified, the library account is set to follow their tweets. This allows the library to gain a larger presence among UNO twitterers. Through TweetDeck, you can also search for @replies and direct messages.

While all of these search features are nice, what makes TweetDeck the perfect tool is the ability to do everything through one program. When a

question is tweeted to the library, the librarian can find the question through TweetDeck and then use that same program to reply with the answer. Even better, for twitterers who use multiple accounts (e.g. a library account, a department account, and a professional account), TweetDeck offers the option of adding multiple Twitter accounts. This means that you can tweet, receive @replies and direct messages for multiple accounts through one interface. No more logging in and out of various accounts to accomplish different tasks. Finally, TweetDeck also has the handy option of shortening urls for you. This feature is great, but now even Twitter offers that option through a regular tweet via the web site. This program is also highly recommended because it is now owned by Twitter. Twitter purchased TweetDeck in May 2011, so the odds of TweetDeck fading into the background have grown slim. Another plus is that TweetDeck now has apps for iPhone and Android phones.

The only issues that we have experienced with TweetDeck involve the option to set tweets up ahead of time. This is a nice feature--the ability to type a tweet one week and set it up to post the next week. This is really handy for announcements, such as extended hours during finals. However, we have experienced the occasional technical difficulty with this feature. There were times when a tweet experienced a significant delay in being posted, causing confusion about library hours. For this reason, we also recommend SocialOomph.

#### *SocialOomph*

SocialOomph is a web-based tool that can significantly enhance the use of Twitter. SocialOomph (originally called TweetLater) “is a service that provides free and paid productivity enhancement services for social media users” (“About SocialOomph”). While there is the option to pay for special features in this program, the free features are often more than enough for the average user. Like TweetDeck, SocialOomph offers one-stop shopping for the Twitter user. Through the interface, users can update multiple Twitter accounts, schedule future updates, and shorten urls. SocialOomph, however, does not allow users to search through their interface. Searches can be conducted through the Twitter site, so the two can work together to provide a full range of options.

### ***bit.ly***

bit.ly is a url shortener that also allows the user to track the clicks of that url. bit.ly “helps you collect, organize, shorten and share links” (“About bit.ly”). While it has obvious applications for Twitter (it helps the user make the most of those 140 characters), bit.ly has actually been used for many programs, especially emails and blogs. The beauty of bit.ly is that the user can take a long, ugly url and reduce it to a shorter, less-ugly url. While Twitter, TweetDeck, and SocialOomph all offer url shortening as a feature, none of those programs currently has a way to track data on the various urls. bit.ly does. Once the user shortens a url, he/she can view real-time statistics on how many people are clicking on the link. This can be useful for justifying a Twitter account or blog, as it shows that your tweets, blog posts, etc. are actually being read.

### **Conclusion**

Libraries have been using Twitter for the past few years to promote services and make announcements about library events and hours. Until now, libraries have not seen the potential for Twitter as a reference access point. After all, how would it be any different from the current chat and email reference services libraries offer? The difference is that Twitter can work directly with text messaging to provide users with a completely different reference experience. Offering such a service without purchasing a program or cell phone plan seemed impossible. But now, through the use of a library account and <[http://ask.mosio.com/twitter/ what.php](http://ask.mosio.com/twitter/what.php)>.

a distinct hashtag, libraries can use Twitter to find questions intended for them and answer them--through a text message on the user's end. Again, Twitter is not intended to replace other forms of reference. It is simply meant to broaden the services that libraries are able to offer their users, especially in a time of such financial hardship for libraries.

For those who think Twitter reference is a passing fad, we must point out that Mosio, a popular text messaging program that many libraries pay for, is currently using a Twitter/Mosio mashup for that very purpose (“Tweeter Answers”). So why pay for a service that you can offer for free?

### **Note**

1. We will be using these terms, along with the phrase twitter users, interchangeably throughout paper.

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# Use It or Lose It: Are One-time Purchases of Electronic Resources an Effective Use of Limited Funds?

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## Abstract

Academic libraries have long collected usage statistics to make retention decisions on subscription databases and other electronic resources that have ongoing costs. Usage statistics for one-time purchased electronic resources have not drawn much attention. In recent years, the University of Kansas (KU) Libraries have purchased large packages of historical newspapers, imprints, e-books, and documents as one-time purchases. However, more than 1% of the entire library collections budget is spent annually on maintenance fees to support these resources. KU librarians have begun to question whether this is a wise use of limited funds. Two KU Librarians collected usage statistics on 44 one-time purchased electronic resources in an effort to answer the following questions:

- 1) Has use increased or decreased with time?
- 2) What types of resources get the greatest use?
- 3) Do the number of faculty and students in various departments impact usage?
- 4) Is heavy use associated with large class assignments?
- 5) Do low numbers indicate that service staff and instructors need to be better promoting these resources?
- 6) Are there any correlations between the cost and use of these resources?
- 7) Have we spent our money wisely on these resources?

The presentation will briefly summarize a review of the literature and focus on the results of this study, with implications for the future of one-time purchased electronic resources at the KU Libraries. The presenters will open discussion so that the audience may share their experiences from their own institutions.

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## Introduction

The University of Kansas Libraries (KU Libraries) have long collected usage statistics to make retention decisions on subscription databases and other electronic resources that have ongoing costs. Usage statistics are posted and updated twice a year on a staff Intranet site, making them available to subject librarians who make retention decisions. KU subject librarians are asked to review electronic resources with ongoing costs on an annual basis. Once a month a report is run which lists the database subscriptions that will expire within three months. Subject librarians receive a renewal reminder for databases in their subject areas via an online form.

When the renewal price and number of searches and sessions are entered into the form, the cost-per-use statistics are automatically calculated and the form is populated with these figures. Subject librarians consider these statistics when making retention decisions and identifying cancellations.

However, usage statistics for electronic resources that have been acquired as one-time purchases with ongoing maintenance fees have not typically been reviewed. Like many large academic research libraries, KU Libraries have invested large sums of money in journals, historical newspapers, imprints, e-books, and documents as one-time purchases.<sup>1</sup> Usage statistics for these purchased resources were largely ignored until

KU librarians calculated the on-going maintenance fees and discovered that these fees make up more than 1% of the entire collections budget. With concerns that these on-going fees might not be sustainable in difficult financial times, KU librarians began a study to determine whether these resources were good investments.

### Literature Review

Library collection managers have always faced the challenges of selecting appropriate resources for users, tracking usage statistics (in the past, how often was a book checked out?), and justifying the money spent. According to Chisman, “The electronic resource environment provides the perfect venue to supply such usage statistics to help librarians build collections that are cost-effective and focused on user needs.” However, prior to 2002, “With varying data elements and varying definitions, there was no way to compare the use between and among database providers to decide which were providing the access that patrons needed and budgets could afford (80).”

Blecic, Fiscella, and Wiberly reported on the “meaningful measurement of the use of electronic resources to inform prudent expenditure of limited collections budgets (26).” They focused particularly on the definitions of the terms “searches” and “sessions” because standardized definitions are essential to analyzing, interpreting, and quantifying the usage statistics across vendors. Before 2002, inconsistencies in vendor-reported measures caused less than accurate statistics. The need for protocols for comparing and managing this data became apparent.

In 2002, *Project COUNTER or Counting Online Usage of Networked Electronic Resources* was developed as an international standard “to ensure that all vendors count the data elements consistently (28).” It is in the best interests of the vendors to enable librarians to analyze their return on investment; COUNTER has enhanced the accurate data gathering abilities of libraries. The authors detailed circumstances that could still skew the results, such as researchers accessing an electronic resource, then exiting before performing a search when they realized they had the wrong resource, or a resource having a short timeout; thus, the researcher would have to begin a new session. They also

cautioned librarians of steps to take when working with vendor-reported usage statistics, including being aware of the effect of federated searching statistics in the final analyses.

Negrucci explained that “Justification for the decision to purchase expensive databases and e-journals is one compelling reason to study usage data. Improving awareness and access to e-resources to our library’s user community is another reason to examine this data (48).” Beals and Leshner stated that “Collecting usage data has become a necessity rather than an option. Insatiable demands for electronic resources and budgets that cannot handle those demands require quantifiable measures to defend purchases and provide equity in spending across subject areas (220).” They noted that low usage may lead to cancellation but low usage could also suggest that the resource needs to be better promoted. Botero, Carrico, and Tennant discussed similar points in regard to collection managers’ responsibility to meet user needs while being financially accountable to their institutions. In order to fulfill both of these obligations, they must have meaningful, consistent data, not only to analyze current resources and the ability to sustain them, but also to plan for future acquisitions (61, 63). As did Blecic, Fiscella, and Wiberly, these researchers noted the inconsistency of usage statistics before COUNTER and the role that this international initiative has played in assuring more reliable usage statistics. In addition to the direct monetary costs related to electronic resources, McQuillan, et al., identified the labor intensive aspects of staff time in making such resources accessible, including licensing agreements, cataloging, and subscription renewals and/or annual maintenance fees (108).

### Methodology

In an effort to answer the following questions, the authors, two KU subject librarians, asked the Acquisitions Department to provide a list of electronic resources that were acquired in recent years with a purchase price over \$2000 that also have on-going maintenance fees.

- Has use increased or decreased with time?
- What types of resources get the greatest use?
- Is heavy use associated with large class assignments?

- Do low numbers indicate that service staff and instructors need to be better promoting these resources?
- Are there any correlations between the cost and use of these resources?
- Have we spent our money wisely on these resources?

Forty-four electronic resources were identified for this study. Usage statistics for these resources were compiled in a spreadsheet for 2008, 2009, and 2010, when they were available. The authors soon discovered the usage statistics provided by the vendors were sometimes inconsistent. Some of the vendors provided COUNTER statistics with the number of searches and sessions, while others also provided the number of downloads. For this study, the authors used the number of searches and sessions. In some cases, an entire year of statistics was not available, as some resources had been purchased quite recently and the KU Libraries only have the statistics from that recent date of purchase to the present. The authors found it more effective to analyze consistent data and settled on data from 2009 and 2010 from resources with COUNTER statistics. It was useful to initially review all of the data from the forty-four electronic resources, yet only twenty-six databases had consistent data, and these 26 were ultimately the resources that the authors used for this study. Once these parameters were identified, it was far easier to determine patterns in the usage data.

After usage statistics were collected, the types of resources were categorized into the following groups based on the type of materials in the collection:

- Journals (e.g., American Periodical Series, Harper's Weekly, ACS Journal Publications)
- Historical Newspapers (e.g., ProQuest Historical Newspapers, 19th Century U.S. Newspapers)
- Historical Documents (e.g., American State Papers, Early American Imprints, United States Congressional Serial Set)
- Indices (e.g., Accessible Archives, C19, Reader's Guide Retrospective)
- E-books (e.g., Cambridge Histories Online, Early English Books Online)

These categories allowed the authors to compare the usage statistics of one type of resource to

another in order to discover whether or not one or more type of resource received more use than others.

Next, the spreadsheet was presented to the KU Libraries statistical computing consultant,<sup>2</sup> who used SPSS, a predictive analytics software package, to determine whether there was any correlation between the cost of the resources and their usage. The spreadsheet was also used to find the average number of searches, sessions, and cost per use. The statistics were reviewed to note spikes in usage at particular times during the year and also to determine whether there were increases or decreases in use over the three-year period.

After reviewing the usage statistics, the authors interviewed KU Libraries subject librarians, who were asked to describe their instruction sessions and which electronic resources they promoted for class assignments. Promotion of particular resources could account for sudden spikes in use that were observed at particular times of the year.

### Observations

As previously mentioned, the data initially collected on 44 one-time purchased electronic resources was inconsistent because of differences in reporting usage. Therefore, data for 26 of these resources that presented COUNTER statistics, from 2009 and 2010, was analyzed (When there was 2008 data for any of these 26 titles, it was also included). The resource with the lowest cost per use was the Alexander Street Press resource, Black Thought and Culture, at \$.79 per use. This resource is closely associated with class assignments in History, English, and American Studies. Harper's Weekly, which was purchased to accommodate a request by a faculty member who has since left KU, received the lowest use. Based on purchase price vs. usage, each use cost \$416.16. Some of the more expensive resources, like the U.S. Congressional Serial Set, have seen a significant decrease in use over time; its use declined from 5237 searches in 2008 to only 1162 searches in 2010. However, following a recent load of Serial Set records into the online catalog, it is anticipated that usage will increase.

The statistical computing consultant found no correlation between the cost of the one-time

Table 1  
Report

Column1		1-time price	AVG_Search	AVG_Sessions	Cost/per/search	Cost/per/session
docs	Mean	37765.0000	4748.8333	6546.4444	131.4140	7.7381
e-book	Mean	38866.2500	1370.4444	1682.6667	26.9789	83.9856
index	Mean	17505.9983	657.0000	213.0278	3019.2024	2628.3249
jnl	Mean	30707.9286	7429.1111	8118.3333	20.0208	83.3740
news	Mean	37045.7500	3396.3854	1060.3542	24.4673	95.5010
Total	Mean	33525.5593	3845.0375	2972.7149	432.5968	491.1579

purchases and the usage. He also calculated average cost per search and session based on all of the available data collected from 2008, 2009, and 2010 (see table 1).

These numbers are of concern, but as noted, data reporting has been inconsistent and KU Libraries have owned many of these electronic resources for a short time.

From an analysis of the categories listed previously, we ascertained the following averages (see table 2).

Although the cost per use of indices appears to be quite high, the most expensive index had been purchased only a few months before this study began. Documents and Newspapers have seen a significant increase in use over time and it is expected that those numbers will continue to increase. For instance, the New York Times alone is accessed more than any other single resource in this study. The other types of resources have fluctuated in use over the short time that they have been owned and it will be important to watch the usage over a longer period.

There were predictable increases in usage during certain times of the year. The highest use occurred during the months of April and May in the spring semester and November and December in the fall. As would be expected, use declines in the summer, but increases significantly when the fall semester begins. During interviews with

subject librarians, they were asked to list the resources that they promote to their students during instruction. Most of the resources they taught are highly used, but not necessarily immediately following an instruction session. Rather, students obviously use the resources when their papers are due, which may be two months after the subject librarian has introduced them to these resources. Subject librarians are encouraged that the students do remember and consult LibGuides, subject-specific guides with direct links to these electronic resources, which are highly visible on the Libraries' website. It is noteworthy that the increases and decreases in use from month to month are consistent from year to year.

### Conclusions

The authors were interested in determining whether the KU Libraries have made prudent investments by purchasing these electronic resources. It became apparent that presently we do not have enough consistent data on which to draw significant conclusions or on which to base future purchasing decisions. Gathering data over a longer time period will increase accuracy in making these fiscal decisions.

It is crucial that data collection is consistent for each individual resource. COUNTER statistics or another standard of gathering data are essential if we are to accurately draw comparisons among

Table 2

Type	Ave.	Ave. #	Ave. #	Ave. Cost Per	Average Cost
Documents	\$37,765	4748	6546	\$131.41	\$7.73
E-Books	\$38,866	1682	1370	\$83.98	\$26.98
Indices	\$17,505	213	657	\$2628.00	\$3019.00
Journals	\$30,707	8118	7429	\$83.37	\$20.02
Newspapers	\$37,045	1060	3396	\$95.50	\$24.46



the types of resources we have purchased. This study has given the authors the impetus to contact those vendors who do not currently support COUNTER standards and point out the importance not only to academic library decision-making but to the electronic resource producers themselves – they may see a decline in product sales if they are unwilling to implement necessary standards.

There is evidence that electronic resources that are promoted during library instruction sessions do get more use. Students introduced to these resources, even early in the semester, remember the relevant resource or that they can find it through a LibGuide when they begin the research to write papers later in the semester. Classes in History and English at KU have large numbers of students who are assigned research projects that are historical in nature and these one-time purchased electronic resources provide relevant information for their research. The authors are aware that they need to encourage colleagues to continue to promote these resources during library instruction sessions, which will increase usage over time.

An important consideration is increasing the number of access points to these resources. Resources that have cataloging records for individual titles within the resource get higher use. Some resource vendors now offer widgets which make it easy to insert a search box for an electronic resource within a subject guide or a class management system. With multiple access points for users, usage invariably increases.

A major factor to consider when purchasing electronic resources is the sustainability of paying the maintenance fees, which for some of these resources are significant. In some cases, the KU Libraries have been successful in negotiating waiving the maintenance fee for a resource when multiple purchases have been made from the same vendor. It never hurts to ask!

The authors are aware that this is a longitudinal study that needs to continue over time in order to provide more comprehensive data for analysis and purchase decision-making. Our current study provides the groundwork for continued statistical collection and analysis that will ultimately lead to informing KU Libraries' Head of Collections and subject librarians as to what types of one-time

purchased electronic resources are the most worthwhile investments.

#### Note

1. During this study, one of the authors, the Head of Collections at the KU Libraries, had the opportunity to lead a discussion on this topic at a Greater Western Library Alliance meeting. During her presentation and subsequent discussion, she was able to gather further information related to this issue from other academic librarians whose institutions have also invested in one-time purchases with ongoing maintenance fees.
2. The authors would like to acknowledge the assistance of Rachel Miller, Head, Acquisitions/Serials and Angie Rathmel, Head, Serials Orders and Claims Unit in compiling data, and Mickey Waxman, Statistical Computing Consultant, in preparing statistical analyses of the data.

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## **“Full Exposure” of Hidden Collections: Drake University First-Year Students Create a Living Archive**

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### **Abstract**

Cowles Library at Drake University has long been the unofficial keeper of the university’s archives and special collections, but until recently, the use of these resources has never been integrated into the Drake curriculum. For many decades, there were only a handful of times when student groups were allowed to physically tour through the publicly-inaccessible area known as the Special Collections Department. Rarely were items ever brought out of the locked “cage” which houses most of the department, and taken into a classroom for students to observe and handle. This secured area seemed to exist only to protect items from the community, not to offer access to them. To that end, two colleagues at Cowles Library combined efforts to design a First-Year Seminar class entitled, “Drakepedia: Building a Living Archive,” in an attempt to not only highlight the unique contents of our Drake University heritage collections, but also to open up the hidden collections for curricular use at Drake.

The primary purpose of this course was to create an organic, home-grown online repository in the form of a wiki “about Drake, by Drake and for Drake.” A Wikipedia entry already existed for Drake University, as is the case for many institutions, but much of the content was of the cookie-cutter variety that seemingly was shaped together by an admissions and a marketing department, with a modicum of historical content thrown in for good measure. The goal of this class was a student-created wiki, constructed from the ground up and consisting of student-authored and submitted content drawn from the resources found in Drake’s special collections and the digital *Drake Heritage Collections*.

The specific intent of the wiki was to focus on the history and stories behind the buildings, organizations, people, traditions and artifacts of the Drake University community. The instructors wanted the students to learn how to do research of this nature, where oftentimes resources available about specialized local content required digging deeper into source material not usually found in the online catalog and standard academic databases. In addition, they also wanted to include an oral history component as part of the course that would teach students how to prepare for and conduct an oral history interview with a member of the Drake community; this would enhance the wiki by adding an audible voice to the Drake “story.”

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### **Background on Drake’s Special Collections and Archives**

For over 125 years, Drake University in Des Moines, Iowa, has held the distinction of being the center of higher education in Iowa’s largest city. Drake’s rich heritage is evidenced by the fragmented pieces of institutional history housed within Cowles Library under the aegis of “Special Collections.” Because Special Collections has never operated as an official

university archive, an unknown amount of its rich history has been lost. The library has always been perceived as fulfilling the role of the university archive, although only random institutional records can be found in its holdings. Fortunately, the library has been recognized as having the status of the university’s “de facto” archive. Several departments on campus have deposited materials with the library on a haphazard basis, and the library continues to be a convenient “dumping ground” for all things university-

related. The special collection department has managed to grow due to these irregular additions of materials.

The contents of Special Collections consist of student yearbooks, student newspapers, Drake-related publications from across campus, Drake faculty and alumni publications, city directories of Des Moines, Iowa, Iowa county histories, some unusual private book collections, and essentially a general mishmash of everything directly related to Drake University and tangentially related to Drake's role in the Des Moines community. Other than an occasional gift from alums, the only active growth in the department has been the collecting and adding of materials for the Biography and Agency files. The Biography files contain newspaper clippings and random publication items about key alumni, administrators and faculty members, and the Agency files contain newspaper and newsletter publications about campus buildings, organizations and events.

### **Integrate the Library's Hidden Collections into the Drake Curriculum**

Because Special Collections in Cowles Library isn't easily accessible, nor promoted by library faculty as a key primary resource for historical research, few students are aware of the department's existence. As a result, even fewer Drake students know or appreciate how the university's "stories" residing there connect with the legacy of the institution. The contents in Special Collections are seen as being irrelevant to what a Drake University student needs by way of library resources, despite the fact that institutional treasures are housed there.

To that end, two library staff members at Cowles Library began exploring the options for integrating the use of the resources into the Drake curriculum. During the spring of 2010, there was a growing demand for First Year Seminar (FYS) courses for the upcoming fall semester, and the call was placed for more course proposals. In an effort to be more collaborative with the rest of the campus, the library administration determined that the library should step up and help fill the need. It became apparent to the library staff members that a course designed by those who work in the library could provide an information literacy-rich format that would both expose students to the basic tenets of research, as well as

also open up Special Collections as a hands-on laboratory. It was a win-win situation; not only would Drake's rich historical heritage be exposed to entering Drake students, but also the library would reap the benefits of introducing first-year students to the library and all the services it has to offer.

### **Design a Course that Uses Wiki Software**

Early in the planning process, the now-library instructors decided they wanted their students to create an online archive "about Drake, by Drake and for Drake." They were both convinced that they wanted to use a wiki format, and after consulting with colleagues in the library's System Department, they decided that *WikiSpaces* would be the best platform choice for several reasons: the subscription fee was nominal (\$1000 yearly), the web-editing functionality was user-friendly, and the server was hosted offsite. Unlike some other wiki software, *WikiSpaces* would support the various types of formats that the instructors wanted their students to use: maps, photographs, audio files, etc.

After familiarizing themselves with *WikiSpaces*, the instructors decided to use the wiki not only as the platform, but also as the learning management system, rather than Blackboard, the campus's current LMS. Students would receive "invitations" from the instructors to join the class wiki, which would allow each of them to create their own wiki within the larger course wiki. The content that they added, which would consist of their assignments would be visible only to the instructors and to the other class members; nothing would be "public" until it was deemed ready. This safe "sandbox" environment would allow students to learn the software and experiment with their own content.

The instructors' intent was to specifically focus on the history and stories behind the buildings, organizations, people, traditions and artifacts of the Drake University community. Students needed to learn how to do research about this type of content, some of which required digging deeper into source material not usually found in an online catalog or standard academic databases. Another course objective, the oral history component, would teach students how to prepare for and conduct an oral history interview with a member of the Drake community; this would

enhance the wiki by adding an audible voice to the Drake “story.”

### **Create a Captivating Course Description**

All entering students register for their First Year Seminar (FYS) during one of 5 summer orientation sessions, each session holding open 4 seats for each FYS class. Based on the written FYS description alone, students would choose their top 4 preferences, as those seats were available on a “first come, first served” basis. The library staff members wanted their course description for “Drakeapedia: Building a Living Archive” to read as an enticing invitation, as follows:

Which Drake building was bombed by terrorists in the 70’s? What returning Drake student booked a ticket on an ill-fated ocean liner called the Titanic? This seminar engages students in conducting basic historical research of and for Drake University. The class will work as a group to create Drakeapedia, which will live on as a permanent and public resource. Students will uncover long-forgotten stories as they navigate the fundamental issues of historical research and writing, conduct oral histories, and explore Drake’s Special Collections and the University Archives. This course would appeal to students with interests in creating wikis, online communities and collaborations, and students considering any major in the humanities as well as journalism, technology, law and education.

The course instructors set about populating the syllabus, being mindful to align the readings and written assignments with the class objectives and learning outcomes, listed below:

Objectives:

- 1) Learn to read and evaluate historic documents
- 2) Learn to write in different styles for appropriate audiences (academic, wikis, blogs, etc.)
- 3) Learn to prepare, conduct, and process oral histories
- 4) Learn how to use web-editing software, *WikiSpaces*
- 5) Understand the process of historical research, preservation and archiving

- 6) Work collaboratively on a group project which ultimately becomes part of the Drake Archives
- 7) Understand legal and copyright issues when researching, writing and publishing

Learning Outcomes (Students will be able to):

- Read/review library agency and alumni files and create archive wiki entries in the Drakeapedia wiki using the appropriate writing style and legal/ethical considerations
- Conduct an oral history of a Drake faculty, staff, or alum and, along with a brief biography and photo of the person, archive the project on the Drakeapedia wiki using the appropriate writing style and legal/ethical considerations
- Work together to create a group project (e.g. class history) to archive on the Drakeapedia wiki
- Attend 2 Drake events and write reflections of the experience
- Research a Drake alum, faculty or staff member and write an accurate, well-cited biography for the Drakeapedia wiki
- Participate in a tour of the State Historical Archives and the Salisbury House to better understand and appreciate archival processes

In creating the syllabus for this course, the intent was to include as many hands-on activities using the resources found within the Special Collections Department as possible without increasing the potential risk of damage to fragile items. Although Cowles Library does not have an archivist, staff members were familiar with the best practices of handling rare items. After analyzing the inventory of Special Collections, it was determined that the bulk of the material that could be used was contained in the form of file information, broken down by Biographies (alums, faculty, administrators, etc.) and Agencies (buildings, organizations, events, etc.) To alleviate the risk of damage by frequent handling, a predetermined amount of relevant documents, photographs and articles from these two file groups were photocopied for the students to use. Each wiki entry assignment required significant research based on either information gleaned from these files, or pertinent content in supplemental resources. Oftentimes, students were able to find additional information using one or both of the more recently-created Digital

Heritage Collections: Drake's student newspaper, the "Times-Delphic" or the "Drake University Yearbooks." Other newspaper databases were also consulted, as well as city directories and various miscellaneous publications about Drake's history.

In an effort to emphasize the importance of learning effective research skills, a heavy dose of information literacy exercises were included, which dealt with everything from the evaluation of quality resources to issues of copyright and plagiarism. Proper mechanics of citation style for the wiki and the necessity of a signed permission form from the oral history interviewees were both stressed. Assignments were posted with links to the grading rubrics, and the course resource page was routinely updated with readings and announcements. Using the blog feature of WikiSpaces, students responded to discussion questions, posting their responses within the required time frame.

#### **Schedule Speakers and Class Trips**

The class instructors arranged for a wide variety of speakers to visit the class, which included long-time stalwarts of Drake University who were familiar with its history, and also librarian colleagues actively involved with the digitization projects. Other visitors included Alumni and Advancement Department administrators who were able to share memories of past Drake traditions and special researchers who demonstrated their methods for "drilling down" through digital content to the high-quality, reliable content. The instructors also arranged for tours to the State Archives at the State Historical Society of Iowa and to the Salisbury House, a house-turned-museum that was property once owned by Drake University.

These trips proved to be a highlight of the course. Logistics were not a problem since both the State Archives of Iowa and the Salisbury House were within a few miles of the Drake campus. Both venues had exceptional docents who provided customized Drake-specific tours for the purposes of the class. Follow-up blog entries reflecting on the experiences were very favorable regarding the tours. All speaker visits and tour guides were sent a signed "thank you" note from the class.

#### **Involve the University's Marketing Department**

Early in the semester, the instructors decided to invite a design team from the University's Marketing Department to visit with the students about creating a unique public look or brand for the wiki. Because the wiki would be about Drake and including the institution's official logo, the brand would have to also be approved through the official channels of the institution. Plans had been made to "go public" with Drakeapedia by the end of that course's semester, so a stable, recognizable interface was necessary. During this process, the instructors discovered that the term Drakeapedia had already been copyrighted and so an 'a' was added to become Drakeapedia.

#### **Promote within University to Reach Outside Constituents**

Having worked with planning events in the library, the instructors soon realized the importance and value of promoting the class to the stakeholders outside the campus community, primarily the Drake alums. Because of the wiki format, anyone and everyone would eventually be enabled to contribute content. The instructors were particularly interested in connecting with the Drake alums. The course and the student wiki were deliberately promoted in an email announcement appearing in Drake's online alumni newsletter, "e-Blast," and hard copy version, "e-Blue." The instructors asked the Drake alumni community for contributions of personal photographs of campus buildings, explaining that their class needed additional images, particularly of buildings that had been razed. They immediately heard back from a few alumni who had photographs they were willing to share. The instructors purposefully found a way to use these photographs on the wiki, making certain to attribute ownership of the photos to the donors.

#### **Keep Connections Open for Future Endeavors**

This course was an experiment that proved to be successful at incorporating special collection material into a course. The class was also a success due to the help and input of many participants from the campus community and the local community. For an academic library with no official archive, the instructors discovered a mechanism that would enable them to start preserving Drake's rich heritage. Moreover, the

instructors found a way to engage the students who were to become the future alums of Drake, and at the same time, make connections with current alums and other interested outside constituents. Currently, the instructors are in the process of tweaking the course for another semester of digging into the “hidden” special collections.

#### **Works Cited**

*Drakepedia*. Home page. Drake University, 2011. Web. 12 July 2011.

# **From Static HTML to Interactive Drupal: Redesigning a Library Intranet that Enables Collaboration and Social Interaction**

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## **Abstract**

Intranets are essential places for academic libraries to provide security networks where organizational information is accessible at any time. At the University of Northern Iowa's library, intranet has been available for many years and over time, the thousands of pages accumulated have gradually made the site structure confusing. It is very hard to find certain information, and there is lack of search capability across the site. Ideally, an intranet should facilitate communication and interaction among 21st century workers but that is not always achievable when HTML pages are static. We experience email overloads every day because there is no place on the current site that enables library-wide discussions and conversations. User dissatisfaction indicates it is time for a redesign, whether the objective is to reorganize the site structure, add a search box, enhance communication, or reduce the amount of emails within the library.

### **Design Decisions**

A series of design decisions were made based on considerations from a site inventory, a usage survey, and an interview with another library.

#### **Site Inventory - Information Architecture and Navigation System**

Before spending time on the redesign there was a need to inventory all the pages within the current site. In this stage, we worked on distinguishing the characteristics of each file to determine logical groupings. It was a prolonged process but it turned out to be beneficial.

#### **Staff Intranet Usage Survey - Identifying the Gaps**

The survey asked respondents to point out weaknesses of the current site. Nineteen out of twenty-three participants reported that organization infrastructure challenged them the most. Several other challenges mentioned were difficulties in navigating the site, inconvenient authentication with remote login, non-intuitive organization, duplicated information, prohibitive number of links needed to find specific information, and lack of search capability, all of which users generalized as being "not user friendly (see table 3)." Suggestions for improving the site included: enhancing the menu system, regrouping some of the information, reconsidering the naming system for headings, adding a search box, and enhancing communication/interaction through creation of a staff newsletter, forming discussion groups, and creating a virtual space to fulfill social needs of staff. Luckily, these are all achievable with Drupal's database-driven platform.

#### **Interview with another Library - Learning From Others**

The University of Iowa had just launched a redesigned intranet in 2010 and graciously agreed to share their experiences with us. During the interview, we were impressed by the site's professional looking, functional organization, and the social essence throughout the site.

#### **Conceptual Framework - Building the Sitemap**

Finally, we were able to construct a sitemap based on reorganization of existing pages, utilizing results from the survey and interview.

In this paper, the authors share what they have learned from the process of moving from an HTML to a Drupal platform, and what decisions were made about redesigning the interface and navigation systems. A post survey of staff satisfaction on the redesigned intranet was conducted and those results are also shared (see table 4).

## Introduction

Providing a more efficient staff intranet has been the ultimate goal for the University of Northern Iowa Library in order to improve communication and enhance positive user experience. As results from surveying staff demonstrate, intranet usage, organization, communication, and search functionality are the main concerns (see table 3). Therefore, our strategy has been to develop an intranet site that not only hosts all the organization's documents, but serves as a virtual place that optimizes interaction and communication, and where professional partnership, social networking, and user-generated content are available and encouraged. Hence, a decision was made in 2009 to build a *Drupal* intranet that would replace the staff intranet.

## Making Decisions

First of all, the authors distributed a survey to gather staff usage preferences with the old site,

followed by a site inventory to understand the site architecture of the old intranet. Then the authors conducted an interview with two staff members at the University of Iowa Library in order to learn from their insights and redesign experiences.

### ***Staff Intranet Usage Survey: Identify the Gaps-Needs Assessment***

The usage survey contained three parts. Twenty-three (42.6%) out of fifty-four staff members responded to the survey (N=23). The first part of the survey (see table 1) gathered basic information including departmental information and the frequency in using the intranet. Not surprisingly, 91.3% of the respondents' use of the intranet ranged from daily, 2-3 times per week, once a week, to at least 2-3 times per month. However, only 47.8% of the respondents accessed *RodNet* from home.

Table 1  
Staff Intranet Usage Survey with Responses I (N=23)

In what area of the library do you work?	
• Access Services	13.0 %
• Library Information Technology	8.7 %
• Reference & Instructional Services	30.4 %
• Collection Management & Special Collections	21.7 %
• Administration	8.7 %
• Technical Services	13.0 %
• Unknown	4.3 %
How frequently do you access <i>RodNet</i> ?	
• Daily	26.1%
• 2-3 times per week	30.4%
• Once a week	17.4%
• 2-3 times per month	17.4%
• Once a month	4.3%
• Once or twice a year	4.3%
• Never	0.0%
Do you access <i>RodNet</i> from home?	
• Yes	47.8 %
• No	52.2 %



Table 2  
Staff Intranet Usage Survey with Responses II (N=23)

With what frequency do you perform the following tasks on <i>RodNet</i> ?						
	Daily	Weekly	Monthly	Seldom	Never	No Response
Update content areas	0.0 %	13.0 %	26.1 %	21.7 %	43.5 %	
Update unit pages	0.0 %	4.3 %	21.7 %	26.1 %	47.8 %	
View Library blog	0.0 %	17.4 %	13.0 %	47.8 %	17.4 %	4.3 %
View department information	4.3 %	17.4 %	26.1 %	43.5 %	8.7 %	
Find a policy	0.0 %	26.1 %	43.5 %	26.1 %	4.3 %	
Find a service	0.0 %	13.0 %	34.8 %	43.5 %	8.7 %	
Download a form	0.0 %	8.7 %	30.4 %	52.2 %	8.7 %	
View committee minutes	0.0 %	34.8 %	39.1 %	21.7 %	4.3 %	

The second part of the survey (see table 2) asked respondents about the frequency of performing different tasks with the intranet. Almost half of the respondents reported themselves never updating either a content page or a unit page. 65.2% of the respondents either seldom or never read news within the intranet. However, although 43.5% respondents reported seldom viewing department information within the intranet, 47.8% of the responses had used intranet to look up department information. Almost 50% of the respondents used the intranet to find a policy on monthly basis and 73.9% of the respondents used the intranet to view committee minutes on a monthly or weekly basis.

The third part of the survey (see table 3) asked respondents to point out strengths and weaknesses of the old site and challenges in using it. While 56.5% of the respondents found it useful for its feature of pulling things together; 43.5% reported that organization and infrastructure challenged them the most. Several other challenges reported were “inconvenient authentication with remote login”, “non-intuitive structure”, “duplicated information”, “prohibitive number of links needed to find specific information”, “lack of interactivity”, “lack of consistency”, “lack of search capability”, and “not user friendly.” Interestingly, 30.4 % of respondents preferred to keep latest 1-2 years meeting minutes while 26.1 % of respondents preferred to keep minutes in the intranet site forever (see table 3).

Suggestions for improving the site included: enhancing the menu system, regrouping some of

the information, reconsidering the naming system for headings, adding a search box, and enhancing communication/interaction through creation of a staff newsletter, forming discussion groups, and creating a virtual space to fulfill social needs of staff. Luckily, these are all achievable with *Drupal*'s database-driven platform. Etches-Johnson and Baird (268-270) provide a list of mapping requirements for *Drupal* functionality and modules they have implemented on their intranet which was helpful for us to consider.

#### ***Site Inventory: Information Architecture and Navigation System***

The challenge of redesign an existing intranet is to incorporate the old with the new. Therefore, before spending time on the redesign, there was a need to inventory all the existing pages and associated files, working on distinguishing the characteristics of each file to determine logical groupings. A *Google Docs* Spreadsheet was created and color coded for further grouping. It was a prolonged process but it turned out to be beneficial.

#### ***Interview with another Library: to Learn from Others***

The University of Iowa had just launched a redesigned intranet with *Microsoft SharePoint* in 2010. The web coordinator and her colleague graciously agreed to share their redesign experiences with us. During the interview, we were impressed by the site's professional looking, functional organization, and the social essence throughout the site.

Table 3  
Staff Intranet Usage Survey with Responses III (N=23)

In your opinion, how many years of minutes should be available on <i>RodNet</i> ?	
• Forever	26.1 %
• 5-7 years	17.4 %
• 3-4 years	8.7 %
• 1-2 years	30.4 %
• None	4.3 %
• Not sure	8.7 %
In your opinion, what are the strengths of <i>RodNet</i> ?	
• Secure location	4.3 %
• Easy access to <i>RefXpert</i> and <i>Track IT</i>	8.7 %
• Simple interface	8.7 %
• Pull things together	56.5 %
• None	4.3 %
• No response	17.4 %
In your opinion, what are the weaknesses of <i>RodNet</i> ?	
• None	4.3 %
• Pretty good	4.3 %
• Troubled login outside library	4.3 %
• Not user friendly	4.3 %
• Duplicated information	4.3 %
• No search capability	17.4 %
• Lack interactivity	4.3 %
• Lack consistency	4.3 %
• Organization/navigation	43.5 %
• Did not answer	13.0 %
What information do you have trouble locating the current site?	
• None	13.0 %
• Staff info/documentation	4.3 %
• Policy	4.3 %
• Web author(s)	4.3 %
• Confused categories	30.4 %
• Almost everything	17.4 %
• No response	4.3 %
What features would you like to see added to <i>RodNet</i> to make it more useful to you?	
• None	8.7 %
• Search engine	30.4 %
• Organized staff information	8.7 %
• Staff events/interaction	8.7 %
• Library fact sheets	4.3 %
• Hover boxes explain each category	4.3 %
• Other	26.1 %
• No response	8.7 %

## Intranet Redesign Processes

In this stage, a sitemap was created to test the flow, followed by a redesigned interface to carry out the site flow. Then a survey was distributed to gather staff input about the design.

### **Conceptual Framework: Building the Sitemap**

Based on reorganization of existing pages and with the results from the pre-survey in mind, we constructed a sitemap that consists of the home page with a site search box, top navigation for external links, side (main) navigation, main content area, library news, Tech Support links and a Café page (see fig. 2.). The subpages (children pages) were also listed in order to test the navigation flow.

## Interface Design

The interface design was based on the study of top trends in higher education redesigned websites (Foss, 2009). For example, the screen resolution was wider and has been increased from 738 pixels (see fig 1) to a fluid design that accommodates all users screen resolutions (see fig 2). Other design elements taken into account included news and events on the home page, 3D design graphics, natural textures and colors schemes, and a site search box placed on the top right corner of the site. The drafting site was created in *Adobe Dreamweaver*.

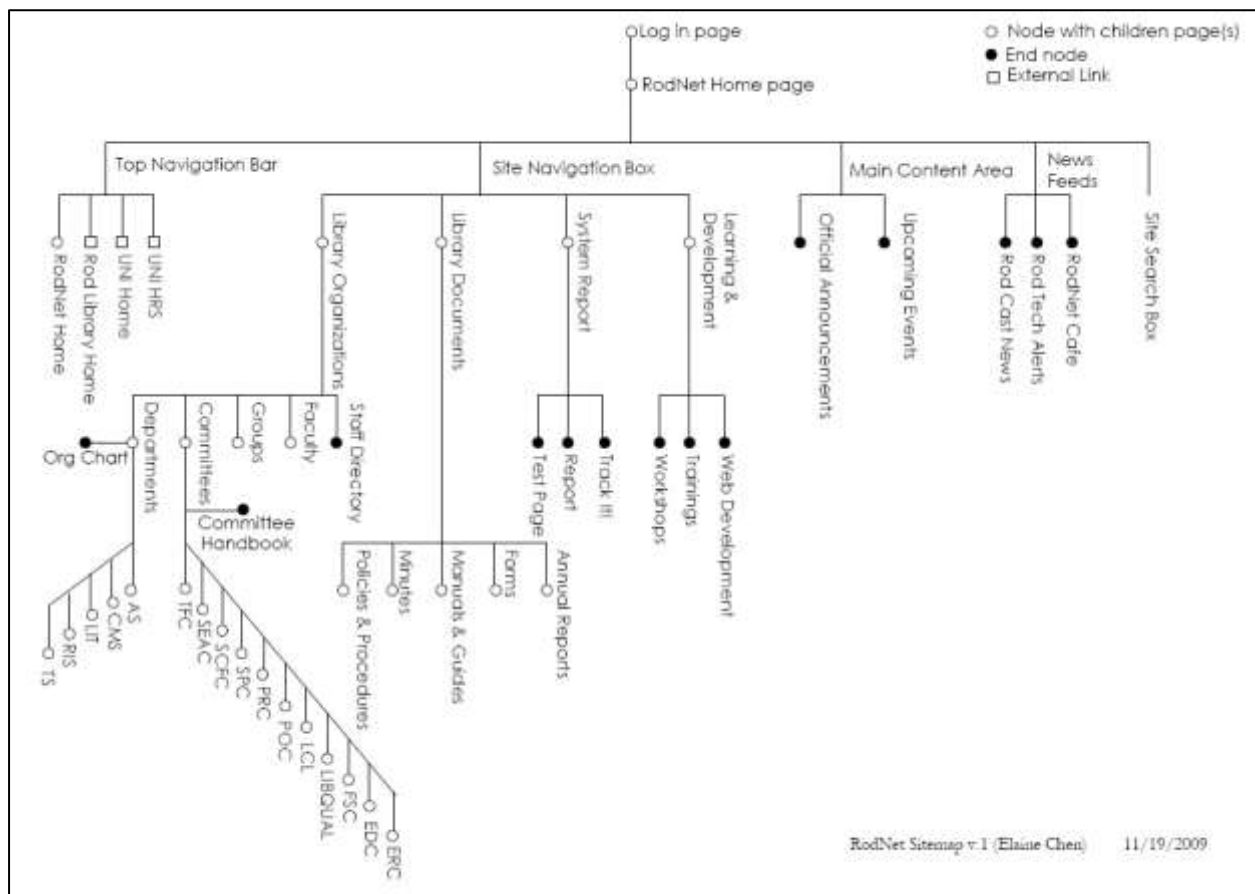


Fig. 1. Site map for the redesigned intranet.



Fig. 2. Screenshot of old staff intranet home page.

### Survey for the New Interface

A second survey was distributed to gather staff input about the new interface design. The open-ended survey questions asked:

- Any comments about the layout and design (page width, header, footer, colors, images, photos, etc.).
- Any comments about the navigations (top navigation, main navigation on the left hand

side, tab navigation for committee and department subpages, and quick links).

- What do you like the most?
- What do you like the least?
- Any additional suggestions?

Eight responses were received including six responses to the online survey, plus two personal email comments. The online survey comments are listed below:

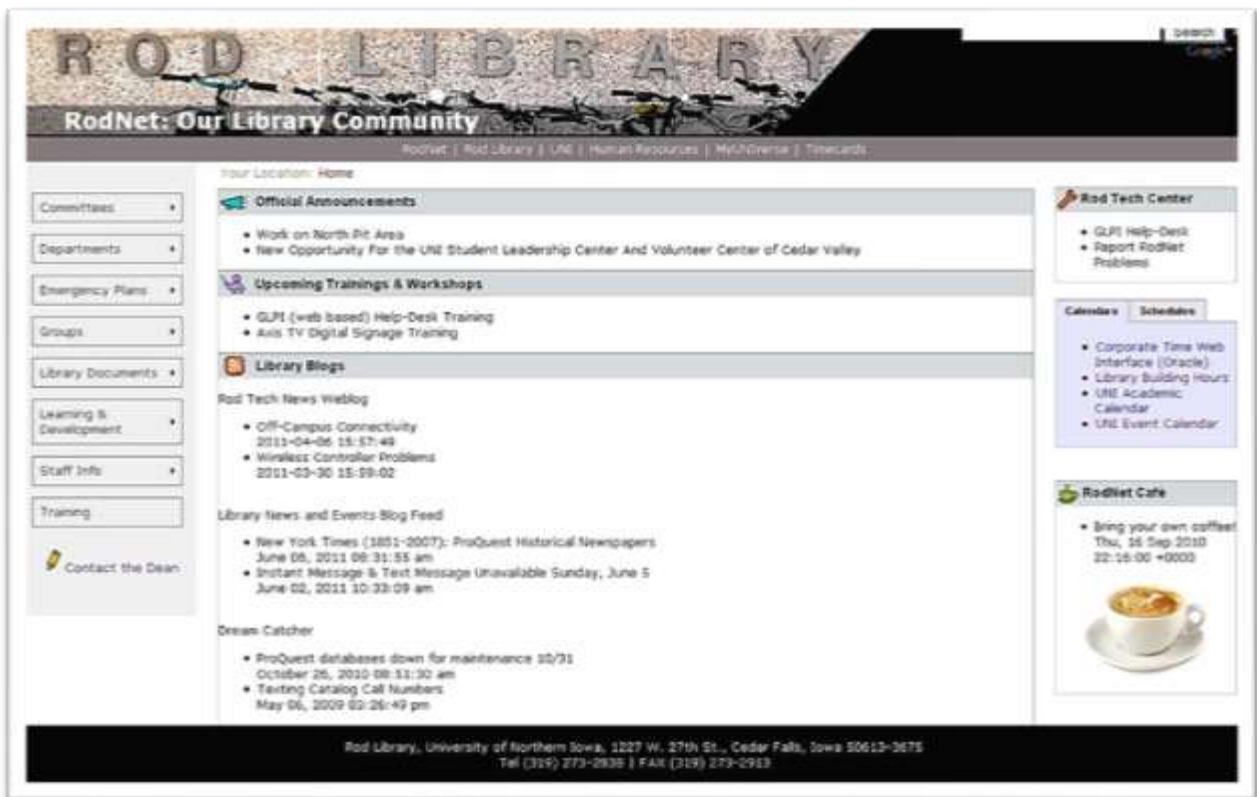


Fig. 3. Screenshot of redesigned intranet home page.

Table 4  
 Survey of redesigned interface with responses (N=6)

Survey of RodNet Redesign

Any comments about the layout and design (page width, header, footer, colors, images, photos, etc.):

- “Rod Library” image clashes with the background and doesn’t stand out at first glance.
- “The main page looks very good. I like it very much!
- I think the individual department pages should be changed because there is quite a bit of white space below the department name, and above the tabbed area in the middle. All of the department pages have this problem. Perhaps remove the information about the department head from its current place to the right of the department name? Then put the department head in the same area that the other staff and faculty of the department are. Put the Quick Links where the department head currently is. That will bring the tabbed area up so there is not so much white space.”
- It looks great.
- Is the custom search box intended to search only the *RodNet* space? I just did a couple of searches and it didn’t seem to work. A search box for the site would be awesome!
- “The following comments are my point of view. Not meant to be informed criticisms based on usability, etc.
  - Don’t like the aqua blue background on tabs.
  - Don’t like the informal feel of the site - dog image, bikes. Would prefer more formal
  - Like the reference staff page.”
- Love the new look! I would recommend taking the [image] icon off the Rod Library signage header photo. If you want to use this image, I would place it in the black empty space to the right of the footer picture. I think it detracts from the Rod Library sign. :)

Any comments about the navigations (top navigation, main navigation on the left hand side, tab navigation for committee and department subpages, and quick links):

- When you put your mouse over the “Committee”, you’re not able to see the entire list of committees. You have to scroll down to see the entire list. I believe you should be able to see the entire list without scrolling down.
- I think the navigation works very well! And the page looks very modern, which is also nice.
- Seemed a little slow, but it was probably my computer
- What is Questions and Answers? Will it be like a FAQ?
- Like the tabs for navigating within departments and sub-content.
- Don’t like the grey background for submenus on left-side in grey boxes (hover over committees or departments, or any other main heading on left)
- “We need a link to SUPPLY REQUESTS on the main *RodNet* page! There’s no link that I could find?????....Also would like to see a link to the binding page for Bibliographers on the main page. I’m always having bibliographers asking for this link and it’s buried in the T.S. Dept. pages!

What do you like the most?

- The Google search bar. The menu bar that shows the links to “My Universe, Timecards, etc.” It’s right on the homepage and you don’t have to go looking for this information.
- I like the design of the main page. It appears very attractive and functional.

- I like the new subject areas on the left hand menu. A bit more intuitive.
- Don't know
- The new picture! It's better than the current *RodNet* pictures of staff.

What do you like the least?

- When you click "Committees", you don't get the entire list at one glance. You have to scroll down to see the entire list. Also, at first glance, the image with "Rod Library" doesn't stand out. It clashes with the background of the image. I believe "Rod Library" should stand out more.
- I don't like the way the individual department pages are formatted.
- A lot of black in the header- too much?
- Don't know
- I would move the *RodNet* Cafe down and put the GLPI and Supply Requests link up higher....those are more widely used by staff.

Any additional suggestions?

- Changing the image (dog with leaves) on the homepage would be nice as our season changes.
- No more suggestions at this time. Thanks!
- Not at present. Nice to see forward progress on this.
- GREAT JOB! Thanks for all your hard work!

Overall, the comments were very positive. With some revisions and testing, the redesigned site was ready to move into *Drupal*. In 2010, the site was recreated in *Drupal* by the library's webmaster and a student assistant with PHP programming skills. At this time, each department was responsible for reviewing their own pages in the old site and to decide what to keep and what to delete. Likewise, each library committee and work group was responsible for cleaning up their content folder such removing old information and orphans, and fixing links.

With *Drupal*'s database-driven functionality, the main content area will be the central place for library's announcements and other RSS news feeds; this area allows for comments in order to encourage library-wide conversation and to reduce email loads. To foster a social networking, each individual will be able to post entries in the *RodNet* Café box for social events and personal announcements. However, as Battles (263) pointed out, "*Drupal* obviously was an important part, but it remains merely the vehicle that

allowed for the achievement of goals." Whether the new *Drupal* intranet can provide us new opportunities to participate and collaborate more with our colleagues will require a post-survey to find out. Due to the time constraints, we were not able to release the new site when this paper was prepared.

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# Demographic Trends of College Students Today & Tomorrow: How Do We Entice Them to Use the Academic Library?

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## Abstract

Profound challenges lie ahead for U.S. higher education. Population analysis shows us that shifting student demographics may prove to be the most formidable change ever for American colleges and universities. Millennials, America's newest generation, are the most ethnically and racially diverse cohort of youth in the nation's history-called "digital natives", the first in human history to regard behaviors like texting, along with mobile phones and social media usage, not as extraordinary inventions of the modern era, but as everyday parts of their lives. Who are our future college students? How do we tailor library services to meet their needs?

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## Introduction

As stated by Lippincott in "Educating the Net Generation," "there is an apparent disconnect between the culture of library organizations and that of Net Gen students." Although academic libraries have continually updated their content delivery platforms, their reference presence, and even their hours to accommodate students' service preferences over the past thirty years, we are barely keeping pace with the information-seeking behaviors of college freshmen as the Internet and other advanced technology have become omnipresent in our students' lives.

Most historians agree there are several distinct generations that were born in the US during the twentieth century. Among them are included: the Baby Boom Generation (1946-64), Generation X (1965-81), and the Millennial Generation (1982-2003). Although the spans for each generation are not definitive, the cutoffs usually differ by only a year or two. These generational groupings share common formative life experiences and other distinctive identity features ("Generations and Generational Conflict".) While earlier generations learned to use information through print, Millennials and those born since have taken

a digital path. For the purposes of this paper, we will use the collective term "Next Gen" when referring to Millennial and post-Millennial generations, the group of students 29 years old or younger.

Next Gen students in the US are the most diverse cohort of youth in the nation's history ("*Knocking at the College Door*"). Major aspects of these rapidly changing demographics that impact Next Gen students' use of academic libraries is that there will be many more freshmen who are immigrants or children of immigrants who do not speak English at home, or who are the first in their families to attend college (Asher, Case, and Zhong 264), or who are experiencing economic difficulties (Hamilton and Marcus). Other characteristics prevalent in the literature about Next Gen students are that they lack college readiness and that many of them grew up not seeking information in a library setting, whether at their local public library or their K-12 school libraries (Flores and Pachon 7, Adkins and Hussey 461). Conversely, many of these students are considered "digital natives" and are the first generation to regard behaviors like texting, mobile phones, and social media usage as everyday parts of their lives (Lenhart et al. 9).

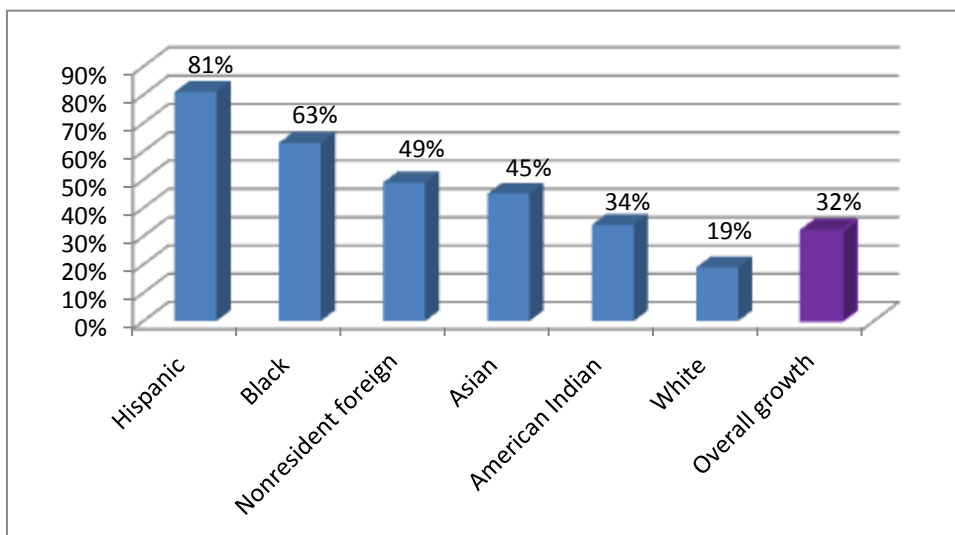


Fig. 1. Higher Education Enrollment Growth by Race/Ethnicity, 1998-2008  
Source: Almanac of Higher Education.

These technology-inherent learners are used to group-work, multitasking, and figuring things out for themselves (Lippincott, “Net Gen”). How do we tailor library services to meet all these divergent information needs?

Is the dichotomy between the expectations of the academic library creators (i.e., librarians) and the service users (i.e., students) too great a hurdle to overcome? According to recent ALA demographics studies, over 70 percent of ALA’s membership are librarians 35 years of age or older, predominantly of the Baby Boom Generation (50%) and to a lesser extent Gen X (20%). The mindset characteristics of older generations are quite different from those of Next Gen. As far as diversity, an earlier ALA report, *Diversity Counts*, states that, “if libraries are to remain relevant they must be willing to not only reach out to diverse user communities but to build a workforce reflective of that diversity” (Davis and Hall 4).

A scrutiny of the demographics of Next Gen students should benefit academic librarians by improving their understanding of the mental models of current and future college students. This will in turn hopefully enable librarians to design offerings that will entice students to use library services to the fullest extent possible and equip those students with the best resources in their research arsenal, so they are better able to succeed in higher education and beyond.

## Student Demographic Trends

### Current Enrollment Trends

During the second half of 2010, the *Chronicle of Higher Education* published a series of charts in the *Almanac of Higher Education 2010*, using data from the US Department of Education (DOE) and the University of California at Los Angeles (UCLA) Higher Education Research Institute (HERI).

The *Chronicle* analyzed the data and looked at enrollment growth over a span of 11 years, from 1998 to 2008. Looking at race/ethnicity in postsecondary education, they found that the overall amount of growth in enrollment occurred as follows (see fig. 1).

In looking at different characteristics of freshman of 4-year institutions, UCLA’s HERI surveyed freshman in 2009 about their demographic characteristics and their opinions towards college and learning. These freshmen were mostly age 18 (68%), spoke English as their native tongue (92%), and were white (73%).

Several of the data points were compared to a 2004 survey asking most of the same questions. More students indicated in 2009 than in 2004 that their mothers or fathers were unemployed, that they were going to use loans, and that they were concerned about paying for school. The majority of freshman indicated that one factor in their school selection was that the school’s graduates get “good jobs.”



The freshmen in the 2009 survey, in responding to questions about their approach to learning, indicated that most took notes during class, studied and worked with other students on assignments, asked questions during class, and accepted mistakes as a part of the process of learning. Only about a third of the respondents indicated that they evaluated “the quality of reliability of the information” they received or looked up scientific research articles and resources. Most believe they will make at least a ‘B’ average (*Almanac of Higher Education*).

### **Future Enrollment Trends**

In March of 2011, DOE’s National Center for Education Statistics (hereafter NCES) updated their annual report, *Projections of Education Statistics to 2019*. Analysis of NCES data shows that from 1994 to 2008 (the last year of actual data available) total enrollments in the nation’s degree-granting institutions increased 34 percent (slightly higher than the 1998-2008 figure mentioned previously) and additionally total first-time freshmen enrollment increased 42 percent over the same 14-year period. This upward trend is expected to continue and projections indicate that over the next 11 years there will be a further increase of 17 percent—to 22.4 million students by 2019.

Between 2008 and 2019, specific demographic details within NCES’s projections, show that enrollment numbers are likely to increase:

- 12 percent for students who are 18 to 24 years old; 28 percent for students who are 25 to 34 years old; and 22 percent for students who are 35 years old and over.
- 12 percent for men; and 21 percent for women.
- 17 percent for both full-time and part-time students.
- 16 percent for undergraduate students; and 25 percent for post-baccalaureate students.
- 13 percent overall for first-time freshmen (within this grouping, 8 percent for men and 18 percent for women).
- 5 percent for students who are American Indian or Alaska Native; 7 percent for students who are White; 30 percent for students who are Black; 30 percent for students who are Asian or Pacific Islander; and 45 percent for students who are Hispanic.

Using NCES data, the Pew Research Center further elucidated several trends among first-time freshmen enrollees in the report entitled, *Minorities and the Recession-Era College Enrollment Boom*. A record 2.6 million first-time, full-time freshmen were enrolled in the nation’s degree-granting institutions in fall 2008. This represents a 6 percent increase—or 144,000 more freshmen—over the 2007 freshman class and the largest since 1968. The Pew Research Center researcher attributes this phenomenon to two factors. The first factor is that the nation’s high school graduating class in 2008—at 3.3 million—is estimated to have been the largest ever. The second factor is that record rates of high school graduates are immediately enrolling in college. In October 2008, 68.6 percent of high school graduates were enrolled in college in the fall immediately after completing high school. This trend occurred again in October 2009 when a record 70 percent of high school graduates immediately entered college in the fall after their graduation. This is a historical high for the data series, which began in 1959 (Fry)

Interestingly, around three-quarters of the freshman enrollment boom is due to minority freshman enrollment growth, which reflects the changing demographics of the nation’s high school graduating classes. Also, the boom was highly concentrated in a limited number of states—California alone accounts for 35 percent of the nation’s total freshman enrollment increase from 2007 to 2008. Other heavily Latino states—specifically Arizona, Nevada, and New Mexico—also experienced above-average growth in freshman enrollment (Fry).

### **Information-seeking Behaviors of Next Gen Students**

How do Next Gen college students seek information? How do students conduct research for academic assignments? Because of growing up in the digital age, and being continuously connected to the Internet, do they exhibit generational styles that are markedly different from previous generations?

According to the seminal book, *Born Digital: Understanding the First Generation of Digital Natives*, by Palfrey and Gasser:

Digital Natives are coming to rely upon this connected space for virtually all of the

information they need to live their lives. Research once meant a trip to the library...Now, research means a Google search—and, for most, a visit to Wikipedia before diving deeper into a topic. They simply open a browser, punch in a search term, and dive away until they find what they want—or what they thought they wanted (6).

Prensky postulates that children and teenagers raised with a computer actually think differently from adults; their cognitive structures work in parallel, rather than sequentially as older generations were taught to do. He states that educational systems have traditionally been dominated by linear thought processes that may slow down learning for Next Gen students who are used to action-packed videogames, 30-minute TV shows, and surfing on the Internet. He says, “our children are out furiously retraining their brains to think in newer ways, many of which...are antithetical to older ways of thinking” (3).

Overwhelmingly, it has been shown in study after study that a majority of college students turn to the Internet first for research (Biddix, Chung, and Park 180). Because many students are overconfident of their searching skills (Holman 24) and unaware of the personalization aspects of Google, they do not realize that their search results are being ranked for relevancy based on cookies and/or other IP-based information gathered by the search engine (Pariser).

Numerous studies stated that Next Gen students tend to be less discriminating in the sources they use; they often scan materials for what they are seeking instead of reading an entire article; they value convenience and ease-of-use over quality; and although they appear confident in their information-seeking abilities, they lack sophistication in structuring their searches and fail to realize there are better sources they could be using to find more targeted answers. (Biddix, Chung, and Park; Lippincott, *Net Generation Students and Libraries*; Palfrey and Gasser)

Other studies have found that students utilize simple keyword searches that often contain misspellings or incorrect logic. They prefer to utilize natural language search strings in a single, simple interface that doesn't allow for more complex search strategies and that automatically

corrects spelling mistakes. Because of their lack of in-depth reading of materials, students rarely modify the searches they conduct and tend to utilize only those links in the first few pages of results. (Holman; Lippincott, *Information Commons*)

Barnes and Peyton state that, in addition to their preference to search for information first and foremost on the Internet, students also want to access information when and how they choose, usually not inside the library; they expect access to all information in a variety of formats at all hours of the day. They appreciate feedback from others as long as it's not condescending and “they enjoy learning through stimulating, hands-on activities and through collaboration.” Undergraduate students appear to want to waste as little time as possible and so have zero tolerance for any delays, because they are so habituated to instantaneous connection and technology.

In a huge, multi-institutional study by Head and Eisenberg in 2009, the researchers concluded that students were “challenged, confused, and frustrated by the research process.” The most difficult part of research for them was “figuring out how to traverse complex information landscapes” and that students were frustrated in locating materials they wanted or even knew existed (13).

### **Next Gen Service Recommendations**

Given the demographics of the college student today and tomorrow, how do we entice them to use the library's services? In an age of ubiquitous information, how do academic librarians adapt and improve the library's services to stay relevant and necessary? The good news is that college libraries are regarded as trustworthy and valuable by students (De Rosa et al. 54). The hurdles to information access can be lowered by increasing the seamlessness between the sources that students turn to on a regular basis (such as Google and Wikipedia results) and the library's content in academic electronic resources. Librarians can help their students discover their library's resources by signing up for Google Scholar's Library Links and/or Library Search programs which are both available at no cost. Libraries have made progress in adapting to the changing technological wishes of Next Gen users by adapting reserves and reference services into

Table 1  
Percentage of Higher Education Credentialed Librarians by Race/Ethnicity, 2000

Race/Ethnicity	2000
White	85.6
Black	4.8
Latino	1.5
Other	8.1

Table 2  
Percentage of Higher Education Credentialed Librarians by Gender and Age, 2000

Characteristic	2000
Female	69.9
Male	30.1
Under 35	12.5
35-44	22.6
45-54	39.9
55-64	20.5
65 or older	4.5

Source: Godfrey and Tordella 12 and 28.

virtual formats. Some libraries have adopted an “information commons” model of physical space that allows for group collaboration, technological experimentation, and new pedagogical applications (Lippincott, “Info Commons”).

Librarians can also enhance their class pages by creating specialized pages with embedded resources in the course management software (hereafter CMS) utilized by their institution. Take time to communicate with faculty and use their input to create interactive tutorials and pathfinders for use on CMS pages, so that students can view training videos and other multimedia on their own time and at their point of need introducing subject-specific resources and resource-specific search strategies. Providing ready-made CMS modules will be a boon to faculty looking to include information literacy in their courses, and will save time for students who will not need to remove themselves from coursework to find relevant information.

Given that mobile phone penetration among young adults (aged 18 to 34) is higher than that

of all US adults (95% versus 85%) (Zickuhr 1) and teens have a “deep comfort level with [their] mobile phones” (Docksai 11), the academic library should be providing mobile access to information about the physical collection as well as full access to all electronic resources within their virtual collection. Through both the mobile and traditional portals, the library’s website and Online Public Access Catalog (hereafter OPAC) should be re-designed to be visually appealing, intuitive, and utilize Web 2.0 technologies (wikis, blogs, RSS feeds, podcasting, virtual reference services, federated searching) to encourage community building and online social media interactivity.

To accommodate increasingly prevalent student smartphones, Quick Response (hereafter QR) codes could be incorporated throughout the physical library to link to virtual resources with additional information to deliver context appropriate help. Examples of using QR codes include: linking to scheduling software to reserve a room; ringing a phone number within the library to provide phone reference support; starting a text message for interaction with the text-a-librarian service; providing or importing contact details for a librarian or library staff personnel that are not at their desk; creating a scavenger hunt; storing information for future reference; providing links to e-journal backfiles when the print copy is shelved in remote storage; and enabling your OPAC to generate QR codes to allow students to scan and locate a physical resource. In short, basically anytime that automatic entry can replace manual keying of information on a student’s phone to save time and effort (Ashford).

A concerted effort to reflect the diverse demographics of our students in academic librarian staffing is essential. The tables below show the race, gender, and age distributions of academic librarians during the new millennium (see tables 1 and 2). Statistics from a variety of sources support the long-held stereotype that librarianship is filled with white women, but in looking at the changing demographics of the Next Gen students, one can see a vital need for a more diverse group of professionals. Further study should be done to note what languages are spoken by our incoming students as compared to languages spoken by our librarians.

Instruction sessions cannot be uniform any longer. Large demographic shifts in undergrads require the application of different pedagogies to reflect many different learning styles. Librarians should adjust their instruction sessions to work on specific research topics and not utilize simply a blanket information literacy course at the beginning of the semester. Group work is to be encouraged, but perhaps an adaptation of instruction style could benefit the technologically-capable Next Gen student. Both the Fairfield University library's *Library Scene: Fairfield Edition* (ACRL's March 2011 PRIMO Site of the Month) and the Massachusetts Institute of Technology *Environmental Detectives* were created as bibliographic instruction computer games that are effective at teaching critical thinking in group settings (Lippincott, *Net Gen*). To serve the growing number of distance education students, an online instruction session would be optimal. One method might be to have a virtual scavenger hunt that can be used both on- and off-campus.

This is but a cursory glimpse into the demographics of Next Gen college students, and possible methods by which to understand and serve them. The tectonic changes in demographics and technological savvy of college students are well worth the attention of library service providers. Librarians need new skill sets and a willingness to adapt in order to incorporate new services and pedagogical schemes for our students.

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# **A Winning Strategy: University Library and Athletic Department Partnership**

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## **Abstract**

One of the University of Houston's strategic directions towards achieving status among top universities in the nation is athletic competitiveness. The expected outcome is to produce well-rounded student athletes who can perform well on the field and in life.

To help, the UH Libraries decided to start expanding the role of the subject librarian to also serve campus units like athletics. The athletics liaison role was created to take a distance education approach to accommodate to student athletes' demanding schedules, which include training, practice, and traveling in addition to classes.

The athletic liaison librarian role was one that had to start from scratch and is constantly a work in progress. Only vague institutional memories of a similar program done in the past exist. Also, very little literature has been written on the topic of library outreach to athletic departments. However, with persistence, the help of strong allies within library administration and athletics, the role is showing signs of making an impact. Some services that have been implemented by the liaison librarian are Athletic Center reference hours, student athlete tutor training, presenting at orientations, and coordinating library staff to support students at games.

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## **Introduction**

University of Houston Libraries launched an outreach program in the fall 2009 semester with the goal of extending library services to student athletes who often have little free time to physically visit the library due to sport and academic obligations. How that goal would be achieved was anyone's guess at the time. This paper will follow a new library outreach program to the athletic department from its inception and through its journey up to now.

## **Literature Review**

There is a limited amount of articles that cover outreach to student athletes. If one would go by the span of publication dates, the articles date back to the late 1980's and there appears to be waves of more interest in the subject around 2000-2001 and 2006 to 2010. The articles describe valuable strategies to student athlete outreach that can be categorized into these general outreach methods: bibliographic instruction and promotions or marketing.

In the area of bibliographic instruction, Melba Jesudason from the University of Wisconsin-Madison set a foundation in her 1989 article introducing the library community to the recently passed NCAA Proposition 48 that required athletes to follow academic guidelines in order to keep their scholarships and discussed strong reactions to this mandate that accuse the system of alienating black athletes who often come ill-prepared for college due to broken school systems (13-20). The article outlines some strategies in how libraries could help athletic departments adjust to Proposition 48 like conducting two library instruction sessions in the evening time when student athletes are freer in their schedule (19). Phyllis L. Ruscella takes a different angle from Jesudason on the academic capability of student athletes in her article and argues that student athletes are actually "comparable to those of other undergraduates with similar time limitations" according to University of Central Florida's campus and library surveys (233). The University of Central Florida Library also conducts two evening instruction sessions, but focuses on information

literacy skills that do not repeat content covered in English Composition I and II (Ruscella 234).

Instead of reinventing the wheel, some libraries used the non-library student athlete support programs already in place to implement library instruction and services. The Odum Library at Valdosta State University and the Washington State University Libraries have both implemented library instruction sessions through an academic and life skills program sponsored by the NCAA and already in place at their respective institutions called CHAMPS, Challenging Athletes' Minds for Personal Success (O'English and McCord 145; Puffer-Rothenberg and Thomas 136). Librarians from those institutions noticed a gap that library skills could fill and communicated with their athletic departments' administration to make the addition. In Davidson's and Peyton's article, Mississippi State University employed library instruction in athletic academic tutor training and freshman football orientation (Davidson and Peyton 63-77).

In addition to library bibliographic instruction, libraries have collaborated with athletic department for marketing that prove beneficial for both. Washington State University Libraries produced three advertising campaigns that included Student Athlete of the Week, "Fun Sports Facts" trivia announced over the football stadium's loudspeaker, and newspaper ads featuring fun citations from scholarly publications (O'English and McCord 148). Teresa Williams from Butler University capitalized on the success of the 2007 men's basketball team in the NCAA tournament to produce student-centered advertising with a popular READ poster of the team (Williams 235).

### **Background**

The University of Houston is a Division I urban public university based in one of the largest and most culturally diverse cities in the United States and its student population reflects that. The university serves more than 38,500 students and is constantly growing in size.

The arrival of a new University president in 2008 spurred the University of Houston community to engage in a Tier One campaign with the goal of becoming nationally recognized among the best colleges and universities. To reach this status, the university adopted six goals to help achieve this

feat: Nationally Competitiveness, Student Success, Community Advancement, Athletic Competitiveness, National and Local Recognition, and Resource Competitiveness ("University of Houston Goals"). The university's efforts were rewarded when the Carnegie Foundation for the Advancement of Teaching designated University of Houston as a top-tiered research university. In addition to this designation, the university strives to become recognized for being an institution with a reputation of student success.

The University of Houston Libraries is seen as a strong partner in supporting the university and its goals. The flagship campus' library system includes a main library, M.D. Anderson Library and three branch libraries, Art & Architecture, Music, and Optometry. As for resources, libraries contain 2.5 million books, 50,000 electronic publications, over 300 computers, and over 100 staff members.

### **Why Now?**

Why start a library outreach program to the athletic department? The combined timing and readiness of three groups on campus compelled the libraries to take action.

The UH Athletic Program has 300-400 students who participate in 14 sports: baseball, softball, men's and women's basketball, golf, football, men's and women's cross country, men's and women's track and field, swimming & diving, tennis, volleyball, and soccer. Student athletes are often under pressure to abide by stricter requirements and schedules than most traditional students. According to NCAA.org guidelines, Division I athletes must meet 40% of their degree credits within 4 semesters and no academic probation is allowed after sophomore year ("Eligibility"). In addition to this academic guideline, the student athletes must still fulfill their athletic obligations by attending life skills classes, competing, attending practice, weight training, and traveling. Men's Basketball players miss the most days from class due to traveling with an average of 22 days within a semester. Due to these time restraints and the isolated location of most athletic facilities, many student athletes find it difficult to visit the library on the other side of campus and other support units.

The UH Libraries has a Liaison Department consisting of 13 public service librarians whose roles traditionally involved connecting with subject departments and colleges to help fulfill their learning, teaching, and research information needs. Liaison librarians usually carry out collection development, research assistance, and user instruction by requests. Recently, the liaison librarian role has gradually evolved to reach out to student groups and campus units such as international students, the Honors College, and military veterans. Just like with academic departments, undergraduates, and graduates, liaison librarians could custom tailor or organize resources in a way that is better understood by that particular user group.

The University president specifically and publicly acknowledged that success of the athletic program is integral to the university's overall growth and competitiveness ("Tier One FAQs"). As mentioned before, the athletic department's performance on and off the field is a focus of one of the university's goals, Athletic Competitiveness. The goal states, "UH will provide a comprehensive educational experience for its students and within this context, it will seek to build the strongest athletic program possible" ("University of Houston Goals"). The UH libraries are always committed to helping the university achieve its goals and found an opportunity to step in and help.

### **Implementing the Library Outreach Plan**

The first step taken in constructing an outreach program from scratch was eliciting any institutional memory of library-athletic department partnerships from veteran librarians. Unfortunately, there were no leads. Second, a literature review was conducted to get an overview of what is expected in an outreach program to student athletics and compile potential ideas to try. Third, a meeting was arranged with the Associate Athletics Director for Student-Athlete Development, who supervises student athletes' academic and life skills programs. She was pleasantly surprised the library was interested in helping the athletic department and was curious in what services the library could offer. We started by talking through the academic resources the athletic department provides its students. Since then, Maria Peden has been an energetic ally of the library.

Most student athlete resources are located in the Academic Center of Excellence (ACE) facility located within the Athletic Center. It houses a small computer lab, approximately 10-12 private study rooms, 2 meeting rooms, and offices for 5 academic counselors, a tutor coordinator, and outreach coordinator. Since practice facilities are so close to ACE and the Athletic Center, student athletes often spend their free time there in between classes, meetings, and practices. Therefore, the director and I agreed we could start off with holding desk hours in the computer lab so students would begin recognizing their librarian.

There have been various ways of conducting desk or reference hours over 2 years. To promote the services, the Director for Student-Athlete Development would often announce my arrival to academic counselors and students sitting in the study rooms and the computer lab. Also, signs were made and posted on the lab door to alert students to when and where a librarian would be to assist with research assignments. Despite these efforts during the first semester, students would only ask typical computer questions asking about printers and missing staplers in the computer lab. With consent from the academic counselors and the director, desk hours were moved to an assigned study room for the second semester, which had similar results.

Even though students never visited during desk hours in the computer lab or study room on their own, academic counselors gradually began referring students to see me. Then it was realized the best way to help students is to help their academic counselors. Academic counselors are assigned one or two sports, in which they monitor those students' academic progress on a daily or weekly basis depending on if students are academically at-risk. Counselors may also hold study halls at various times in the evenings and weekends. They are in the perfect position to identify each student's concerns and weaknesses, which may be research skills. A survey to find out which hours I could best serve the athletics academic program was sent to counselors, and I received responses from around half of them. Library desk hours held in freshman and sophomore football study halls on Sunday afternoons during mid-terms were a result of the survey's feedback. Connections to the athletic academic counselors also led to library



instruction requests from a counselor who teaches an introductory Human Development and Consumer Science class made-up of mostly of student athletes. Since the counselors mainly referred students for research assistance by e-mail, I tested suspending regular desk hours and reserving ACE visits for student consultations one semester. I received informal feedback from various academic counselors they personally preferred if desk hours were continued in the facility. Therefore, ACE regular desk hours will start again in the fall 2011 semester.

ACE allowed connections to various other groups within the Athletic Department to happen. Issues with library electronic resource access were discovered in the computer lab and required persistent communication with the Athletic Center's IT manager. An invitation to the University of Houston's Student-Athlete Advisory Committee (SAAC) to introduce the library's services in ACE led to student athletes proactively seeking out research assistance and requesting a consultation. There were also invitations to a freshman student athlete orientation, which eventually phased out into the university's general new student orientations, and the department's tutor training sessions. Both opportunities usually involved a 5-15 minute presentation giving an overview emphasizing those library services that are accessible outside of the library building.

In the meantime, a library-athletic department relationship was being forged on the administrative level. Two UH Libraries' associate deans were appointed to the Athletic Advisory Committee, an group selected by the University president to advise on the direction of the athletic department. Since one of the associate deans oversees the library's Liaison Services department, she often meets with me to make sure I am aware of athletic initiatives and for me to report any new developments from the library side.

### **Future Directions**

Big steps have been taken to create a connection between the University of Houston Libraries and the University of Houston Athletic Department, but further steps must be taken to turn it into a solid partnership.

An online resource guide has been created through the platform, LibGuides, for student athletes. It compiles basic research databases, links to online guides of classes student athletes most often take, and sports newsfeeds. The intent of this resource guide is to be a one-stop place for student athletes to seek information that is most relevant to them. The guide was enthusiastically accepted by the Director for Student-Athlete Development and academic counselors. They suggested changing the previous title, Resources for Student Athletes, to something more inclusive to those in the UH student body who have similarly hectic schedules as student athletes. It is now titled Coogs on the Go! Another suggestion made was to have this site featured in the ACE lab computers. This suggestion has proven to be a little more difficult to implement due to the computer lab logistics and a few tries at repurposing the lab. A more immediate goal is to get a solid understanding of the ACE computer environment and make a push to have Coogs on the Go! resource guide prominently displayed on lab computers as a default browser homepage.

Another goal that could be implemented sooner than later is training the athletic academic counselors since they have direct contact with students working on their assignments. The fact the counselors are becoming more and more comfortable in referring students to me is very encouraging, and it should be continued. However, there may be times the student may be too pressed for time and just need a quick answer on finding information. Library instruction sessions could build on what the counselors already know to optimize use of their time with students and could possibly be supplemented into department meetings.

Finally, a needs assessment of the athletic department academic program is crucial to providing service that will actually benefit student athletes. Some assessment could be modeled after the plan taken at the University of Central Florida in which enrollment, graduation, and students' previous research assignment experience data was collected and analyzed for "determining the strengths and weaknesses of this BI target audience and in designing an appropriate lesson" (Ruscella 233). Assessment of the library outreach effectiveness should soon follow.

## Conclusion

Over 2 years, the University of Houston Libraries and the University of Houston Athletic Department have made great strides toward building a partnership to help student athletes reach their full potential in the classroom and ultimately reach the university's goals. Through persistence and the benefit of supportive contacts, any library could integrate into a campus or community unit. The Associate Athletics Director for Student-Athlete Development has often commended the library's efforts to university administration, academic counselors are comfortable enough to refer students to the liaison librarian for additional help, and there is a general sense of excitement at the direction the athletic program could go with the help of support units like the library. For example, one day when a counselor notified her students about the reference desk shifts one exclaimed, "Wow! We're really rolling now!"

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# Multilingual Zotero: Its Promises and Limits

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## Abstract

There are many citation tools out there in the market. They are also called bibliographic management tools. Some are powerful and comprehensive such as RefWorks, which require institution subscription. Some are freely available online and can easily be downloaded into a computer, such as Zotero. Zotero not only impresses many of its users in ease of use, vivid tutorials, and technical support, but also it launches a new feature, Multilingual Zotero, for international faculty and students for their research. Such a new feature offers many promises which are welcomed by those who use this function. However, like any new product, it also displays its limits. By examining this new feature, international faculty and students will be fully aware of the scope of this feature, and thus, make better use of this citation tool.

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## Introduction

In order to help international scholars and students do research, exchange scholarship, and achieve their academic goals, various bibliographic management tools are making efforts to create tools that will help them use and cite research documents. RefWorks provides multi-language interfaces in Spanish, German, French, Japanese, Korean, Chinese, as well as English. It also sets up language-specific sites over the world to provide their end-users local support and training. Such a great customer service not only appeals to international scholars and students in managing their research documents but also enhance their abilities to publish in other international publications.

Another bibliographic management tool, EndNote, offers similar customer service. They provide tutorial materials in other languages such as Chinese. Those foreign language guides help international users search for research materials, store the documents, and turn their bibliographic records into the desired styles that publishers require. Their service helps their users get the most out of EndNote.

Zotero is a free web bibliography management software (Vanhecke 275-276). It is making special effort and has gone further. It is experimenting with a new functionality, Multilingual Zotero (MLZ). It was first created by Frank Bennett, an Associate Professor at

Nagoya University in Japan as a contest submission. Later, Avram Lyon and other contributors from around the world joined the project. The tool is aimed at helping its international users to capture, organize and correctly format the items by translating or transliterating multilingual data in an automated way according to its blog "Multilingual Zotero with Duplicates Detection".

## Literature Review

Zotero is a Firefox Web application. Like other bibliographic management tools, it helps scholars and students collect and archive teaching and learning resources, organize and cite research materials (Clark and Stierman 54-58). Ever since it was launched, many academic and library researchers commented on it, compared it with other citation management tools, and reported their stores of using it in various fields.

In their article "Citation Management Software: Features and Futures", Kern and Hensley compare four software: RefWorks, EndNote X4, Zotero, and Mendeley. They analyze them from three aspects, benefits, drawbacks, and the librarian's perspective. (Kern and Hensley 204-208). Rethlefsen also targets several citation managers and compares online versions of EndNote X1, Quosa, Papers, and Zotero in hope that scholars and students can best use the product they like (Rethlefsen 14-16).

Rosenzweig shares his application of Zotero in note-taking in the digital age, “once you have captured the metadata, you can link as many virtual ‘note cards’ to it as you like or import other attachments (which can be dragged into the Zotero window that opens in the bottom of the Firefox browser)” (8). Klapperstuck and Lackie point out Zotero can “sense” the bibliographic information on the website. If you click it, it will cite the resources in a certain format you choose (Klapperstruck and Lackie 15). “Zotero, the plug-in for Firefox, imports and stores PDFs” (Mead and Berryman 390). “Whatever you’re working on, Zotero lets you keep a list of your references, reading notes, and page snapshots with you wherever you go next” (Chudnov 31-33).

### **Installation Requirements**

Anyone, who wants to use Multilingual Zotero, should install a separate profile as it is a drop-in replacement for the standard Zotero. It is only for Firefox 3.6, Firefox 4.0 or above versions. Such steps include: setting up a separate profile for testing, installing the Multilingual Zotero plugin, and installing a word processor plugin.

### **Promises**

Like the standard Zotero, Multilingual Zotero also allows its users to collect, manage, cite, and share information. As to collecting information, it collects attachments, notes, files (e.g. PDFs, images, and audio/video), links and snapshots, etc. It also uses translators (models) to ingest information. The generic translators can work on specific websites. Users can also manually add items if they cannot be automatically added into Zotero. Managing information includes building up collections, setting up tags, and searching specific items within the collections. Users can also save their searches for future use.

Not only can Zotero collect and manage its items, it can cite both major citations styles such as APA, MLA, or Chicago, and also many journal special bibliographic styles using its Citation Style Language (CSL). In addition, it uses its word processor plugins to integrate the citation into word processing documents and make it possible to change citations styles for the whole document. Sharing information in Zotero actually means to use multiple computers with syncing, to access synced items through Zotero server, to collaborate with colleagues via user groups.

Zotero can be a center for group research project, for group discussion, and for communication. Apart from that, The Multilingual Zotero has its special features. International users can enable language tags when they need to import data into the Multilingual Zotero. They can also change the language by clicking “Quick Locale Switcher” add-on in the Zotero/Firefox. The language configuration, editing item data, citations and bibliography, and duplicates management have made the Multilingual Zotero one of the highly necessary tools in citation software market.

### **Challenges**

Based on feedback from its user groups, the Multilingual Zotero faces certain challenges. The first challenge is that it is not easy to Romanize other languages. Adding records in other languages is a huge task. The Multilingual Zotero needs many more volunteers with different language backgrounds to speed up this work. The second challenge is that no matter how well a record is being translated or transliterated, it still needs human modification. Therefore, it requires many people with different language backgrounds and technical skills to support its service. The third challenge lies in the collaboration process. It involves a quality control of such an initiative. The last one is how to handle the ownership of the underlying metadata which are provided by other information vendors.

### **Conclusions**

As it is a free and open source from Firefox, Multilingual Zotero has a unique feature and that is its user community. Zotero encourages all of its users to get involved in one way or the other. If you are a JavaScript or XML expert, you can contribute a code or write a translator to help ingest content. You can help with translations so that more people can use Multilingual Zotero. You can give a demo in your library and promote free Zotero to all interested potential users. If you have a good experience with Zotero, you can work the forum and answer questions and help new users.

Pioneered by Frank Bennett, an Associate Professor at Nagoya University in Japan, Multilingual Zotero has been developing steadily. Joined by Avram Lyon and other contributors, the project is running in Beta form. With the

international users in mind, those scholars, researchers, or simply pure users work hard to capture, organize and correctly format items for other international users. By translating or transliterating multilingual data, the Multilingual Zotero helps the international scholars and the students to import, store, and cite any items in various kinds of languages.

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## **A Fine Balance: Tangible or Electronic?**

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### **Abstract**

As the government documents librarian, I was appointed to an ad hoc library task force in the spring of 2010. The task force was to determine if our library should remain in the Federal Depository Library Program (FDLP) as a selective depository. Ultimately, the group recommended that we remain in the FDLP, and the library administration accepted our recommendations. The recommendations included shifting from tangible government documents towards electronic documents wherever possible. However, tangible government documents of significant historical and/or research value were to be retained. In addition, a special weeding project to reduce the size of the current collection was implemented. The library task force's assessment and analysis of Rod Library's participation in the FDLP, the information gathered and utilized throughout the process, the potential benefits and drawbacks of our depository status, and the criteria used to determine retention or withdrawal will be addressed.

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### **Introduction**

In January of 2010, I was approached by the now retired Dean of Library Services. She indicated that she would be appointing a task force of library faculty and staff to analyze the government documents depository collection and recommend whether or not the library should retain its status as a selective federal depository library. With budgets growing tighter, we needed to prove the value and worth of the depository program and collection to the library and university administration.

### **Background**

Rod Library at the University of Northern Iowa has been a selective federal government depository since 1946. As a selective federal depository library, Rod Library receives federal government documents published by the Government Printing Office (GPO) and distributed through the FDLP free of charge. Selective depositories are not required to select and receive everything published by the government and generally select publications based on the research needs of its users. Rod Library's depository serves the university community and the First Congressional District of Iowa. The collection occupies the west half of the main floor of the library and covers 7,022 linear feet of shelving, approximately 65%

capacity. The depository collection includes print materials, microfiche, CD-ROMs, DVDs, maps, kits, and other types of materials. In 2010, Rod Library was receiving approximately 60% of the government publications produced by the GPO. Newer government documents are issued online but there are a significant number of older, historical government documents that have not been digitized and put online yet. The task force felt that it was important to gather and analyze information that would give an objective and comprehensive snapshot of the depository library collection and its use, both physically and electronically.

### **The Challenge**

The task force was composed of four library faculty and staff: the government documents librarian, the head of Reference and Instructional Services, the Technical Services government documents assistant, and an Access Services staff member. The charge given to the task force was:

Analyze and study the Rod Library Government Documents Depository status to determine whether use of the collection, both print and electronic, warrants retention of depository status as it currently exists considering costs associated with maintaining current status. Include cost of human resources and supplies and space

occupied by the print collection. Consider option of changing entirely to Documents without Shelves status. Identify process required to eliminate or modify the depository status and to change entirely to Documents without Shelves status. Make recommendations on whether we retain depository status as is and/or how the collection might evolve; submit report to the Dean by June 1, 2010 (Mercado).

The task force began meeting twice per week in February of 2010. First, we conducted a literature review to determine if other depository libraries in the United States had gone through the process of examining their depository collection and status. One library, the Suffolk University Law Library, had gone through the process of dropping their depository status entirely. It had been a selective depository for about 19 years and had an 11 percent depository selection rate. Its collection was small and had no historical government documents. There were many differences between the depository collection at Suffolk and the one at Rod Library. The description of its depository relinquishment process is the most detailed one found, and the steps would be the same for any depository library (McKenzie, Gemellaro, and Walters 305).

Since there was not much literature available, the task force also posted a query to other depository libraries on the government documents listserv, GovDoc-L. We asked:

For those of you that have heavily weeded the tangible collection, gone to Documents without Shelves entirely, or dropped depository status entirely, would you let me know how the experience was? I am interested in the particulars of the process: time, money, staffing, space and other factors that one might not think of. (Gould)

A number of responses were received and, while some input was helpful, it was apparent that each depository library was unique in their collection, staffing, budget, and so on.

### **Relevant Information and Data Gathering**

The task force ran circulation and usage statistics for the government documents depository collection. This would determine which

government documents were being used in the physical collection. The statistics were limited to government documents in print format as that was the largest component of the government documents collection. Approximately 14,000 government documents circulated once or more since 1989, the year Rod Library launched its online public access catalog, UNISTAR. Since January of 2005, 2,500 government documents circulated once or more. Since January of 2009, 438 government documents circulated once or more. In addition, 698 government documents circulated a total of five or more times. Internal use statistics were only available for the time period of June 2009 through June 2010. 711 government documents were used internally during that time period.

Rod Library's information systems specialist programmed software that would track the number of electronic government documents accessed through UNISTAR. A significant majority of government documents in electronic format are assigned a Persistent Uniform Resource Locator (PURL). We tracked the number of PURLs patrons accessed on a monthly basis for two months. In March of 2010, 140 electronic government documents were accessed a total of 191 times. In April of 2010, 379 electronic government documents were accessed a total of 429 times.

### **Survey Questions and Responses**

The task force felt that it was important to survey the faculty, staff, students and general public regarding their use of the government documents depository collection. The task force also wanted to get a sense of how many people were actually aware of the fact that Rod Library was indeed a federal depository library. The task force consulted with the regional depository librarian for the state of Iowa and the director of Collection Management and Preservation at the GPO and developed an eleven question online survey (see table 1) (Bancroft). The survey was publicized by utilizing social media tools, e-mail, presence on the home page of the library website, and word of mouth. The survey was open for approximately one month.

Table 1

## Rod Library's Government Documents Depository Collection and Usage Survey Questions and Responses

1. Did you know Rod Library provides access to tangible and online government documents?	Yes —78 No —10 Unsure —2
2. How frequently do you access government documents?	At least once a week —6 At least once a month —14 Occasionally (3-5 times per year) —24 Rarely (Once every year or two) —27 Never —17 Other Comments —5
3. Which formats do you use? (Select all that apply)	Online —59 Paper —59 Maps —29 Microfiche —11 Posters —6 CD-ROM — 6 Other formats —2
4. What type of document do you use most frequently? Please briefly describe.	Responses —54 Census materials, statistics, congressional hearings, and maps are the most heavily used types of government documents
5. What are you most likely to use the government documents for?	Research —41 Class/Paper —23 Personal Use —17 Other —5
6. How did you first hear of or find government documents at UNI?	Library Staff —35 UNISTAR (catalog) —14 Library website —10 Database/Google/Online —7 Professor —7
7. What changes could we make to more readily facilitate your use of the collection?	Leave it the way it is; no changes (a broad collection of print/online/microfiche) —43 Go all online —25 Focus on tangible and online documents of significant research value —11 Other (Specify) —15
8. Do you have any questions, concerns, ideas, or comments regarding the government documents collection at Rod Library?	No —11 Other comments —15
9. If Rod Library no longer had depository status and provided access to fewer tangible government documents, what impact would that have on your classes or research?	Generally, little to none —12 Other comments —38
10. Does your UNI department (or other group) make heavy use of a specific part of the government documents collection? If so, please describe.	No/Not applicable —9 Other comments —17
11. Please identify yourself.	UNI Faculty —40 UNI Student —29 UNI Staff —18 Other —2



A total of 90 survey responses were received and almost half of the respondents were faculty members on campus. The survey responses showed that, while the government documents depository collection was not heavily utilized on a daily basis, it was still used on a fairly regular basis for classes and research. The respondents indicated that the three top formats used in the government documents collection were paper, online, and maps. Microfiche, CD-ROMs, and posters appeared to be used very little. Most of the survey respondents wanted the collection to remain pretty much the same. Tangible government documents in certain areas were still heavily used and, in some cases, the preferred format. These tangible formats included, but were not limited to, maps, soil surveys, statistical information, congressional hearings and reports. While many respondents preferred to get their government information online, they utilized the tangible documents when it was more feasible for them to do so. The misconception that everything is available online was reflected in some of the comments. Contrary to popular belief, that is not necessarily the case with government documents. The current trend seems to be that historical government documents (pre-1930s) and new government documents (post-1990) are available electronically. Between about 1930 and 1990, it seems to be hit or miss with government documents available online. The survey responses reflected that a number of professors on campus used government documents heavily in their research and for their class assignments. Overall, the survey results reflected that the government documents collection was still relied upon by the university community.

### **Input from Library Subject Bibliographers**

After the information had been gathered and the survey results analyzed, the task force envisioned that the government documents depository collection could retain tangible government documents of significant historical and/or research value while moving towards a predominantly electronic government documents collection. An e-mail was sent to the thirteen subject bibliographers at Rod Library and the task force requested which specific tangible government documents titles the subject bibliographers thought held significant research or historical value and, therefore, should be

retained in the tangible collection. The subject bibliographers responded with categories of government documents, such as statistics and congressional hearings, as well as specific individual titles or series that they wanted retained in the government documents depository collection.

### **Documents Without Shelves**

*Documents without Shelves* is a commercial service available through MARCIVE, Inc. MARCIVE provides the subscribing libraries with full MARC records with URLs for government documents that have been published online. These records are then loaded into a library catalog on a monthly basis and patrons can then access government documents online. Rod Library chose to go the less expensive route and pay for *all* online government document titles instead of choosing to pay a little more for MARCIVE to tailor the MARC records to match our selection profile that was on record with GPO. While there was some savings in going this route, Rod Library's online catalog was flooded with huge numbers of government documents. This, in turn, made more work for the patrons as they had to sift through more online catalog records to find the relevant government documents.

### **Time and Expenditures Assessment**

Another part of the charge given to the task force was to assess the time library personnel spent on government documents as well as the various expenditures that supported the government documents depository program and collection. It was estimated that 1,844 hours per year are spent on the government documents depository program and collection. This includes the time spent by the government documents librarian, the Technical Services government documents assistant, the Technical Services library associate, the cataloging librarian, and student assistants from Reference and Instructional Services and Technical Services.

For expenditures related to the government documents depository collection and program, we looked at the expenditures for supplies and subscriptions to online services. On average, Rod Library spent approximately \$20 dollars per year on supplies to support the government documents depository program and collection. The majority

of the costs came with our subscription to MARCIVE's *Documents without Shelves*. The total amount spent on the MARCIVE subscription was approximately \$3,962 dollars per year.

### **Benefits and Drawbacks**

The task force felt that enough information and data had been gathered to start considering different scenarios. The task force came up with five possible scenarios:

1. Transition to a mostly electronic depository collection which included retaining our depository status, heavily weeding the depository collection, and shifting to take up less space.
2. Transition to a hybrid print and electronic depository collection which included retaining our depository status, heavily weeding the depository collection, and shifting to take up less space.
3. Transition to a hybrid depository collection which included retaining depository status, modifying and hybridizing item selection list, but no heavy weeding or shifting.
4. Do not change a thing.
5. Drop depository status completely but retain subscription to MARCIVE's *Documents without Shelves* service. This involved relinquishing our depository status, offering all of our government documents to other depositories, and de-accessioning materials from our catalog and OCLC.

The task force specified all the benefits and drawbacks under each possible scenario. It was a very detailed and complex process. The more significant benefits to retaining depository status included:

- Receiving all government documents, tangible and electronic, for almost no cost to Rod Library.
- Access to federal government databases that Rod Library would not otherwise have access to.
- Free MARCIVE records tailored to our item selection profile as a depository library participant in the GPO's Cataloging Record Distribution Project.
- Retention of depository status would let Rod Library keep older government documents that were considered valuable.

The major drawbacks to completely relinquishing our depository status included:

- Relinquishment of Rod Library's depository status would be an irrevocable decision.
- Rod Library would be terminating a 64-year partnership with the federal government.
- Our patrons would lose access to all government documents, tangible and electronic.
- Every single government document would have to be individually de-accessioned from the catalog and OCLC, listed and offered to other depositories, which would heavily burden the workload of the Technical Services staff.

### **Task Force Recommendations**

After the task force had analyzed all of the relevant information it had gathered during this semester long process, it put forth its recommendations to the Rod Library administration:

We recommend that Rod Library retain selective government depository status. We further recommend that the selection profile be changed to focus on electronic resources whenever possible. The Task Force recognizes that it will be important to keep some resources in tangible form because some publications do not yet exist in online form, or are not easily usable by researchers in electronic format (this is the case with most maps, for example). We further recommend that the size of the current tangible collection be reduced through a special weeding project. The project will focus on keeping sources that are of historical and/or research value to the local community, and that do not exist in usable (or any) electronic form. (Marshall 1)

### **Conclusion**

Rod Library's administrators accepted our recommendations and agreed that Rod Library should remain a selective federal government documents depository. In the fall of 2010, a second task force was appointed to develop a detailed plan and process for weeding the government documents collection. With a detailed process in place, Rod Library has begun weeding the tangible government documents collection.

Contrary to the beliefs of many, everything is not online. As the task force discovered through this process, there is still value to having a tangible government documents depository collection. There is also tremendous value to maintaining a partnership with the federal government that benefits all parties involved and furthering the mission of access to government information.

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## **The Advantages of Importing Usage Statistics to Millennium ERM with SUSHI**

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### **Abstract**

Saint Louis University Libraries started automatically importing usage statistics to the ERM with SUSHI last year. SUSHI stands for Standardized Usage Statistics Harvesting Initiative, a protocol allowing automatic harvesting usage data through web services. Usage statistics are downloaded on a monthly basis and cost per user for electronic titles are automatically calculated at the same time. This process has greatly reduced staff time spent on collecting statistics manually from various vendors or publishers' websites. Millennium ERM also provides a single place for storing usage statistics and the opportunity to link related order records to relevant resources. Prior to downloading statistics automatically via SUSHI, our staff needed to go to various vendors' or publishers' websites and collect statistics and store them on a local disk or network drive each year, which is unfortunately very time consuming. In addition, the ERM allows linking order records to relevant resources and calculates cost per use automatically. Previously, cost data had to be traced manually from our acquisitions system in order to calculate cost per use. The statistics can be exported in excel format, allowing the important ability of creating various charts and conducting comparisons.

## **A Look from Both Sides Now**

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### **Abstract**

At the University of Missouri-Kansas City (UMKC) the concept and interpretation of library instruction is shifting. Two documents at the core of this change are the UMKC Undergraduate General Education Student Learning Outcomes (draft document at the time of submission) and the University Libraries Strategic Plan: 2010-2015.

This presentation will briefly review how one librarian and one intrepid professor worked together to move from traditional library instruction to a model of embedded librarianship. An undergraduate intensive writing course serves as the framework for this ongoing experiment.

The relationships between the students and the librarian will be closely examined. Students from the class will discuss their attitudes about libraries and librarians, both before and after the class. These students will talk plainly about their feelings regarding the merits of an embedded librarian. Lastly, the students and the librarian will discuss the impact on the final research project for the course and any implications for life-long learning.

## **Campus Copyright Support from a University Library**

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### **Abstract**

In the summer of 2010, the UMKC University Libraries created a Copyright Support Team for the purpose of filling a void on campus to help faculty with their copyright issues. Inspired by models at other universities, yet lacking some of the resources and personnel for a Copyright Center or Scholarly Communications officer, the University Libraries created a network that meets the need in a low budget, yet effective way. Headed by the University Libraries Associate Dean, assistance is structured through a collaboration of the copyright support team and faculty advocates. This session will provide an overview of the impetus for this initiative, resources employed, a discussion of the way the team built campus recognition, and an explanation of how copyright issues and questions are handled. The presenters will also share the copyright team's deliberations over the institutional copyright policy and plans for the future.

# Jack be Nimble...Quick', and Communicative: Flexible Staffing Positions for Changing Technical Services Workflows

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## Abstract

As library purchases for their collections move to predominantly electronic and patron-driven, acquisitions staffing has been changing to meet demands of fast paced and more complex workflows. For large academic institutions with legacy print collections, this change has not been a seamless or simple transition away from print to electronic. Unique print and patron-driven acquisitions have required complex management and staffing needs similar to those of e-resources.

In 2006 the Acquisitions/Serials Department at the University of Kansas began addressing these staffing needs by hiring all new or vacant entry level library assistant staff positions as flexible assignments. Each one shares duties and supervisors across three Units of the department: Serial Records (print), Serial Orders & Claims (print and electronic), and Monograph Orders/Approvals (print and electronic). Based on the skill set of the applicant and the needs of the department at any given time, each new hire began within different units in an effort to determine: 1) the best sequential learning for training purposes, 2) best practices in communication between staff and supervisors, and 3) appropriate physical space and location of new hires. Job advertisements outlined the reporting structure and nature of the flexible assignment. Hiring interviews focused on measuring behaviors such as adaptability to change, technological literacy, and communication skills. Physical spaces were adjusted as needed. Interviews with staff and supervisors assessed the effectiveness of this arrangement and the impact on workflow.

This presentation summarizes the process and assessment, and solicits audience feedback to identify areas for further research. This presentation is potentially applicable, beyond technical services, to anyone seeking new collaborations or restructuring of staff and workflows.

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## Introduction

Workflow and staffing challenges are a particularly hot topic, especially given the continual and rapid rise of electronic collecting practices against decreasing or flattening of library budgets. One example of this can be seen in the programming of the 2011 Electronic Resource & Libraries (ER&L) conference. In response to the 2010 conference's evaluation recommendations, a new program track was developed devoted exclusively to the workflow and management of e-resources (Winters). Similarly, a very active two-day discussion in June 2011 on the *Association for Library Collections and Technical Services* listserv focused exclusively on staffing, formats, and workflows (Sippel). Each of these speaks to the ongoing need to understand best practices in

workflows that are responsive to complexity and rapid change.

The University of Kansas Libraries has explored a variety of new structures and staffing models to increase flexibility across its organization including:

- an experiment in matrix reporting structure for Collection Development, Reference, and Instruction
- the use of temporary staff positions, cross-training, and backup assignments in Cataloging and Acquisitions/Serials
- increased use of student employees
- ad hoc flexible work assignments
- explicit shared work assignments.

These models vary in their reporting structure and the how the nature of the assignment is communicated and maintained. For example, the

matrix structure is the most complex arrangement, involving dual reporting structures. Because of this it is a more formally communicated and documented flexible staffing assignment. Others more often involve only single reporting structures. The levels of formal communication, implementation, or permanence across them can vary.

This session will provide the background for how explicit shared work assignments developed in the Acquisitions/Serials department. A review of the existing literature will show trends in workflow and staffing and various models for their assessment. Assessment of staff members' and supervisors' experience in this model is outlined, followed by the group's response to the results and how they will proceed based on this experience.

### ***Background***

The University of Kansas is a large academic library with a total library materials budget of \$9.5 million. Since 2006, electronic resources acquisitions have grown by 61%. In addition to e-collecting practices, there has also been an upward trend in ILL, patron driven acquisitions, and e-preferred approval book profiling. The Acquisitions/Serials department's current structure does not have a single unit devoted to electronic resources work. Instead, it distributes electronic resources workflow by format (print and electronic) and function (one-time and continuous purchasing) across three units within the department: Serial Records (print), Serial Orders & Claims (print and electronic), and Monograph Orders/Approvals (print and electronic). Many staff members are trained in a number of areas in order to effectively manage new and changing workflows. Like at many other libraries, retirements and vacancies are an opportunity to regularly evaluate resources and workflows.

In 2006, the department began hiring all new or vacant entry level library assistant staff positions as flexible or 'shared' assignments. Job advertisements outlined the reporting structure and nature of the flexible assignment. Hiring interviews focused on measuring behaviors such as adaptability to change, technological literacy, and communication skills. Physical spaces were adjusted as needed to accommodate work in several units. Each work assignment shares duties and supervisors across the three basic units

of the department. Based on the skill set of the applicant and the needs of the department at any given time, each new hire began within different units in an effort to provide a solid foundation in more than one workflow. The goal was that staff would become familiar with the department overall and be prepared to perform effectively in a variety of roles.

While the concept behind shared assignments is not particularly unique within the organization, the impact of this workflow has not been systematically assessed. Similarly, workflow and staffing issues related to electronic resources are abundant in the literature, but the impact of various models in practice remains underreported.

### **Literature Review**

Reorganization and workflow changes were major topics of the acquisitions literature from 2003-2007 and included a variety of perspectives of organizational changes in libraries (Dunham and Davis 238-39). These studies begin to address the importance of flexible staffing arrangements -- described in practice as cross-training, retooling, or reassigning staff -- but neglect to assess the impact at the unit or individual staff level. A presentation at the 2010 NASIG annual conference, specifically addresses the staffing implications related to the elimination of print workflows. This study found 85% of responding libraries were reporting reorganization and retraining of staff within the library (Glasser and Arthur 111). This is a very similar figure to the often cited ARL Spec Kit survey reporting that 87% of ARL libraries are making organizational changes to support electronic resources (Grahame and McAdams 11). Still, the challenges presented in Glasser's survey teased out a further need to assess these instances of reorganization and retraining. For example, response comments and audience discussion questioned whether retraining is as effective as hiring for necessary skill sets, and Glasser suggests further study to measure these areas.

Whether it is more effective to retrain or hire for expertise has not yet been fully resolved. The impact of the hiring temporary employees was discussed to some degree by administrators of medium-sized research libraries at the 2007 ALA Midwinter meeting. They report the increased use of temporary employees "brings new ideas into a department and serves as motivation for



permanent staff . . .” (Boock 73). More recently, this same group reports a list of various reorganizational strategies taking place that are “shifting toward a model where everyone in technical services does a bit of everything” (Winjum and Wu 352). The importance of observing this shift away from the traditional expertise-based workflow is useful, because the shift brings with it new core areas of impact that necessitate assessment beyond just the libraries’ functional changes in workflow.

Communication is one of these areas with significant impact at the unit and individual level, especially in a distributed structure. In the traditional expertise model, needed communication can remain within a silo created by an individual expert, especially without proper documentation of workflows and policy (Kulp and Rupp-Serrano 17). But examining communication networks in e-resources workflows shows that communication silos can occur, not just with individual specialists, but within limited communication networks, if not examined. One study shows that even while email has flattened the hierarchy and served an effective communicative function within a changing workflows environment, “email alone is not an effective management tool” when “used for more purposes than those for which it was designed” (Feather 206). Other authors who support flatter organizational models (Boock 73) and distributed expertise are quick to add that this structure necessitates flexibility and “efficient communication strategies to stabilize and guide workflow practice across the library” (Collins 264). Across all the literature the need to focus on effective and streamlined communication and increased collaboration was strongly emphasized. This was a key component in developing and structuring assessment of the shared assignment.

The business and management literature was most useful in providing concrete models for assessment of flexible staffing structures like shared assignments. Case studies on the matrix structure were most common and were reported in environments ranging from hospitals (North and Coors) to consumer packaged goods companies (Kesler and Schuster). Others looked specifically at the impact on organizations (Derven), on managers (Sy and D’Annunzio), and at the implications for training (Rees and

Porter). The remaining lack of both workers’ perspectives and a library context supports the need to expand the assessment begun here.

The study of six industries’ use of the matrix structure and its impact on managers was most relevant for developing the assessment of shared assignments. Matrix structures are like shared assignments in that both the work and the reporting line in each cross two or more divisions. Of the three most common types of matrix structures (functional, balanced, and project), the shared assignments matched matrix elements of both the balanced and the functional types. A key difference between them is that the functional matrix employees remain full members of a single functional unit, rather than as official members of two (Sy and D’Annunzio 40). While the goals of the shared assignments reflect the desire to have the more balanced understanding of membership, they do retain a primary supervisor, resembling more closely in practice the functional model. The matrix study also identified five “challenges” from industry managers’ perspectives. How these shaped the assessment of shared assignments is described further in the next section.

### **Methodology**

When looking internally to other experiences of shared assignments, cross training, or matrix reporting experiences, the general feedback matched preliminary, anecdotal findings of our experience. The primary data informing this evaluation of shared assignments, however, includes a structured survey of three staff currently working in shared assignments and three semi-structured interviews of the supervisors of these shared assignments.

Content of the questions were developed following the key factors identified by the matrix model assessment (Sy and D’Annunzio). For the shared assignment assessment, key factors included evaluating clarity of roles and responsibilities; understanding goals; and a commitment to the department overall, as opposed to a single area (or silo). The data gathered informally across the library helped inform additional questions in the areas of communication, time management, and learning connections across assignments.

15. How likely are you to recommend shared staffing assignments based on your experience?						
	not at all likely (0)	1	2	3	4	extremely likely (5)
Recommendation	0.0% (0)	0.0% (0)	0.0% (0)	66.7% (2)	33.3% (1)	0.0% (0)
NPS	Detractors (0-2)		N/A (3)		Promoter (4-5)	
	-0		0		1	

Fig. 1. Net Promoter Score for Ultimate Question

Survey and structure interview results were openly reviewed, discussed, and analyzed by the supervisors and department head, as well as shared with staff in these positions.

### Limitations

Our assessment involved a very small set of staff experiences working and supervising shared assignments. It was primarily intended as a tool to inform ongoing departmental planning, rather than serve as a valid or general research instrument. Due to the small size of the survey pool, complete individual anonymity was not possible, and this was made explicit in the administration of the survey. The goals and purpose of the assessment for continuous improvement were also clarified, as was the assurance that no data would be used as a performance evaluation of any employee or supervisor. We aimed to be as open as possible with the assessment and discussion of results.

The methodology was appropriate for the purpose, but would require further development to ensure reliability over time, or to potentially include other shared assignment experiences in the organization, or across other libraries.

### Staff Survey Instrument

The survey instrument consisted of fifteen questions divided across three sections. The first section gathered demographic information by the respondent's assigned units, physical location, and whether there had been any previous experience of shared assignments. It also included a question about initial perceptions of shared assignments in general.

The middle section assessed four categories of the shared assignment experience: communication, time management, physical location, and learning connections. One additional question about learning connections was asked of any staff who worked part of their assignment on the public reference services desk. Questions in this section were designed using a variant of the Net Promoter Score evaluation tool, a customer loyalty/satisfaction rating based out of Reicheld's book *The Ultimate Question*. Using specific questions for each category, the respondents were asked to rate effectiveness of each of the categories based on a scale of 0 (not at all effective) to 5 (extremely effective). When calculated, all middle values (3) are considered passive and are not counted toward the score. Detractor values from 0-2 are subtracted from any promoter values of 4-5 to arrive at the Net Promoter Score (NPS).

The third section sought to determine any change from initial perceptions, as well solicit suggestions for improvements. The survey concluded using the NPS scale to ask the Ultimate Question: whether the respondent would *recommend* shared staffing assignments based on this experience. Fig. 1 shows this question and provides an example of how the NPS is calculated.

The value of using NPS was primarily for the simplicity of the questions and actionable nature of the resulting scores. This metric used straightforward language to tie together the day-to-day effects of working in this model with the goals of the assignment. The scoring mechanism more clearly identifies the actionable areas. These are revealed by promoter scores (what do

Table 1  
NPS Results and Comments on Shared Assignment

communication	NPS (100 scale)		comments
b/w employee and supervisor	2	67	
b/w supervisors	1	33	
training documentation	0	0	* quite a bit of helpful training documentation... * ; * ..not much training documentation... frequently took notes and made my own...*
clarifying roles and responsibilities	(-1)	(-33)	
<b>time management</b>			
distribution across units	2 (67)	67	
understanding / setting priorities	0	0	* ... priorities are clear in serials check-in area, but not very clear in elecres/claims/usage*
<b>physical location</b>			
proximity to supervisor	1 (33)	33	
proximity to others doing similar work	1 (33)	33	
ability to concentrate	0	0	* ...I frequently have trouble concentrating when working in my cubicle because of [noise in the area].*
equal access to needed resources	2 (67)	67	* ...I have plenty of access to all needed resources.*
<b>learning connections</b>			
primary unit	2	67	* ...very useful for making connection and learning how the units work (independently and with each other. I would say this is the most noticeable benefit of this type of work sharing.*
secondary unit	2	67	
other units in the department	1	33	*I do not think the shared assignment is any better or worse than any other method for learning connections with other units, departments, and the library/University.*
across library departments	1	33	
across university	1	33	

we keep doing) and detractor scores (what do we stop doing, or what we do to turn this to a promoter?).

### ***Supervisor Structured Interview***

Supervisors were interviewed individually using similar questions as the staff survey instrument where applicable. Supervisors' historical perspective and involvement in the planning of these shared assignments made the interview a more effective method for gathering their spontaneous and complete feedback. A neutral facilitator conducted the interviews and shared each interview summary with the supervisor to clarify responses. This summary was then shared with all three supervisors and the head of Acquisitions/Serials department. These results along with the summary of the staff survey results were discussed in a meeting of these four individuals to determine if any follow-up was needed with staff, and to identify actionable next steps.

## **Results**

### ***Staff in Shared Assignments***

All questions in the survey instrument were answered by each staff member, but only one of the three staff members provided additional feedback in the form of comments. There were no strongly positive or negative initial perceptions of shared assignments; most reported mixed perceptions, and one had no opinion.

Additional comments about perception spoke to the respondent's experience in the beginning of the assignment, noting "it can be confusing/overwhelming, particularly when first beginning training". This sentiment was repeated in the comments regarding current perceptions as well, even though the ratings of current perception indicated one instance of a change to positive. Comments here indicated an understanding of the department's goals for the shared assignment and an appreciation for a variety of learning experiences.

The majority of the other questions using NPS score resulted in promotional scores of 1. On the whole this left more questions than answers since these scores resulted from such a high occurrence of passive ratings and comments were limited to a single perspective (table 1).

Ratings and comments about learning connections did reveal that some aspects of the goals for shared assignment were met effectively. The goal for the assignment to gain a familiarity with department overall, however, was not necessarily reflected as a result of the shared assignment itself. It was rated useful for only the working units of the assignment. Department level impact was reflected, however, in the response to learning connections based out of the public reference services desk experience (table 2).

Table 2  
NPS Results and Comments on Reference Services Experience

learning connections	NPS (100 scale)		comments
primary unit	1	100	"... the reference experience gave me additional learning connections that I would not have had with only the shared assignment. [e.g.]... lets me see how library users access our electronic resources, issues/difficulties they have, and what they use them for. It also gives me the opportunity to interact with the subject liaisons/bibliographers, which is beneficial because they are one group of our "internal customers" - for usage reports, claims, etc"
secondary unit	1	100	
other units in the department	1	100	
across library departments	0	0	
across university	0	0	

There were two questions that in hindsight may have been more appropriate to incorporate within the evaluation of communication using the NPS scale. First, when asked how staff members were made aware of the nature of the shared assignment, the survey sought to evaluate the effectiveness of communication about the assignment at various stages. Based on inconsistent response, we could not factor this communication's effect on their experience of the assignment as we had hoped to in questions that followed. A second question identified the primary and secondary working areas of the assignment, which revealed confusion between the name of the unit and work being done within it. For example, the same working area was identified by one respondent as the given option, *Serials orders claims*, and by another as *Other: Electronic Resources*. This too may be related to the areas of communication. The survey's only negative NPS (-1) was regarding effectiveness of *Clarifying roles and responsibilities*. Comments given about this section unfortunately did not address this specific response.

Other comments about shared assignment in general also revealed some discrepancies in communication and time management from one unit to another, and were repeated in supervisor comments.

#### ***Supervisors of Shared Assignments***

Similar to staff survey responses, supervisors expressed lukewarm perceptions of shared assignments overall. The topics addressed in the interviews focused primarily on communication and physical location. All agreed on the importance of staff proximity to supervisor, noting that the need to travel to another location, even to remain in proximity to another supervisor, seemed less productive overall. Each cited the prominent role of communication in the process of developing, training, working, and assessing the shared assignment experience. Most also generally noted positive communication

experiences between staff and other supervisors in the course of their work. Some inequities in both physical location and initial communication experiences with staff were noted. Regarding the latter, however, the process of assessment helped to clarify role and purpose more clearly in the end.

Supervisors also discussed the importance of clarifying distinctions between cross-training and the shared assignment, saying "shadowing" for cross-training may be enough for some areas. In other areas, where you may more regularly need people to fill in, a fixed shared assignment is more effective. Otherwise, the time spent training is wasted since practice in those skills is not ongoing.

#### **Conclusions**

The following goals shaped our next steps: to assess the shared assignment as a concept, to decide whether to continue shared assignment for the next 6-12 months, and how to make shared assignments more effective given the feedback from staff and supervisors.

It was determined that some of the envisioned benefits were achieved. Staff were trained in a variety of duties and made learning connections within the department. Communication among all involved staff was generally effective, but there is potential for improving training and providing clearer priorities and definitions of responsibilities. Scheduling, time management, and physical locations are presenting some challenges. The responses reinforced the importance of continually clarifying the purpose and goals of the shared assignments.

It was originally envisioned that after initial training, the two newest hires would shift to a different primary and secondary supervisor and learn a new workflow. Because of transitioning workflow in Serials Check-in/Binding (print) to project-based activities, however, there was no estimated need to retain ongoing staff in this

workflow going forward. The secondary assignments in this area were deemed an effective use of shared time, as staff successfully gained a general understanding of this workflow. Considering this with the other units' upcoming needs and priorities for the new academic year, supervisors proposed to continue only one of the three shared assignments between Monographic Firm Orders (print + electronic) and Serials Orders/Claims (print + electronic). The remaining two assignments would adjust their time to 100% in these same primary areas.

While shared assignments served the established goals, it was noted they may not be the only way to address these goals. Ultimately all involved felt the experience provided a beginning understanding of what makes a good shared assignment, what to monitor as pitfalls, and where to account for practical constraints over which there may be little control (e.g. space, noise). The most useful part of the experience however, was the process of assessment itself. The experience opened up communication between staff and supervisors, among supervisors, and between supervisors and the department head, and helped in planning workflow and larger departmental priorities. More specifically, it revealed the importance of communicating the peaks and valleys of each unit's workflow. It also helped each unit begin to determine a minimum percentage of staff time needed to maintain comprehension for the most effective use of cross-training.

Another unforeseen outcome was accomplishing a first step of a more comprehensive workflow analysis for the department. It would be useful to build on a study of communication networks to identify specific communication gaps in the shared assignment and other areas of the acquisitions workflow going forward.

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## **Putting the Customer First: Developing and Implementing a Customer Service Plan**

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### **Abstract**

When a new Director of Academic and Library Services were appointed, the library was challenged to improve customer service initiatives. All staff gathered information about student perceptions regarding the purpose and use of the library. In addition, librarians met with each department to solicit information about needs, wants, and priorities. The library also collected feedback via mediums including interviews, comment boards, and social networking. With so many resources and services available via the Internet and other campus units, the library worked to remain a viable, in-demand, hot-spot on the “brick” campus. With increasing services and resources offered in the “click” environment, libraries must also ensure that customers receive good service in an online experience. When customers are faced with multiple options for their patronage, what can be done to ensure that the library stays relevant? This presentation will examine initiatives to ensure that the library remains a center of campus activity, contains a welcoming environment, meets the needs of its users, delivers a high standard of service, and provides a variety of value-added services and resources. The presenters will begin the presentation with a showcase of students discussing examples of when they received exemplary customer service. Next, the audience will be invited to discuss how these service stand-outs can be locally implemented. The presentation will conclude with the presenters sharing how our customer service plan was examined, designed, and implemented within B.D. Owens Library.

## Catch the “Campus Express!”

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### Abstract

The Interlibrary Loan Unit at USI’s Rice Library provides a delivery service to faculty called “Campus Express.” This service allows its participants to receive books and other returnable ILL items directly to offices university-wide through regular campus mail delivery. Each item sent to patrons via the “Campus Express” program is identified as such by their arrival in a branded, red nylon bag, which is used by faculty to return the item to the ILL Unit when finished. Following a successful trial run in 2009, this service has proved enormously popular and continues to attract several new participants among the USI faculty each semester.

This paper will detail the purpose, workflow, delivery procedure, tracking methods, registration, and marketing of the “Campus Express” program at USI. It will show how the program’s success has proven a valuable public relations tool for Rice Library with other university departments. Finally, the paper will provide specifics about the service that other academic libraries, interested in offering such a service to their faculty, can adapt to their own particular circumstances.

The author of this conference paper will share a brief summary of its content during a lightning round presentation at the Brick & Click Academic Library Symposium.

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### Introduction

The Interlibrary Loan Unit at the University of Southern Indiana (USI) Rice Library implemented a campus-wide delivery service to faculty. This program was named *Campus Express* and has become increasingly popular among the biggest users of ILL at USI. This paper will present the *Campus Express* program at Rice Library in detail, including its initial purpose, how it was (and is) marketed, registration, workflows, and tracking methods. It will also show what methods to assure success have remained, while others are continually being revised for the same purpose. Finally, the paper will offer recommendations to other academic institutions with an interest in implementing such a program for their faculty.

### Purpose and Intent of the *Campus Express* Program at USI

In the fall of 2008, the ILL Unit Staff at Rice Library proposed the implementation of a campus delivery service for ILL items ordered by USI faculty. The service would send books borrowed through ILL directly to USI faculty members’ campus addresses. Target for delivery

of *Campus Express* materials was set at one to two days. The ILL Unit determined that this delivery system would be beneficial in two ways:

1. It would proactively provide to faculty a convenient way to obtain desired resources, while also serving as a valuable public relations tool to academic departments across campus.
2. It would reduce the number of unclaimed requests and late pick-ups, thus reducing the amount of items returned overdue to ILL (“New Service Tryouts”).

Rather than open this up to all faculty right away, a trial of the service with limited participants was organized. Ten of the most frequent ILL users were invited to participate in the trial. The ILL Unit staff then worked with the library director and account clerk to place an initial order of 25 red nylon bags in which to deliver the books. The bags were branded with the Rice Library Interlibrary Loan and *Campus Express* logos (see figure 1). In an effort to keep delivery of these parcels secure, barcode stickers were placed on each bag that Distribution Services could scan at both pick-up and delivery.





Fig. 1 Bags for book delivery with Rice Library Interlibrary Loan and *Campus Express* logos.

### Keeping the *Campus Express* on Track

Following the trial run at the end of the spring 2009 semester, the ten faculty members participating in the trial were invited to answer a brief survey; five of the ten responded. All five stated their intention to continue participating in the service. All respondents expressed high regard for the service, and there were no reports of any problems receiving or returning materials through *Campus Express* delivery. The ILL Unit recommended expanding the service to all faculty, beginning spring semester 2010. The Unit staff met again in the fall of 2009, to put together a plan of action prior to opening up the service to all faculty in the spring semester. Several preparatory steps were taken to assure the success of the expansion:

1. An invite letter was composed, complete with a detachable sign-up sheet, inviting all faculty to sign up for the service.
2. Procedures were revised for the *Campus Express* program to reflect current practices. The procedures file was kept in a shared computer drive, handy for future revisions.
3. To account for increased participation, the purchase of 25 additional *Campus Express*

courier bags was requested, bringing the total number of bags to 50.

4. Additional barcodes to use for tracking bags were obtained from Technical Services.
5. Distribution Services was contacted to assure their operation could absorb a potentially large increase in *Campus Express* parcel.
6. A preliminary plan was mapped out for marketing the expansion of the *Campus Express* program to maximize exposure and interest.

### Marketing

It was decided that the best means for dissemination of the letter/sign-up would be a one-time mass email sent to faculty and admin offices from all academic departments on campus; the email was sent out on November 9, 2009. Additional marketing opportunities followed as Rice Library staff offered many helpful suggestions for other ways to get the word out about the new ILL service.

The following timeline provides an account of how *Campus Express* has been marketed by Rice Library since the decision was made to open the service up to all faculty in the fall of 2009:

November 2009

- An email was sent out by the Rice Library ILL Unit to all USI academic departments inviting all faculty members to sign-up for *Campus Express*.

December 2009

- Rice Library's Director promoted *Campus Express* at the Academic Affairs Meeting.

January 2010

- The Reference and Interlibrary Loan librarian composed and posted a write-up about *Campus Express* for the Rice Library "Let's Talk Library" Blog.
- 25 additional *Campus Express* courier bags were ordered in anticipation of the program's continued growth and popularity.

February 2010

- A *Campus Express* web page was added to the Interlibrary Loan drop-down menu and web pages. The page included a link to the information/sign-up letter.

March, 2010

- *Campus Express* was featured in the "Spotlight" section of the USI Rice Library web site.

April 2010

- *Campus Express* was included among Rice Library offerings on display at the Center for Academic Creativity "Scholarly and Creative Works" reception; a program recognizing scholarly activity of USI faculty and staff from the previous year. The display included bulleted flyer, red nylon bag, and information/sign-up letters.
- A write-up about *Campus Express* was included in the Spring 2010 Rice Library newsletter.

September 2010

- An email was sent out to all current participants, notifying them that a campus-wide email would be sent out by the provost in a few days. This email was to assure them that their participation was assured and they would not need to sign up again.
- An email was sent out campus-wide from the USI Office of the Provost with a short

blurb inviting all faculty to sign-up for *Campus Express*. A PDF of the *Campus Express* information/ sign-up letter was attached.

April 2011

- *Campus Express* was included among Rice Library offerings on display at the Center for Academic Creativity "Scholarly and Creative Works" reception; included were the same display elements used the previous year.

June 2011

- ILL Unit staff began including an information/sign-up letter placed inside books requested by faculty with multiple ILL requests being submitted/filled.

### **Registration**

When a USI faculty member is interested in participating in *Campus Express*, they fill out, sign, and detach the information at the bottom of the *Campus Express* invite letter, then return it to the Rice Library ILL Unit via campus mail. The new participants are added to a spread sheet list of previous participants, stating their name, department, campus mail address, contact info, and the date they signed up to participate. Faculty from a variety of academic departments across campus participated (see table 1).

For each faculty participant, two or three 3x4 inch cards are created; one side has the participant's name and campus mailing address, the other has a return address for the Rice Library Interlibrary Loan Unit. These cards are sized to fit the clear mailing address window on the front of the mailing bag. The cards are printed on a thick card stock and sent to USI's Copy Center for lamination. The 3x4 inch mailing cards are housed alphabetically by participant last name in a small metal card holder with A-Z tabs. If a faculty member's use of ILL is frequent, additional cards are created for that participant. The *Campus Express* program continues to attract new participants each semester. There are currently 39 USI faculty participating.

Table 1  
*Campus Express* Participants by Academic  
 Department – As of June 30, 2011

Academic Department	Frequency
English	5
History	5
Nursing/Health Professions	5
Education	4
Sociology	3
Chemistry	2
Communications	2
Physical Education	2
Biology	1
Engineering	1
Food/Nutrition	1
Foreign Languages	1
Liberal Arts	1
Marketing/Business	1
Philosophy	1
Political Science	1
Psychology	1
Public Administration	1
Service Learning	1
Total	39

#### **Workflow/Delivery Procedure**

The workflow for any requested ILL item to be delivered via *Campus Express* originates like any other loan request. USI Rice Library uses *ILLiad 8.0* ILL management software, and each *Campus Express* participant's user profile is modified to add the letters "CE" by their first name. This allows ILL staff to immediately identify books checked in from lending libraries as *Campus Express* items.

All items, *Campus Express*-bound or not, are processed in the same manner. Books are wrapped with labels containing patron, item, and due date information. All ILL items that are not *Campus Express* are brought to the Checkout area of Rice Library for pickup, and the patrons are notified through the "Contact Customers" queue in *ILLiad*. The *Campus Express* items follow this delivery/return procedure:

1. ILL staff places each item in a nylon *Campus Express* bag. Each bag is identified with a barcode sticker, the last four digits of which

are written on the top of the book wrap. Each *Campus Express* bag is furnished with a "*Campus Express* Instructions" slip (see figure 2). The item's transaction number, name of participant, and date are then added to a tracking log (more on this under the *Tracking* section of the paper below). One of the participant's corresponding mailing cards is inserted in the clear pocket on the front of the bag.

2. The ILL staff sends a customized email notification to the faculty member, stating that materials have arrived and will be delivered to them by the next working day. This email was created using the *ILLiad Customization Manager*. It can be set up to automatically pull in html tags from the transaction page including transaction number, patron name, item title, and due date. ILL staff can then create an email routing rule, accessible from the *ILLiad* transaction page, which automatically routes the transaction to the "Checked Out to Customer" queue.
3. ILL staff will initial and date the borrowing loan slip on the patron's behalf, add the initials "CE" for *Campus Express*, then file it in the designated tray with other outstanding loan slips.
4. Bags are brought up with all other outgoing ILL packages to the Rice Library Administrative Office, 2<sup>nd</sup> floor. USI Distribution Services picks up the ILL *Campus Express* bags there with all other outgoing campus and US mail, and scans the bag's barcode into their TrackPad system. They then deliver the *Campus Express* bag to the appropriate department's administrative assistant, who signs for delivery confirming that the materials have arrived in the department. The administrative assistant places the bag in the faculty member's mail slot or brings to office.
5. The faculty member uses the book for the loan period, requesting a renewal request through their *ILLiad* page if needed. When finished, they return the book in the same red nylon bag in which it was delivered, turning the mail card around to show delivery to the Interlibrary Loan Unit. The faculty member may choose to return the book and bag in person to Rice Library's Checkout Desk instead of through campus mail.

6. USI Distribution Services will ask a Rice Library staff member to sign for delivery, confirming that the book and bag arrived in the library. The red nylon bags are then brought with all other incoming ILL mail to the ILL Unit mail basket.
7. When the bags are returned, they are opened, marked as returned in the *Campus Express* tracking log, and the bags and mailing labels are returned to their storage areas. The books are placed on the “Borrowing Returns” shelf in the ILL Unit area, awaiting return to the lending libraries with all other borrowed items to be returned.

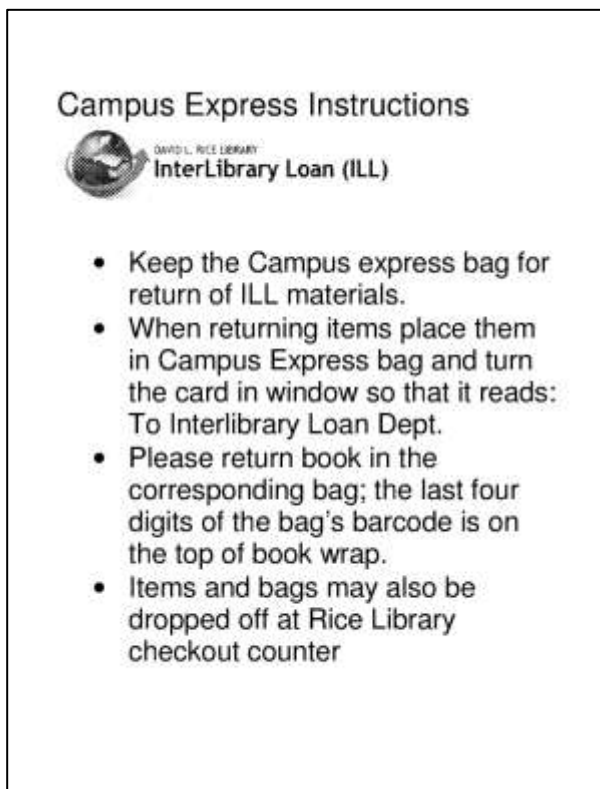


Fig. 2. *Campus Express* instructions

### **Tracking and Organization**

The ILL Unit at Rice Library uses Word and Excel documents to aid in tracking participation, and bag delivery/return. At the time the ILL Unit staff was preparing to open up *Campus Express* to all faculty, an Excel spreadsheet was created to keep track of all faculty signed up to participate in the service. The excel file included participant names, academic departments, campus address, date they signed up, and contact information. This file is updated each time a faculty member signs up. It helps keep track not only of

participants, but also with how many faculty members are signing up each semester. This file, along with all other *Campus Express*-related documents, is kept in a shared drive easily accessible by all ILL Unit Staff. The original sign-up sheets are also housed in a hanging file folder.

To keep track of the whereabouts of each red nylon bag used in delivery to faculty, the ILL Unit staff created a tracking log. The log is pre-printed with five columns, one of which is a list of each of the 50 barcode stickers affixed to the bags. The other columns track the date the parcel was sent, the participant name, ILL transaction number, and date of bag return. When an item is ready to be sent, ILL staff pick a bag whose code on the log has not already been used. All columns are filled at the time of delivery except the “Date Bag Returned,” field, which is filled in once the bag and item are returned to ILL. The tracking log sheet is kept on a clip board and stored on a shelf next to the bags in the ILL mailing work station. When one sheet is completely filled, it is replaced immediately with another. Having the last four numbers of the bag barcode written on the top of the book wrap aided greatly in assuring that the books are returned in the same bag as it was originally delivered.

Finally, ILLiad statistics and search capabilities are utilized for tracking usage by *Campus Express* participants. It is very helpful to track such data as usage by academic department, use of ILL in general by *Campus Express* participants as a percentage of overall use, and during what times of year and/or semester use by *Campus Express* is at its highest or lowest. Once again, these and other statistical data are stored among all relevant *Campus Express* files in a shared drive folder.

### **Free Fare for Other Academic Libraries**

While the total number of *Campus Express* as of June 2011 (39) is still relatively small when compared to all faculty on campus, the level of satisfaction with the program among participants remains very high. Moreover, the program attracts a few new participants each semester. The program details, workflow, and marketing measures is continually reviewed and revised if necessary to assure the program continues to grow. The preliminary planning, marketing,

workflow and tracking written above have worked well for USI and Rice Library.

Listed below are several suggestions which ILL units in other academic libraries may hopefully find useful if interested in starting a campus-wide ILL delivery service of their own:

- Initialize the program as a trial run with a limited number of participants for at least the first semester or two. Once the trial period has ended, gather feedback from participants to assure the program is worth the investment of time and resources.
- Work with the web design or ITS staff for the creation of branding and logos used on the delivery bags, correspondence, etc.
- There are several companies that sell and personalize delivery bags. The best place to start here may be the World Wide Web or library supply catalogs. Rice Library ordered their bags from Demco®, who also assisted in the personalized branding on the front cover of the bag. Once this is set up, ordering additional bags when needed is quick and easy.
- Customize a detailed and logical workflow well-suited for the logistics of your institution and size of university. Much of the workflow for books ordered by *Campus Express* participants is the same as any other incoming ILL request. The workflow is included in the ILL policies and procedures manual, as well as step-by-step manual used daily by ILL staff. These manuals, as with all *Campus Express*-related documents, should be stored in a shared drive or some other place accessible by all staff designated to make needed revisions.
- Get to know your college/university division responsible for the delivery of campus mail. Speak with them to get an idea of the how the implementation of a campus delivery program for ILL will impact their workload and logistics. Develop a means by which the ILL campus delivery bags will be properly

tracked to keep from getting lost. Rice Library was very fortunate that the very same barcodes used in books were readable with the scanning/tracking equipment used by USI's Distribution Services.

- Keep your work area organized and keep a detailed workflow in place for all steps in the ILL campus delivery process. For example the metal card holder to house the participant mailing cards alphabetically has worked very well for our operation. Moreover, we have found that having printed these cards on thick card stock and getting them laminated has kept them from wearing out.
- Finally, it is important to get the word out about your program in whatever means is available to you. Some suggestions include campus-wide emails if allowed by your institution, blog posts, links on the library web page, newsletters, and quick announcements at all available meetings with faculty – faculty meetings, in-services, etc.

### **Conclusion**

Overall, the ILL Unit at Rice Library is very pleased with the *Campus Express* program. Faculty participants have expressed much satisfaction and appreciation for the service, and we continue to enroll new participants each semester. All of the workflow, procedures, and previous preparatory and marketing steps have been carefully documented and stored in a shared drive for easy reference. This gives the ILL Unit the knowledge and resources to take appropriate steps when necessary, such as the ordering of more bags, creation of additional mailing cards, revisions of the workflow, and maintaining proper tracking data. We hope that this paper will be useful to other academic libraries interested in starting or revising a similar program.

### **Works Cited**

“New Service Tryouts” *Rice Library News* 5.1 (2008): 5. Print.

## **Wiki-fy Your Student Worker Program**

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### **Abstract**

One of the challenges in managing a student worker program is establishing effective communications between the student workers and the supervisors. It is essential to keep the students informed about current issues that may affect library services and updated on changes to library policies or procedures, as well as timely address any common performance problems that arise. Holding regular student worker meetings is not always possible due to the students' varied schedules, and e-mail memos may go unread or be quickly deleted. Wikis, however, are a Web 2.0 tool ideally designed for effective student worker-supervisor communications. Supervisors can quickly post - and archive - important announcements for all to read online, while the student workers can easily request substitutes for scheduling conflicts and record their progress on assignments, such as shelf-reading. Additionally, a wiki can serve as an online manual and be used to disseminate training material to student workers; thereby cutting printing costs and helping the library go green.

# Smartphone Trends on the UCM Campus: Is it just the Net Generation?

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## Abstract

Mobile technology has been cited by the Horizon Report as one of the major technology trends in education for the last six years. Although there are still problems that need to be solved for the wide spread adoption of this technology in the classroom, people are already finding ways to utilize them not only in their personal lives, but in education. How is this trend impacting our campuses and our libraries? A technology survey at the University of Central Missouri in 2010 included a section on smartphones. The questions covered ownership of the devices, how they were used, educational attitudes about them, and expectations for increased usage. The answers were analyzed to determine if there were demographic differences between students and faculty or by gender and age. Does the “assumption” that younger people are more likely to use them hold true for this community? Does faculty use them differently than students? Would either group be interested in using their smartphones for certain campus services, including library services? The results proved interesting and informative as the library considers how to increase access through smartphones.

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## Introduction

Anywhere you go, there are people of various ages with cell phones in hand either talking or texting. More and more of these people are using mobile phones with computing power that can rival traditional computers. Not only can they make phone calls and send text messages, they can get directions with maps and GPS, access the Internet for the latest stock quote, catch up with their friends on Facebook, or use a multitude of specialized apps. Mobile devices, whether smartphones, netbooks, or ebook readers are changing the way we live, work, socialize and learn. In a recent article on mobile websites, Karine Joly acknowledges this trend with her opening question, “Do you know where your mobile web visitors are?” (17). Businesses, institutions and libraries can no longer afford to ignore their mobile patrons.

## Literature Review

The rate at which technology advances has increased by leaps and bounds in the past twenty years. The Mobile Internet report confirms the faster growth rate of the current mobile technological cycle driven by the advanced computing functions of the Apple iPhone and Google’s Android operation systems (Bertolucci).

Eisenburg observed that just a few years ago the cutting edge mobile technology was a cell phone with a digital camera but by 2008, smartphones had GPS and could stream audio and video. As amazing as the “dizzying array of options” are, of greater importance is “the increasing potential to deliver content directly to a wide range of individuals -- anytime, anywhere (almost), and in any form” (Eisenburg 24). “The 2011 Horizon Report” takes the trend a step further. “The devices available today are multi-functional and robust, but the story of mobiles is no longer solely about the devices we carry. Mobiles – be they phones, iPads, or similar ‘always-connected’ devices – are doorways to the content and social tapestries of the network” (Johnson et al. 6). It is no longer just about what the devices can do, but about their affect on how we live, work and maintain relationships with others.

Technology forecasters have been predicting a point in the not too-distant-future, when mobile access becomes the predominant access to the web. The 2008 Pew Internet Report speculated that mobile access will be the main way most people access the Internet by 2020 and it will be the only means of access for many across the world (Anderson and Rainie 3). The 2010 International Telecommunications Union report

Table 1  
Comparison of Smartphone Use (“M:Metrics: iPhone Hype”)

Activity	iPhone	Smartphone	Market Average
News or info via browser	84.8%	58.2%	13.1%
Accessed web search	58.8%	37.0%	6.1%
Watched mobile TV and/or audio	30.9%	14.2%	4.6%
Watched on-demand video or TV Programming	20.9%	7.0%	1.4%
Accessed social networking site or blog	49.7%	19.4%	4.2%
Listened to music on mobile phone	74.1%	27.9%	6.7%

on worldwide mobile subscriptions moves up the timetable, predicting this will happen by 2015 (“ITU Sees 5 Billion”). It has already happened in some places. In Egypt, 70% of the people who access the web with their mobile device never use a desktop (Part B4).

Ownership of smartphones with Internet accessibility is rapidly increasing. According to the July 2011 comScore news release, there were 234 million people in the United States over the age of 13 who used a mobile phone between March and May 2011. Smartphone ownership had grown by 11% from the previous year to 76.8 million (“comScore Reports: May 2011”). It also represented an increase of 27.1 million smartphone owners in only one year. The comScore press release for the same quarter in the previous year reported 49.1 million smartphone owners (“comScore Reports: May 2010”). MobiThinking predicts that 85% of the cell phones sold worldwide in 2011 will have Internet access (“Global Mobile Statistics B5”).

The introduction of the iPhone in 2007 triggered a sharp rise in the use of smartphones to access the Internet. According to comScore, daily use of cell phones for Internet access increased by 107% between January 2008 and January 2009. Weekly access increased by 87% and monthly access by 71% (“comScore: Mobile Internet”). Statistics from M-Metrics, Inc. (see table 1) indicated that iPhone owners use their phone to access the Internet more times and for more activities than other smartphone owners even though there were no significant demographic differences (“M:Metrics: iPhone Hype”).

Even when a multi-functional phone is owned, that does not mean that users take advantage of

them, including the ability to access the web with it. The annual college and university survey results for ECAR (EDUCAUSE Center for Applied Research) confirm this. In the 2009 survey, 51.2% of the respondents owned mobile devices that could connect to the Internet but only 33% of this group used it (Smith, Salaway, and Caruso 85). A year later in the 2010 survey, mobile ownership had increased to 63% with 49% utilizing web access (45, 51). Of the respondents in the 2010 ECAR survey who did not own a smartphone, 14% were interested in purchasing one in the next 12 months (Smith and Caruso 51). In just one year, not only has student ownership of smartphones increased by 12%, but web access had increased from one third to one half of the owners. Next year the numbers are anticipated to be even higher as the use becomes more mainstream.

The authors wanted to know why the students were not utilizing this feature. Reasons cited for not using cell phones to access the Internet included plenty of other ways to do so (49.9%), cost of data service (46.2%), and 36.4% indicated the cost of mobile device (Smith, Salaway, and Caruso 19). Other studies support the problem of both the cost of the mobile devices and connection fees (Spires 302; Stockwell 259; McFarland and Mussell 309).

While the ECAR study looked at college students across the United States, another survey focused on technology at the Ohio University campus. The 2009 survey was administered by the library in order to develop a technology profile of their users. One item examined was the amount of time the students spent online. Although many assume that the younger a student is, the more time they spend online, research does not support



Table 2

Own or expect to purchase a smartphone in the next year

Age	Faculty		Students	
	Own	Expect to Purchase	Own	Expect to Purchase
18-19 years	n/a	n/a	54.9%	10.8%
20-22 years	n/a	n/a	55.7%	13.9%
23-26 years	n/a	n/a	64.7%	9.8%
27-30 years	n/a	n/a	66.7%	13.3%
31-44 years	55.0%	15.0%	72.4%	7.9%
45-60 years	43.4%	12.3%	48.1%	11.6%
61+ years	30.8%	15.4%	n/a	n/a

this conclusion. At Ohio University, the greatest use of the Internet was in students age 27 and older (Booth 55). This is confirmed by a July 2008 Nielsen report, which documented 12.7% of users were 13-17 year olds, and 11.8% for 18-24 years old. Internet access increased with the 25 to 34 year old group (27.4%) and reached its peak with the 35-54 age group (37%) before dropping with the oldest groups (Nielsen Mobile 4).

### Methodology

A survey was conducted at the University of Central Missouri in 2010 to identify trends in the faculty and student's technology ownership and use. Faculty were surveyed in May 2010 and students four months later in September. Of particular interest was whether or not demographic differences such as status (faculty, student), gender, and age influenced technology choices. Because of the rapid growth in mobile technology, a third of this survey was devoted to the ownership, attitudes toward, and use of smartphones or other mobile devices which were capable of accessing the Internet. Most of the questions were similar to the mobile questions in the 2009 ECAR survey. For the sake of simplicity, these mobile devices will be referred to as "smartphones" for the remainder of this paper.

Because of the differing age distribution between the students and faculty, there were only two age groups, 31-44 years and 45-60 years, that could be directly compared. With only one faculty response in each of the age groups below age 31, the results were not considered statistically accurate and are not included in the results in this paper. No students were in the 61+ age group.

### Results

The initial question in the section on mobile devices identified how many of the respondents owned a smartphone. Affirmative answers were given by 43.1% of the faculty and 58.6% of the students. An additional 14.6% of the faculty and 11.7% of the students expect to buy a smartphone within the next year. Not only do students as a group own more smartphones than faculty, they owned more even in the two age categories that could be directly compared. For ages 31-44, faculty owned 55.0% and students 72.4%. For ages 45-60, faculty owned 43.4% and students owned a little more at 48.1%. In these same categories, faculty expressed a slightly higher intention to purchase smartphones in the next year (see table 2).

Even faculty (41.5%) and students (29.3%) who do not own one and have no purchase plans in the near future recognize the increasing potential for smartphone use. Faculty and students had very similar expectations of their smartphone use in the next three years and 74.7% of the faculty and 72.6% of the students agree or strongly agree that in the next three years, they will be doing many things on their cell phone that they currently do only on their desktop or laptop computers. This expectation matches the ECAR responses of 74% in 2009 (Smith, Salaway, and Caruso 7). Students at the UCM campus owned slightly fewer smartphones than in the 2010 ECAR study (63%) and about the same number (14%) who anticipated buying one soon (Smith and Caruso 45, 51).

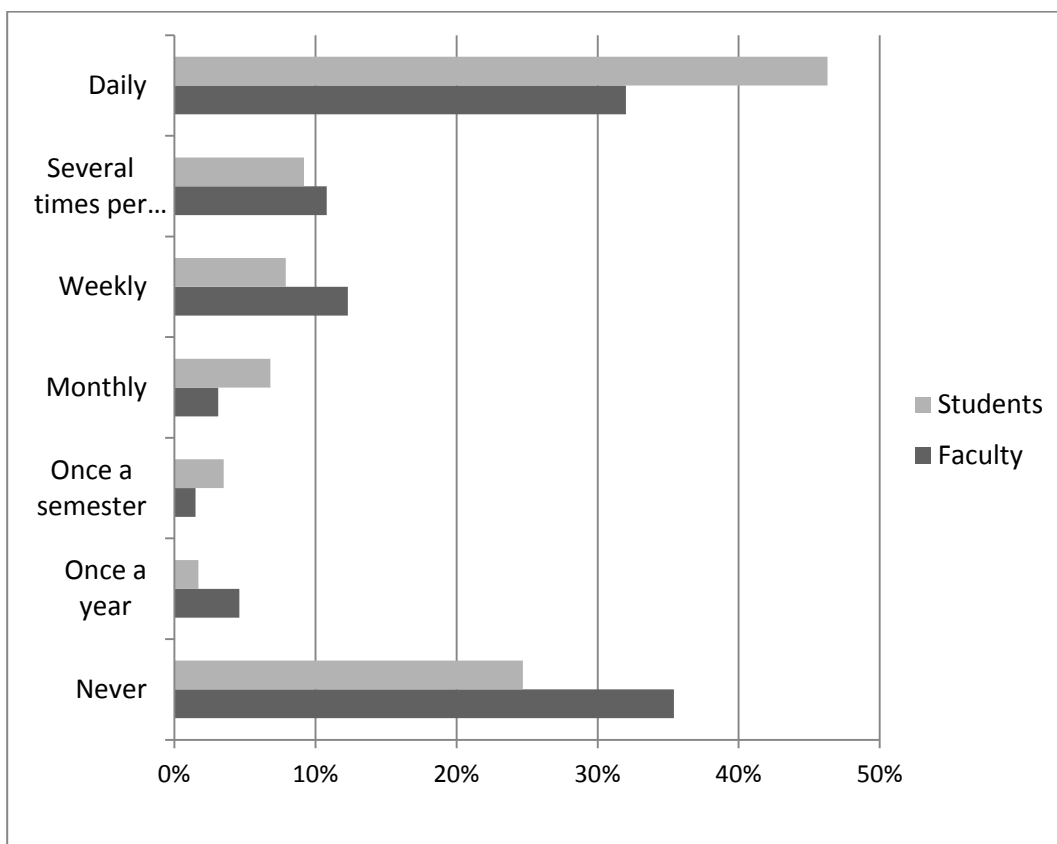


Fig. 1. Frequency of Internet access with smartphones

In spite of the growing mobile usage, there is a significant portion of the campus population that does not have a smartphone and even those who do may only use their basic functions. Smartphone owners were asked how frequently they accessed the Internet with the device (see fig. 1). The choices were: never, once a year, once a semester, monthly, weekly, several times a week, and daily. The greatest differences between the two groups were in the “never use the Internet” (faculty 35.4%, student 24.7%) and “daily” response (faculty 32.3%, students 46.3%). Once again, even in matching age groups, students were more likely to access the web daily on their phone than faculty, resulting in almost 20% difference in the 31-44 years category with 36.0% of the faculty compared to 55.9% of the students in the same age group. There was much less difference for 45-60 years with 26.9% of the faculty and 35.1% of the students indicating they accessed the web daily.

Over 50% of the students accessed the web with their phones daily in three age groups (23-26 years – 54.3%, 27-30 years – 60.9%, 31-44 years – 55.9%). The youngest and the oldest student

categories were the least likely to use this function (18-19 years – 37.0%, 45-60 years – 35.1%). Male students were also much more likely to access the web than female students (males 57.6%, females 39.7%). Faculty use indicated a decreasing trend with age. Over a third of faculty ages 31-44 accessed the web (36.0%), about a quarter ages 45-60 did (26.9%), but only 9.1% of the faculty over age 61+ used this feature. These numbers are a little higher than the Nielsen ratings for the older age groups which had 9.1% for 55-64 years, and only 1.7% among people 65 and older accessing the internet (Nielsen Mobile 4). The UCM faculty responses showed little difference by gender (males 34.5%, females 39.7%).

Respondents who indicated they access the web at least weekly were directed to the next question to determine the number of hours a week they accessed the Internet from their smartphone. (see fig. 2). Fifty percent or more are online for less than an hour per week (faculty 60.8%, students 50.1%). There is little difference between faculty and students for 1-2 hours a week (faculty 17.4%, students 20.1%). Although students are more

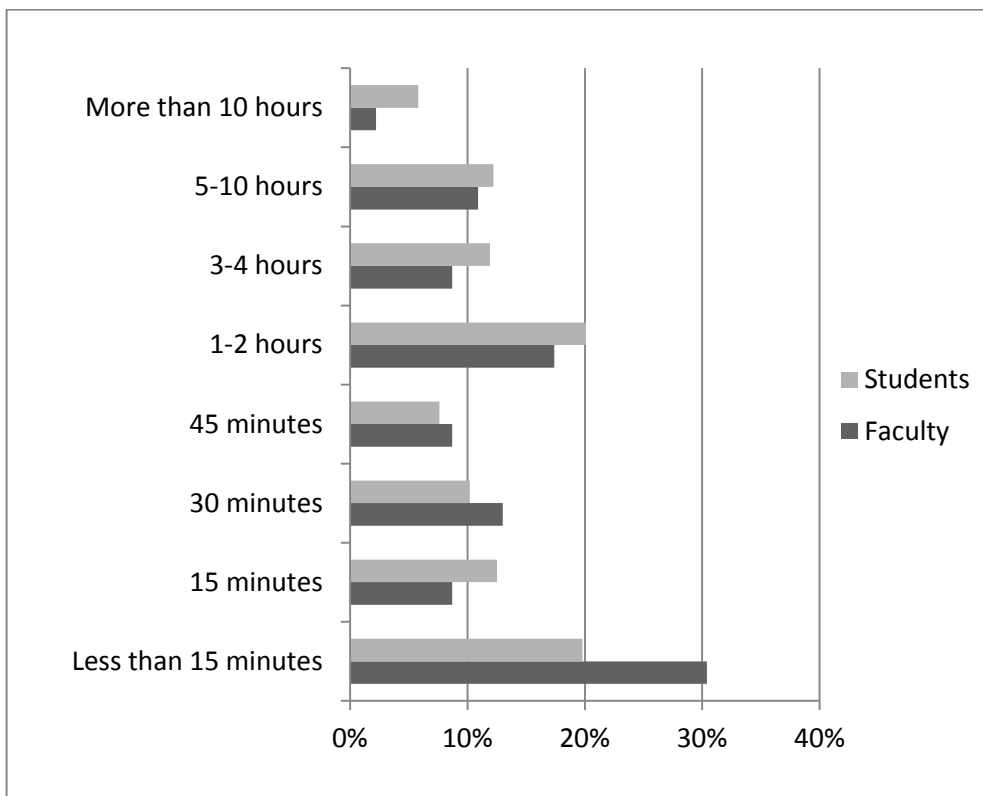


Fig. 2. Hours per week accessing the Internet from smartphones

likely to use their phone for web access than faculty for three or more hours a week, there is not a big difference (faculty 21.8%, students 29.9%).

The age and gender demographics for time online showed trends similar to web access with their smartphones. Students ages 27-30 (52.9%) and ages 31-44 (44.7%) were the most likely to access the web three hours or more a week. Both faculty and students showed minimal gender difference in accessing the web for this time period (faculty – males 24.4%, females 22.0%; students - males 32.6%, females 28.4%). When comparing the two corresponding age categories between faculty and students, faculty were much less likely to use the Internet. For age 31-44 faculty, 30.0% were online three hours or more compared to 52.9% of the students. For age 45-60, 20.0% of the faculty and 44.7% of the students were online. None of the faculty age 61+ accessed the web for more than 3 hours a week.

One of the benefits of mobile computing is the ability to use it anywhere, any time. As people become more accustomed to mobile access, will they use it even when a desktop or laptop computer is within reach or only when one is not available? The survey asked respondents this

question. Overall, there was minimal difference between the faculty and the students. Almost a third of the faculty (30.6%) and over a quarter of the students (27.1%) never use their mobile device if a laptop or desktop is available, but 22.2% of the faculty and 26.1% of the students will sometimes use their cell phone even if another computer is available. 8.1% of the faculty and 15.0% of the students often or very often do.

Demographic differences existed when comparing respondents who sometimes/often/very often preferred to use a smartphone even if a computer was available. The most frequent student users with over 50% responding were in the age groups 27-30 years (55.6%) and 31-44 years (52.0%). Next in line were students ages 20-22 (45.4%) and ages 23-26 (42.6%). Faculty ages 31-44 years (33.4%) were less likely to use their smartphone for web access if they could chose a computer instead than any of the students up to age 44. Interestingly, faculty members in the next age category, 45-60 years (34.8%), were much more likely to choose mobile access over a computer than students in the corresponding student group (only 20.8%). Male students were more avid users than females

Table 3  
Use of cell phones in the classroom

Type of Use	Faculty			Students		
	Strongly Disagree/ Disagree	Neutral	Agree/ Strongly Agree	Strongly Disagree/ Disagree	Neutral	Agree/ Strongly Agree
I use my cell phone in class for course activities	81.7%	1.4%	16.9%	65.5%	11.5%	22.6%
I use my cell phone in class for non-course activities	81.7%	4.2%	14.1%	42.6%	11.3%	45.4%
It is ok for instructors to forbid cell phones use in class	9.7%	4.2%	86.1%	18.4%	18.2%	61.9%

(males 47.5%, females 37.3%) but there was little gender difference for faculty (male 34.1%, female 29.6%).

Even though smartphones have the ability to connect to the Internet, many users choose to not utilize this feature. The survey asked them for their reasons. The four top reasons were that they access the Internet in other ways, data service plans cost too much, batteries wear out too quickly, and the connection is too slow. The top reason for both faculty (81.5%) and students (69.4%) was a preference to access the Internet in other ways. The second choice for faculty (43.1%) was the cost of the data plans and students (36.6%) ranked this one fourth. Both faculty (32.3%) and students (38.7%) ranked the slow connection speed as third. Poor battery life was the fourth reason faculty members (20.0%) do not access the Internet with their phone and the second reason for students (39.9%). Unlike the 2009 ECAR study, cost of smartphones was not a big factor for either group with faculty at 18.8% and students 13.1%.

Other reasons were lack of good wireless access (faculty 16.9%, students 20.0%), don't need to access the Internet with their mobile phone (faculty 7.7%, students 18.9%), desired applications cost too much (faculty 10.8%, students 7.1%), can't find apps they want (faculty 0.0%, students 8.8%), not sure mobile phone use is healthy (faculty 6.2%, students 4.4%), and lack of security with a mobile connection (faculty

12.3%, students 11.5%). The oldest faculty group (61+ years) was the most concerned with the security/privacy of the mobile connection (28.6%). Additional comments cited the small screen size as a deterrent and the lack of support for multitasking and browsing.

A growing discussion in education involves the use of cell phones in the classroom. Are they a benefit, a distraction, or an aid to cheating? The respondents were asked if they use their cell phones in class for either course activities or non-course activities and if instructors should be able to forbid cell phone use in class (see table 3). The responses reveal that the majority of both faculty and students do not use cell phones in class for any reason although faculty was more adamant about it. A high percentage of both faculty (81.7%) and students (65.5%) disagreed or strongly disagreed with the statement that they use their cell phone in class for course activities. Faculty felt as strongly about not using their cell phone in class for non-course activities (also 81.7%). Students were evenly divided on their responses for disagree/strongly disagree (42.6%) and agree/strongly agree (45.4%) indicating that many do use their phones in class for non-course activities. Even a small group of the faculty (14.1%) uses their phones for non-course activities. When asked if instructors should be able to ban cell phone use in class, 86.1% of faculty and 61.9% of the students agreed/strongly agreed that they should have that privilege.

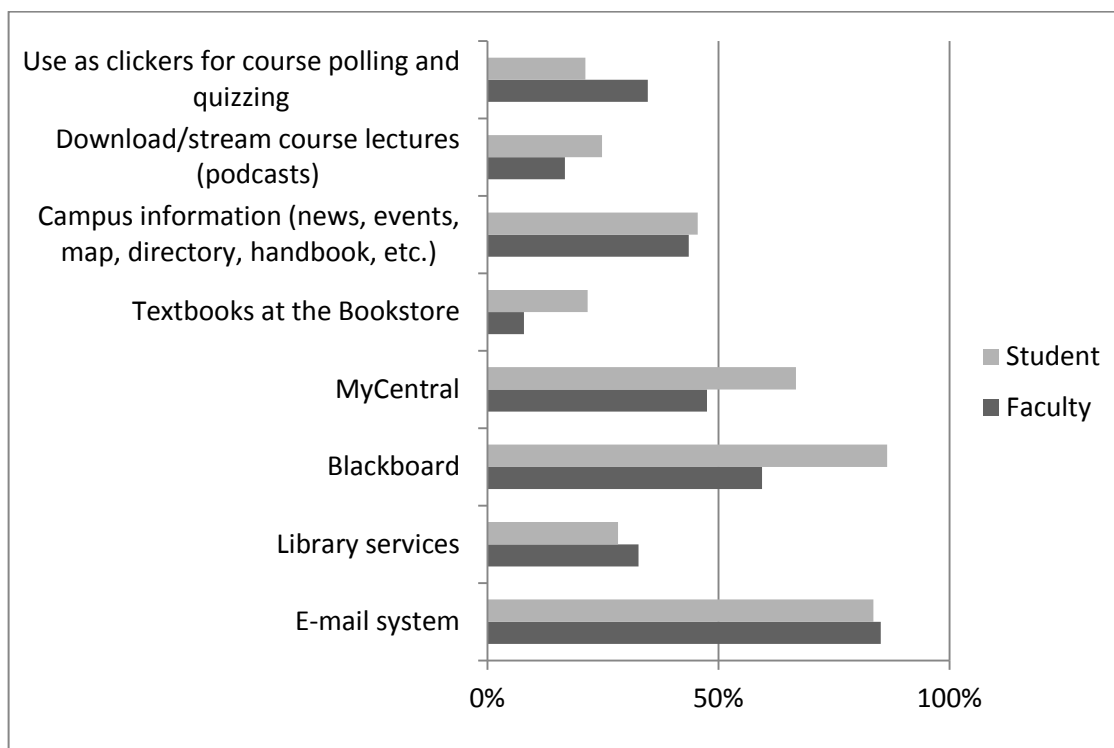


Fig. 3. UCM services they would like to receive on their smartphones

Respondents were asked about what university services they would like to access on their mobile phones. Although faculty and students agreed on the top four items, significant differences existed on the importance of some of them (see fig. 3). Students showed more interest in all items except library services (28.4%) but they were not far behind the faculty response (32.7%). Campus email was the top choice for faculty (85.1%) and a close second for students (83.5%). The student's top choice was access to Blackboard (86.5%) which was number two for faculty (59.4%). Access to MyCentral (a portal for campus information for students, faculty and staff) was also important for both groups (faculty 47.5%, students 66.9%), as was campus information such as news, events, map, directory, handbook, etc. (faculty 43.6%, students 45.5%). Use of clickers in class for polling and quizzes was more important for faculty (34.7%) than students (21.2%). There was less interest in podcasts (faculty 16.8%, students 24.8%) or textbooks from the bookstore (faculty 7.9%, students 21.7%).

Although minimal gender differences existed between faculty and students, age did play a role in some preferences. Faculty, age 31-44 ranked the library in third place (45.5%). Students 27

years and older were also very favorable to library access on their phones and it ranked third for ages 31-44 (47.9%) and fourth for students 27-30 years (36.7%) and 44-60 years (55.0%).

The next question expanded on options for mobile library services. Three relate to some form of SMS/Text notices: receive renewal / overdue notices, receive hold pickup notices, and renew library material. Another is Ask-a-Librarian which is a texting service for reference queries. The last item enables patrons to send a call number from the catalog to their cell phone. Students expressed more interest in all five options than faculty (see table 4). About a third of the faculty and 50% of the students were interested in Ask-a-Librarian (faculty 30.5%, students 52.8%) and send a call number from the catalog (faculty 32.2%, students 50.3%). Both groups were even more interested in SMS/Text notices. Almost 50% of the faculty and about 75% of the students were interested in the following two items: receiving renewal / overdue notices (faculty 48.7%, students 77.4%), and receiving hold pick-up notices (faculty 49.1%, students 77.2%). About 50% of both groups were interested in renewing library material with their phones (faculty 48.7%, students 52.5%).

Table 4  
Level of interest in Library mobile services

Context	Faculty			Students		
	Extremely unlikely	Fairly Likely/ Likely / Extremely likely	I don't text	Extremely unlikely	Fairly Likely/ Likely/ Extremely likely	I don't text
Ask-a-Librarian a question	43.8%	30.5%	25.6%	42.2%	52.8%	5.0%
Send call number from catalog	47.9%	32.2%	19.8%	45.1%	50.3%	4.6%
Receive renewal / overdue notices	33.1%	48.7%	18.2%	18.6%	77.4%	4.1%
Receive hold pickup notices	32.8%	49.1%	18.0%	20.7%	75.4%	3.9%
Renew library material	33.1%	48.7%	18.2%	19.3%	56.5%	4.2%

For each of the items, respondents could indicate whether or not they texted with their cell phone. A small minority of students (5% or less) indicated they did not text but a much higher percentage of the faculty do not (18-25%). Other studies confirm that younger people text more than older people. According to a Pew Internet Project report in 2010, 72% of adults text which is close to the UCM figure, but younger people text much more. Teens send and receive an average of 50 texts per day compared to only 10 texts per day for adults (Lenhart 2).

### Findings

This study revealed some interesting similarities and differences in how students and faculty owned and used mobile technology. Although the younger age groups tended to use it more as was expected, the youngest group in this survey (18-19 years old) often lagged behind. There were two other striking differences. In comparing gender responses for faculty and students, male students were usually the more avid users but there was little or no difference by gender for faculty. Age comparisons are difficult to make due a high portion of students falling into the younger age ranges which did not have comparable results for faculty. Yet in the age ranges that could be compared, there were some startling differences that cannot be attributed to age. In the ranges of 31-44 years and 45-60 years, students in these groups were much more likely to own smartphones and use them to connect to the Internet than the comparable faculty groups.

On the other hand, one item indicated the opposite trend for faculty ages 45-60 who were more likely to utilize web access on their phones even when a computer was available than students in the same age group. The researcher is not sure why there was such a dramatic difference but it does emphasize the point that although it can be interesting and convenient to classify technology use by age (digital natives, digital immigrants), it is important to remember that even within each category, there can be wide variation.

### Conclusions

The survey results confirm that there is an increasing interest and demand for mobile services across age groups and "status" groups. Although the UCM results may vary some from other surveys, they all support the growing use of mobile devices for multiple functions. The library needs to be actively exploring ways to tap into this trend and proactively provide services that will meet the needs of the mobile patrons. Additional investigation can be done to determine more in-depth information regarding mobile usage such as what types of sources they prefer to access with their mobile phones even when another computer is nearby.

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# Social Media Wrangling: A Comparison of Feed Tools

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## Abstract

Attending conferences at times can feel like drinking out of a fire hose. Not only are the presenters providing content but fellow participants and those listening online chime in from Twitter, Facebook, blogs and more. Reviewing steps in content curation to preserve conference-centered knowledge creation will be discussed using three professional development opportunities: the Visual Resources Association, the Art Libraries Society of North America Conference and the eXtension Communities of Practice Workshop.

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## Introduction

For centuries libraries managed knowledge to share with the public and to preserve for future generations. The digital age makes the curation of knowledge more complex. Eric Schmidt, Google CEO, stated “There was 5 exabytes of information created between the dawn of civilization through 2003,” Schmidt said, “but that much information is now created every 2 days, and the pace is increasing...People aren’t ready for the technology revolution that’s going to happen to them...” (Kirkpatrick).

Curation is about listening to the information stream and providing context in an engaging form that builds a relationship between information producer and consumer. Some curators have related the process back to museums and galleries, assembling the pieces into an exhibit, while others compared it to being a DJ (McAdams; Dunn). You remix content based on your audiences changing tastes and filter out the noise with the goal that they will like it enough to engage through a comment, retweet or get out on the dance floor.

Libraries have processes in place for archiving articles, books and other materials. Grey literature such as conference proceedings and social media has been difficult to curate. Through planning and participation in two conferences this spring I will outline a technique for aggregating, filtering, curating, publishing, and distributing content.

## Case Studies

Conferences gather a group of people around a common topic(s) where presenters are sharing

original research. “It’s no longer just about creating [or consuming], now it’s about finding, rating and aggregating” says Stefano Maggi. I would take this a step further and add a feedback loop. This allows the conversation to continue to build around the topic as new content is generated. By creating a circuit the consumers of the curated content can provide feedback that potentially can alter the future direction of the curator. Below I will outline my conference plan of attack, and through each conference I have learned new tools and techniques to make curation a little easier.

### *VRA & ARLIS/NA Conference 2011*

The second joint conference of the Visual Resources Association (VRA) and the Art Libraries Society of North America (ARLIS/NA) occurred in March of 2011 in Minneapolis, Minnesota. Over 500 librarians, visual resource professionals, artists, faculty and students attended. Both organizations have a strong tradition of creating real-time content through photo sharing on conference *Flickr* groups and tweets throughout the conference. In addition to many of these professionals being on the cutting edge, ARLIS/NA for the past several years hosted a Web 2.0 kiosk in their exhibit hall staffed by students and new professionals. The kiosk was not a question or answer space, nor was it a demonstration booth, but rather it was a place where participants, table staffers and vendors, organically had conversations and assisted each other in creating accounts in social networking tools, such as Twitter, Flickr, Facebook, Delicious and more. (Silver)



As the Registration and Hospitality Coordinator for the conference I wanted to display the dynamic content the attendees created during the conference. The conference planning committee came up with the idea of having a large flat screen monitor at the registration desk where people can get a glimpse of what is going on during the conference real-time. I will illustrate the process using Robin Good's twenty-one key tasks in the curation workflow for the joint conference.

1. Identify Niche: Here you identify the topic or theme you will be curating. Since the materials related to a conference represented a variety of topics, they were tied to a specific time and place.
2. Select- Identify Sources: As an information profession we use our research skills to locate the key sources. These resources should be revisited periodically as new sources become available as everyone is a content creator. Scott Abel at the recent ConFab 2011 Conference stated "to manage content effectively you must break down silo walls." In addition to the traditional conference proceedings, I included blogs, Twitter, Facebook, and SlideShare as my sources for curation of the joint conference.
3. Setup search framework: This is the step where you "monitor, gather and find relevant new material on your topic" (Good). I monitored the Twitter hashtag (#vra\_arlis2011), the Facebook group, persistent searches using Google Alerts on various alternatives to the conference name and Technorati for relevant blog entries.
4. Reach Out to Network: In this step you inform not only your intended audience of your curation project, but also those from whom you will be aggregating. This allows for feedback early in the process. Steve Rosenbaum, author of *Curation Nation*, and presenter at ConFab 2011 stated, "The role of the curator is to **let people tell their own stories**, which are more powerful than telling it for them."
5. Aggregate: To aid in monitoring all those feeds I collapsed them into two tools and RSS feeds. To monitor the more instantaneous sources such as Twitter and Facebook I used Flipboard, an app on my iPad. I chose this tool as it displays the

content in a visually pleasing and functional format that was easy for me to follow. The blogs, Google search alerts and Flickr RSS feeds I collapsed into a Yahoo Pipe. This allowed me to focus on one or two areas throughout the day, rather than checking ten sites.

6. Filter: Since everyone is a content creator and publisher these days there is an overwhelming need to filter out the noise. Not necessarily every tweet and comment needs to be distributed. We all have probably seen the same idea re-tweeted on *Twitter*, or have read the same article from associated press published in different news sources. In the social networking realm there is a good chance that your blog entry, Facebook wall or Twitter hashtag will be spammed.
7. Select Stories: Choose from your master feed(s) entries that deserve to be published. For example, I would select not every tweet regarding the plenary session, but a few key thought provoking comments or main messages to highlight.
8. Verify: We have to apply the same information literacy critical thinking strategies we teach patrons in our own work. This is easier if you are in the same conference session, but by verifying through presenter notes and shared slides, and similar comments of others we can verify accuracy.
9. Edit: Double-check each item amending if needed. I saw frequent amendments during the conference through Twitter. Someone would post a statistic, and another person would modify the tweet to include a link to the report.
10. Provide Context: In my opinion, this is the value of curators. Depending on the tool, the curator can group items not based on a timeline, but by theme or other strategy. One can add a custom title and introduction or concluding thoughts. During the conference, I noticed several people tweeting about restaurants for dinner, so I was able to respond with restaurant reviews by other attendees, provide our PDF cuisine guide, suggest a local application on how to get to a specific restaurant through the skyway system as that evening was bitterly cold.

11. Spin: It is necessary to distinguish your story and perspective as different from others. It goes beyond just re-tweeting, but provides an opinion. My approach was to exemplify “Minnesota Nice” regarding hospitality topics and to group items and ask questions around sessions for those who were not able to attend the session or conference.
12. Title: Rather than focusing on catchy titles I went for a more simplified, direct approach.
13. Credit: Just as we teach in information literacy, as a curator you always need to cite your sources. Luckily, most of the tools when you repurpose content will populate with a link back to the original.
14. Sequence: This can vary depending on your topic and scope, ranging from chronologically, by topic, or most in-depth at the top, etc. For the conference, it was largely organized by subtopics and not necessarily by timeline (restaurants, coffee shops, sessions).
15. Organize: Often you will want to “classify or archive” your content through a variety of tags or categories for easy retrieval (Good).
16. Update: Being a curator is about periodically updating with new content, rather than being a static website. Since my project revolved around a specific event in time, I updated several times a day during the conference, and then monitored feeds for about a month following the event. However, I would update my stream based on the timeline of the conference. Pre-conference I focused on logistics, during the conference the top entries were about sessions and then towards the end of the conference was logistics again. Finally, I concluded with sessions at the top, as this is what most people would be searching for after the conference concluded.
17. Disclose: “Be upfront about your focus, mission and personal information.” (Good). I made it clear who I was as hospitality coordinator and that the feed reflected my take on the conference. For future conferences I would like to have the curation be a collaborative process.
18. Syndicate: “Distribute and syndicate your curated news channel on relevant online channels.” I posted it to Twitter using the conference hashtag, my blog, and other relevant sites.
19. Feedback-Reply: After you post your content, listen to your feeds for comments and contributions. Ideally, the tool you use would involve a participation feature or widget. For example, after I posted information on local restaurants, a local restaurant posted that they were having a happy hour special that evening. I refreshed the content to include that information.
20. Track-Monitor: How will you measure success? “Track and monitor visitors, preferences, time spent, links followed and re-distributed by your readers.” (Good). Since this was my first attempt I was pleased with a few comments and the amount of traffic received.
21. Refine and Improve: Always keep refining. You may want to add and remove some sources from your RSS feed of and update content based on feedback.

I was able to achieve my goals for the conference with tools such a public dashboard using NetVibes. This was simply providing a one-stop shop at the registration desk with all the feeds (Twitter, Google, blogs, etc.) displayed. This was not curated content, but rather just a place to stop and view what was happening real-time. Next, I used Storify to collect the feeds and selectively display and group items in a topical format. Unfortunately, neither was very successful, due to poor Internet connections. We did not provide free wireless Internet access to attendees. Due to being located in the middle of downtown amongst skyscrapers cell phones that did have Internet capabilities had difficulty maintaining a connection. Internet connection was one of our recommendations for future venue considerations. Content, especially recaps and summaries, started to pour in shortly after the conference concluded and people were at their home institutions reflecting on their professional development. Despite the limited success of delivering curated content throughout the conference, as was my intention, participants still valued the gathered and curated content post-event.

***Extension Communities of Practice Workshop  
2011***

I am the University of Minnesota Libraries’ liaison to Cooperative Extension at the University of Minnesota. In addition to

answering reference questions, providing training on literature searching and citation managers, I consult and train on numerous social networking tools of value to extension educators. From this I was recommended to serve on the new eXtension Network Literacy Community of Practice (Langcuster et al.). eXtension is “an Internet-based collaborative environment where Land Grant University content providers exchange objective, research-based knowledge to solve real challenges in real time.” To kick off our group, members attended the national eXtension Community of Practice Workshop in June 2011 in Louisville, Kentucky. I was impressed at the conference’s social media presence and curated content for personal use and documentation.

First, the conference used Lanyard as the conference site to locate information on the presenters, slides, and handouts, along with the agenda. We used a site called Twub which aggregated information around hashtags. This was incredibly valuable as you can post links to the conference site (Lanyard), along with session-specific hashtags and more. By registering with Twub it automatically places the group hashtag at the end of your tweet, so you don’t have to type #excop11 numerous times. They used Visible Tweets to display real-time comments during breaks and lunch providing a dynamic background and great conversation starters. Similarly to the ARLIS/NA Web 2.0 Tech Kiosk, on the second day during breakfast there were tables assigned to learn about various technologies and setup new accounts. Even though the conference never moved beyond aggregating content to curation it did provide a venue for conversation online and offline. I think this is a hallmark of a successful conference.

I aggregated Twitter content, blog feeds and a Google search alert for personal use. Storify was used once again to select specific Tweets to make a basic outline of a session, and then filled it in with my own notes and others’ blogs. This provided a tidy package of content that otherwise would be saved in various places on my computer and in the Cloud.

### Conclusion

Not sure how to get started? If you are new to curation try a site for personal use such as Pinterest, which is a virtual collage or pin board of items around a tag/topic from the online world.

You can follow tags and other collectors to curate from. Also, libraries have been using curation in the classroom and creating subject guides with social bookmarking tools such as Delicious or Diigo (Buczynski; Rosenfeld; Fontichiaro).

The four most popular curation tools at the moment are Storify, Curated.By, Scoop.It and Pearltrees (Rosenbaum). Most tools today are manual or automated. We need more semi-automated curation tools that will allow expedient machine processing but human selectivity. However, the more automated the more noise interference and need for advanced filtering. Both conferences were curated by me, and individual; crowdsourced content curating allows for keeping up with the pace of information today and not a singular point-of-view, especially for conferences when you cannot be at every session.

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## **Putting QR Codes to the Test**

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### **Abstract**

QR codes are two-dimensional barcodes, that when scanned by a camera-equipped phone, can cause that phone to display plain text, open a URL, make a call, send a text message, or send an e-mail. A number of libraries have begun deploying them on signs, business cards, book-jackets, and/or on web-pages in the hopes of driving traffic to digital services and resources. The question of the utility of using QR codes for this purpose has been discussed widely, but has not been well-examined through empirical methods.

At K-State Libraries we have conducted a series of simple experiments pitting traditional signs against signs with QR codes to see which are more effective at driving traffic to digital services or resources. To gain greater insight into the importance of instructions for using QR codes, we have also compared versions with and without instructional text. The digital services we have targeted are our text-a-librarian service, our mobile site, and our renewal by phone service. The digital collections we have targeted are our DVD movies, our audiobooks, and the online Oxford English Dictionary.

After the describing the results of our experiments, we will discuss the implications they have for QR code deployments and outline a number of relatively unexamined ideas for using QR codes to improve services to patrons.

## **Speaking to the Masses: The Evolution of Library Instruction for SPCM 101, Fundamentals of Speech**

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### **Abstract**

Librarians at South Dakota State University have redesigned the library instruction sessions that are presented to all Fundamentals of Speech, SPCM 101 sections from an in-person lecture to a series of videos that course instructors show to their classes. For more than 10 years, librarians have met with approximately 30 sections of SPCM 101 each semester. Classes typically have 60-75 students in each. Since Fundamentals of Speech is a required course for all students at SDSU, these sessions provide one of two guaranteed opportunities for librarians to meet with typically first-year students. In one 50-minute session, librarians would present an overview of the library's website, information about finding a topic, and an introduction to searching several library databases.

Initially, a staffing shortage prompted discussions about changing the format for the sessions and moving from an in-person visit to each section to an automated option. Librarians who had participated in teaching the sessions also indicated an interest in changing the delivery method to one that was more suited to the course schedule and needs of the students. Removing the repetitive instruction sessions from the calendar was seen as a way to free up time for librarians to work on other projects and to focus on higher level instruction sessions. The content for the videos was designed to aid the students in researching specific assignments and was created in collaboration with the coordinator for the speech courses. Modules included finding a topic, developing a search strategy, and searching the ProQuest, LexisNexis Academic, and CQ Researcher databases. The final module was a brief overview of how to evaluate information, particularly websites.

In the initial semester of implementation, students viewed the content independently from their Fundamentals of Speech course page in the course management software, Desire2Learn. There were multiple problems discovered in this delivery method. Students reported difficulty in opening the files and viewing the content and instructors expressed frustration at the time and effort needed to verify that students had viewed the content. To address these issues, the content was moved to YouTube and shown by the instructors to each class. Viewing the series of videos in one sitting has proven to be tedious for both the instructors and students. In coming semesters, the library modules will be shown in a more limited manner with the videos being shown over several course periods as a supplement to the lecture that the instructor will present. A follow-up activity based on the show *The Amazing Race* has been designed to bring the students to the library for a class session. Collaborating with instructors for the course on both the content of the videos and on the hands-on activity was a crucial step in creating an effective instructional experience for the students. Course instructors have been supportive of the project and instrumental in its success.

# Don't Panic!: Revising Your Collection Development Policy and Putting it into Action

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## Abstract

Once a lending library of last resort for Missouri Public Libraries, the Missouri State Library suffered under a woefully out of date collection development policy and sporadic or infrequent purchases of new books. Past de-selection attempts were foiled by a lack of direction and subject specialist librarians who couldn't bear to weed from their chosen topics. As the library mission evolved from that of a public library to a state government special library, the collection remained largely the same.

After many years of stasis, the state library seems ready for change. The new collection development librarian uses a combination of anecdotal knowledge, a broad survey, a literature review, mission statement, and a policy review to begin a complete revision of the collection development policy. As the revision neared completion, a collection analysis using the local ILS demonstrated that nearly 80% of the current collection lay outside of the new policy's scope. The policy led the way as portions of the collection underwent review and de-selection. In the face of a large volume of books and bureaucratic policy changes, the collection development team had to adjust workflows, change our procedures, and stop the weeding project all together for a few months. Our new attitude toward the collection development policy is one of respect, but we also have a willingness to be flexible. The on-going de-selection process and continual changes in patron needs demands a policy that functions as a working document.

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## Introduction

On May 5th, 1981, in response to a request from the Missouri Department of Higher Education (which then served as the home of the state library), state librarian, Charles O'Halloran, produced a letter announcing to Missouri public libraries that the Missouri State Library would cease to serve as a supplement to local public library services and redirect efforts to become a special library in service of state government. As Charles O'Halloran put it in his letter, "the need for a circulating collection at the State Library has continually diminished." O'Halloran continued to say that our "existing book collection will become that of a special library with a limited focus. It will attempt to cover subject areas needed by Missouri state government." Though the new mission of the library seemed clear from his letter, the collection development policy would not fully reflect this

change for 27 years. In 2008, the Missouri State Library was ready to move forward.

## History of the Collection Development Policy

The collection at the state library is under the care and purview of the Reference Services Division. For this collection, no record of a collection development policy exists prior to 1998. The policy was either written or revised in 1998, but did not fully translate the new mission, instead reflecting essentially what was on the shelves, with little language about what the library intended to collect. In 2005, the policy was revised and tentatively moved the collection more in the direction of a special government library, still leaving collection levels in a state that reflected the old public library collection. Again in 2007, there was an attempt at revision, this time incomplete, with comments in the

margins and large sections of text marked through.

In 2008, we still had essentially the same collection O'Halloran wrote about in May of 1981, with small and sporadic additions of the kind of titles that would fit a state government library. Several small de-selection projects had been completed or aborted prior to this time. The collection was brought down to approximately 35,000 print volumes, only 10% of which had ever seen any circulation in the last 10 years.

A collection policy which never fully embraced the new mission has turned the collection into a time capsule and an example of what happens without the proper guidance in place. Without a current collection development policy, there are "no benchmarks against which to measure progress" (Johnson, 72).

### **Re-visioning**

The psychology behind the librarian's tendency to avoid revising collection policies is perhaps too heady a subject to address here. Needless to say, after several initial panic attacks, the collection development librarian chose a revision strategy that would start with a literature review and include the old policy, other collection policies, and collection development literature. Using results from a statewide 2006 users survey and ILL numbers from the latest full year, the librarian would determine who the patrons of the Missouri State Library are, while assessing those patron's needs. The new policy would develop directly out of the Missouri State Library's current mission statement while incorporating modern ideas about collection development as well as the needs of the patrons identified through usage and survey statistics.

### **Literature Review**

Comparisons with other policies and readings in collection development literature revealed that the old policy lacked important components and failed to fully address basic areas of collection development. Based on the components listed in Hoffmann and Wood's *Library Collection Development Policies*, the new policy included selection criteria for electronic resources, guidelines for license agreements, fund allocation and budgeting guidelines, a gift statement, and a retention and review statement. Each new section and how it reflects our collection needs will be explained below.

### **Electronic Resources**

The library has limited resources, little walk-in traffic, and a clientele who spend their days in offices physically apart from the library. Many respondents to our 2006 users' survey felt uncomfortable leaving their offices during the work day to visit the library. These factors render a print collection less than helpful to a majority of our clientele. In response to these conditions and the growing electronic resources in our holdings, the policy should outline more specific considerations of collecting electronic resources, listing types of electronic resources collected, covering both free Internet resources and purchased or licensed resources through vendors. The policy should provide basic guidelines about target audience, quality of the resource in comparison with print counterparts, quality of the search interface, ability to support remote users, reliable access, technological requirements, etc.

### **License Agreements**

Electronic resources and license agreements go hand in hand. If you spend any amount of time negotiating electronic resources, you will likely spend a majority of that time determining whether a vendor's license agreement fits in with your institution's legal requirements. The Missouri State Library works internally with a legal counsel. Much of the serious legal wrangling is taken out of the librarian's hands. However, to facilitate the process, the collection policy includes a set of requirements for each license agreement. The librarian can easily ensure that these requirements are met before passing the agreement on for review by counsel. Knowing there is a set list of items to check off for every license agreement helps tremendously when working through a new purchase. Checking off those items beforehand means you don't have to call or write legal counsel repeatedly as you work through each issue as it comes up. Less correspondence with vendors is always nice, too.

### **Fund Allocation and Budgeting Guidelines**

It has been said in the literature on collection policies that you must have a baseline before you can start making decisions. A fund allocation and budgeting statement in the policy should give the librarian some idea of what percentage of the budget should go toward specific subject areas and formats. Many librarians are one or two personnel removed from the institutional



accounting system and frequently receive budget information second-hand. In order to better track expenditures at the Missouri State Library, we implemented an acquisitions module in our ILS that had long gone unused. After collecting data from a year's worth of orders, we found our baseline for the budget.

The budget is quite small and ranges around \$100,000 per fiscal year. However, the nature of government fiscal practices means that this amount is not at all guaranteed and can be reduced at any time. Budget changes of any sort make it imperative to set an acceptable proportion of the budget toward your priorities. Having this in place allows the librarian to cut or increase in a deliberate fashion.

Approximately 62% of the collection is appropriated for electronic resources. Thirty-five percent goes to print material, which breaks down into 30% for circulating books, 5% reference and periodicals. An additional 3% goes to training media. As our emphasis on print collections decreases, more and more of that budget is projected to go toward electronic resources, including more online reference materials.

Fund allocations can vary from year to year, but we decided to allocate what we spend on all of the sub-collections within the collection. The general collection (18%), the reference collection (3%), the Missouriana collection (3%), the Professional Development collection (12%), training media (3%), and electronic resources (62%). These allocations can always be adjusted, but they give the librarian a great starting point and provide guidance for the next librarian.

#### ***Gift Statement***

Gift policies should free librarians from complications related to the transfer of ownership between the donor and the library. Donors occasionally attempt to impose conditions upon the library when offering the item. The gift policy should make it clear that the library cannot enter into any such agreements and will not automatically accept every gift. Acceptance of a donation should always relate back to guidelines in the policy. Only gifts that fit into selection criteria will be accepted. There is no such thing as a free gift. The policy should point out the costs incurred when material is cataloged, stored, conserved, and circulated. The library should also

reserve the right to dispose of unaccepted material in accordance with the methods outlined in the retention policy.

#### ***Retention and Review***

The entire collection should undergo an evaluation of regular frequency whereby de-selection criteria are applied. Materials of intrinsic value, which no longer serve the needs of the Missouri State Library, will be regularly evaluated by the collection development librarian. Rare or unique items found within the collection may be offered to the Missouri State Archives. Other items can find use among other state agencies or publicly funded libraries. Those items which are not of interest to other agencies will be processed through current state government surplus procedures. Crew/Slote Tables that demonstrate a systematic retention schedule for our collection are included in the policy appendix. The librarian will focus on several Dewey classifications per year, eventually assessing the entire collection on a continuous cycle. Procedures for analyzing usage statistics of the electronic resources will also be kept in the collection development policy.

#### ***Format changes***

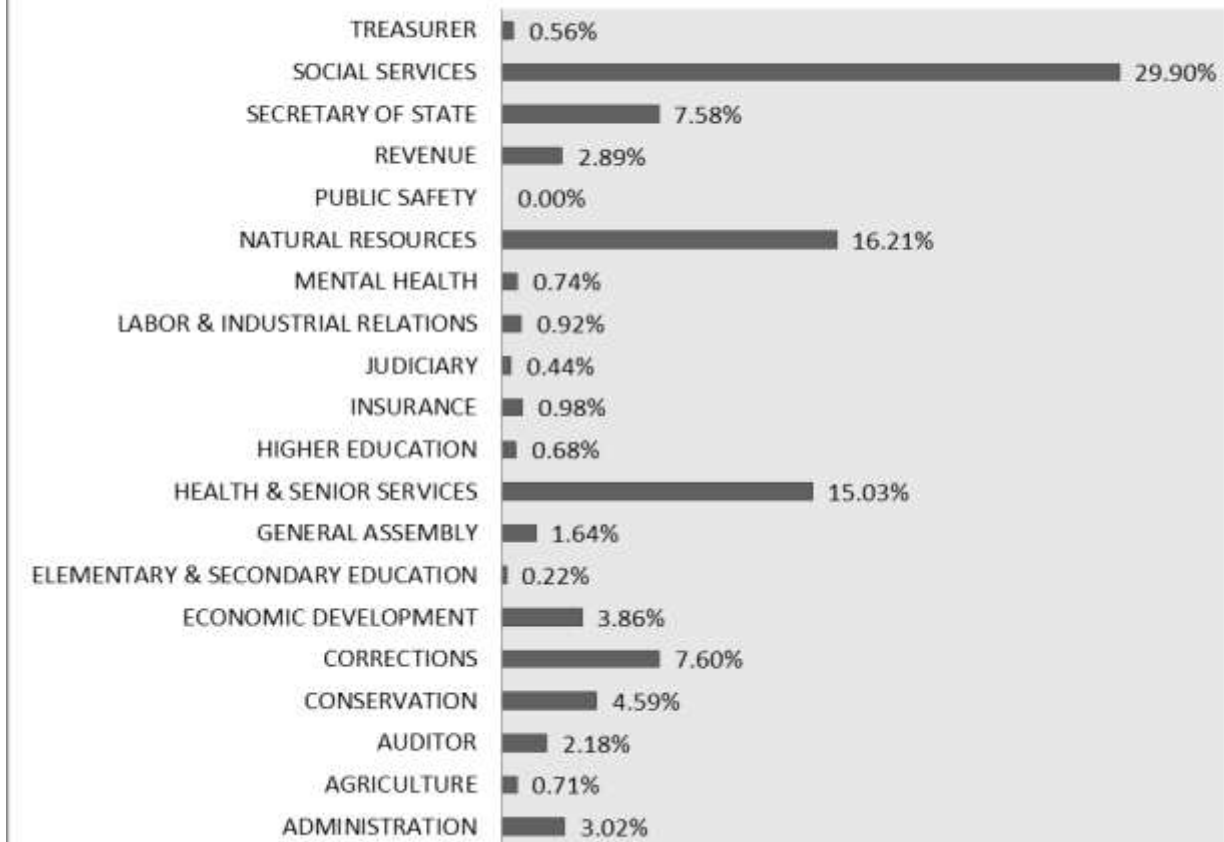
Several other special library policies were found with a simple Google search. The thing that most stood out when reviewing these policies was the fact that putting them online gave them the ability to create a table of contents that linked to each section. It has become common practice to append supplementary documents related to the policy but not expressly part of the policy. Online policy documents make more efficient navigation optimal.

This format works well for the Missouri State Library policy and can house our subject list, level of collection tables, Crew/Slote tables, a memorandum of understanding with the Missouri Center for the Book, a statement on test preparation materials, and a list of key publications that we receive from the Missouri Secretary of State Publications Division.

#### ***Survey and ILL analysis***

In 2006, Cindy Bassett, a librarian formerly employed with the Missouri State Library, designed and dispersed a survey to discover what services state employees were aware of, what they used, and their general impressions of those

## Use of MOSL Resources



services. The survey reflects self-reported numbers of employees from each state agency using our resources and services. Most agencies have small numbers of workers aware of and in the habit of using State Library services. Several agencies are notably higher in their level of usage. Generally, our top three agencies are Social Services, Health and Senior Services, and Natural Resources. These agencies employ individuals highly trained in fields of social sciences, medical sciences, environmental, and natural sciences.

The above chart maps out users as they come from each area in state government. As you can see, the Missouri State Library has a small but intensive group of users from the above mentioned agencies and much lower levels of usage from all other departments. Our most intensive users likely hold professional degrees in the sciences, perform much of their own research, and require desktop access to peer-reviewed journals in their respective fields of expertise.

### *Social Sciences*

According to the 2006 user's survey, the Department of Social Services ranks number one in usage of nearly every MOSL Service. I might note here that they also reported themselves as the heaviest users of our electronic databases. Within Social Services, the strongest users come from the Children's Division and the Family Support Division.

Though they are not heavy ILL users, the usage shows an interest in subject areas that fall into the 300 classification, Social Sciences. The 362 area (various social services) was of particular interest in 2007. In the 2007 collection development policy this subject area is set at level '4'—support. Total check out for our print collection in the 362 range is 138 out of 677 items. We broke out the entire 300 range and saw that out of all 11,926 items, 10,866 have never been checked out. This might point to a need to back down collecting within this range overall, but a definite need to increase our collection of accessible titles in the 360's.

Ultimately, social sciences should remain important to our collection, but our focus should change. The reason cited in our 2007 collection development policy for considering our collection primarily focused on social sciences is faulty. We cannot continue to place emphasis on the social sciences simply because the strength of the collection has always been in that subject area. If our total circulation is any indication, there is no need to maintain an exhaustive print collection. The new policy will call for addition of online journals and ebooks in this area, as well as some comprehensive online reference works. These changes will culminate in a review of the print collection that will clear the shelves of outdated and unused social science materials.

#### ***Medical Sciences***

We found from the 2006 survey that medical sciences are extremely important to a small but very intensive group of users within our clientele. Review of the 2007 ILL statistics for MOSL shows that some of our heaviest users perform research largely through respected peer-reviewed medical journals. In 2007, 52.6% of our ILL requests came from the Department of Health and Senior Services. Categorizing each request from 2007 into Dewey classification ranges, we saw that the subject area with the most requests was 610-619, the Medical sciences. The previous level of collection prescribed for this subject area is '3'—basic information. While the ILL numbers reflect that we have indeed followed our policy, they may also indicate a need to better support a clientele that performs intensive research. Obtaining a print collection of medical journals at this point in time is unfeasible, but a strong collection of medical and nursing journals can be delivered directly to desktops through a number of electronic database vendors. More full text medical e-journals or medical journal products would move the collection toward fulfilling patron needs. Online reference works would round out the collection in this area.

#### ***Environmental Sciences***

The 2006 user's survey shows that the Department of Natural Resources is our third heaviest user as far as our core services. Their use of ILL demonstrates that individuals in that agency have a continual need for environmental engineering materials, freshwater biology, fisheries, and wastewater management materials. Some expansion of our online journal holdings in

these subject areas along with a few online reference sources would better satisfy our patron needs.

#### **CDP Report**

After reviewing the above data, a report was produced that outlined where the old policy failed to guide collection development and management efforts. This report served as a justification to rewrite the entire policy and helped guide the policy writing efforts as they progressed throughout the year. As indicated, the report recommended the addition of several new components such as the gifts and electronic resources statements. All recommendations in the report essentially spring from the mission statement, which declares the collection to be a special collection geared toward serving state government.

#### ***Building on strengths***

The report identified areas of emphasis for the collection. For example, the abundance of Missouri history and culture titles found in the collection should come together to form a new "Missouriana" collection. Somewhere in the Missouri State Library's past, priority had been given to collecting titles that exemplified the unique culture and history of our state. It seems natural and logical to bring these books together as a cohesive collection and cultivate a more browse-worthy component for visitors.

Building upon another existing strength in the collection, library science titles would form a professional development collection for librarians throughout the state. Consulting librarians at the Missouri State Library use the library science titles to assist public librarians throughout the state. Strong interest in these titles indicates a need to keep the collection current while expanding its depth and breadth.

#### ***Reaching out to professionals***

The report also recommended a stronger online presence with the purchase of databases and electronic journal packages in the medical, social, and environmental sciences. Many respondents to the survey felt uncomfortable leaving their offices during the work day to visit the library. Desktop delivery of peer-reviewed journal articles in the sciences would reach them where they work. While our print collection could be reserved via the online catalog and delivered through inter-agency mail, non-circulating

reference material in these areas would have to move online. A better understanding of how medical libraries function might also help to better serve these highly specialized patrons.

### ***Narrowing the focus***

Finally, the selection levels that weighted the rate of selection in each subject area need revision to better fit a special library collection, with less emphasis on basic material in a broad array of subject areas and more in-depth material in a narrow range of subject areas. Many more subject areas would be designated entirely “out-of-scope” in order to reflect the more specialized nature of a government library. The selection level scale in use at the time was as follows: 0 (out of scope), 1 (minimal/no growth), 2 (minimal/even coverage), 3 (basic information), 4 (support), 5 (strong support).

The State Library will not collect any topic at a minimal information level or lower. If we collect, we collect with full support of an area or strong support. Minimal information on a wide range of topics is a public library practice. Not only is it financially unfeasible for our small library, it is less than useful to our patrons. All areas in which we deign to hold any kind of collection should be maintained and continually updated. In essence, the report recommended a leaner, vibrant collection with regular updating and maintenance. Along with the new sections detailed above, the report recommendations were incorporated into a new collection development policy for the Missouri State Library.

### ***Deselection***

The new policy opened the door to a major deselection project in our circulating collection. The Crew/Slote table applied to the collection recommended time periods after which each subject area lost currency. After each subject area received an update on the Crew/Slote table, a plan was formed to create multiple review files (using our Innovative Interfaces ILS) which brought together all titles over a specific age. For two reasons, we did not base deselection on total number of circulations. Total circulation generally only tells us that the item had been useful at some time in the past and the collection was averaging at 35-40 years of age, surpassing even the most liberal Crew/Slote numbers. Additionally, being in a consortial environment with a majority of academic libraries, many of

those circulations did not represent our own patron’s needs.

With print-outs of all old and out-of-scope items in the collection, our staff headed to the stacks and began loading book trucks. Those books were then reviewed by the collection development librarian, and rolled to the next staff member who would then withdraw each item. This process went through a number of shifts and changes related to institutional changes, but more importantly, staff pushed through each change, never losing sight of the ultimate goal.

### ***The Struggle to Automate***

Once the decision was made to weed, we attempted several plans to automate the process. Because of the software we use, our automation options were limited. We had to choose between the old technology and the new. We first considered using a very old “Percon” scanner to gather barcodes in batches and upload them to the server via a review file for processing. We learned during this time that the software company no longer supported the Percon scanner and what the Percon scanner does can be done at a desk with a regular barcode scanner and text file.

Next, we explored the Innovative Interfaces’ “Circa” inventory application which relies upon a mobile device (which you buy yourself). The Circa app is very limited in the fields it can update. It also relies upon wireless connectivity, which is problematic at best for our building.

We went with neither technology and instead tried to develop a homegrown solution using a scanner and text file. Unfortunately, we had difficulty automating the upload to the server. Batch processing was more laborious than necessary, not allowing us to update the fields we required. Ultimately, our paraprofessionals would touch each book individually and make all catalog changes manually.

Updating our holdings in OCLC also presented a problem. In the past, we had manually added the OCLC number to a text document and uploaded that document to OCLC for updating. This was deemed too time consuming for the volume of books we were weeding. After several work flows were tested and discussed, it was decided to use a fixed field in the item record to cue our consortium central office (MOBIUS) to withdraw our holdings from OCLC.

### **Disposal**

Being a state government entity, we must follow the policies and procedures set forth by state law. Disposal of state property, no matter its condition, follows a set of procedures. Early in our weeding project, we were allowed to stamp and box up the books and send them to the Office of State Surplus Property for sale or disposal.

The weeding project had begun in November of 2008 and moved smoothly until October of 2009 when the Missouri State Office of Administration announced the close of the Office of State Surplus Property. During the month of October, we weeded as many books as we could before the deadline came. We expedited our process, pausing our work on the larger and laborious 300 classification. Instead, we moved out smaller out-of-scope chunks of the collection (700's and 800's). This approach allowed us to move more books before the last day State Surplus would accept items. We put more staff on the project at this time and familiarized more staff for future work on the project. Paraprofessionals work on the project by pulling books off the shelves, de-accessioning the books from our catalog, and stamping and boxing the books for surplus. As of November 1st, 2009, our weeding project was put on hiatus while the administration found an alternative for disposal.

Three months later, it was decided that we would offer our books to tax supported libraries in Missouri. We would then recycle the books that were not wanted. Work flow was again altered to facilitate this change in policy. Paraprofessional staff began setting a field in the record that allowed us to generate a list using our ILS. We began using both the statewide MOBIUS and MLA listservs to offer weeded items. The list would "expire" a week from the day it was sent out. All books not requested by Missouri libraries would then be recycled. Requested books were shipped via the Get Connected/MOBIUS courier system which is used by the vast majority of public and academic libraries in the state. Books requested by libraries would be boxed without stamping or marking the book in any way as not to deface any more than necessary. Books not requested by libraries would be marked out and stamped, then put in recycle bins.

### **Staffing**

We started this project with a staff of 11 full time and 1 part time employees. Only two full time staff and one part time clerk were assigned to this project. Our estimated goal was to weed 28,000 books. Since the beginning of this project, staffing changes have played a part in our workflow. At first, our clerk pulled the books and later boxed them for surplus. In October of 2010 our clerk retired, leaving pulling and surplus of the books to the paraprofessional staff. To speed the process, it was decided to bring on another paraprofessional to pull the books and help recycle the books at the end of the process. Paraprofessionals could also weed books as time allowed. Adding more people to the project meant we could finish faster and more efficiently.

### **Conclusion**

At the time of this writing, the deselection project has moved through 90% of the circulating collection and weeded a total of 18,608 books. The size of the emerging print collection is projected to top out at around 10,000 items. The electronic journal collection, however, currently stands at 36,262 titles and we hope to expand as time and budget allow. The collection development librarian continues to consult and refer to the new policy as the collection takes shape. The policy as well as the act of researching and refining the policy provides the librarians and staff with the kind of confidence they will need to justify collection decisions, expenditures on new products, and their support of the state government. Researching and refining the policy will be an ongoing process.

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## 2 for the Price of 1: Combining Access Services and Reference Desks

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### Abstract

In the midst of a complete renovation of the Miller Nichols Library's first floor, Access Services and Reference staff made the bold decision to combine two service desks into one highly visible service point. This paper will address reasons for the change, early decisions leading to the change, intermediate steps, the new service model, training, results and assessment. Factors in the decision-making process included resolving patron and staff frustrations, eliminating multiple referrals, and using limited resources more effectively. Incremental changes began with combined service during late evening hours, moved to providing both services at the Access Services Desk during construction, and resulted in a dynamic service desk where patrons can check out books and get answers to their basic research questions. In-depth research assistance was moved away from the service desk to be provided by librarians on call and by appointment. Combining services involved more than just sharing desk space. Services were assessed and in many cases reassigned to be provided at the most appropriate staffing level. Student assistants, staff, and librarians have been cross-trained in new functions to enhance services to UMKC students, faculty, staff, and community users. The combined desk has the added benefit of freeing staff time to allow better individualized services from point of need troubleshooting at the patron's computer to expanded liaison services to academic departments. One of our goals is not to wait another ten years before making changes. We are highly flexible, continuously reassessing, and making changes dynamically as appropriate to meet our patrons' ever changing needs.

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### Introduction

The Miller Nichols Library, the general library at the University of Missouri-Kansas City, created a new Information Commons in 2000 as a prototype. Ten years later the entire first floor was renovated as an Information Commons. Through the renovation planning process and in consultation with public services librarians and staff, the planning committee decided to build a single service desk, combining Access Services and Reference. At the same time, the Reference Department developed a new model for providing reference and research assistance. Goals for this project included resolving patron and staff frustrations, eliminating multiple referrals, and using limited resources more effectively. With the completion of the renovation in March 2011, the new First Floor Service Desk opened for business.

### Review of Literature

In 1993 Anne Grodzins Lipow led groups of librarians at Berkley and Duke in exploring the concept of *Rethinking Reference in Academic Libraries*. In the nearly two decades since those workshops, Reference librarians have continued to seek new and improved ways of meeting library users' needs. Library literature reveals a slowly growing trend toward combining Access Services/Circulation and Reference desks in academic libraries. Flanagan and Horowitz report on an early trial of merging circulation and reference desks at one of the five main libraries at M.I.T. (329-38). Oberlander discusses the importance of collaboration between Access Services and Reference, although he does not go so far as to recommend a combined desk (666-668). McKinstry and McCracken's review of combining the reference desk with a computer lab desk provides insight into many issues

relevant to the merging of reference and circulation services (391-400). Sonntag and Palsson examine the issues related to providing reference service and describe a move at California State University, San Marcos to staff the Research Help Desk with library assistants who contact on-call librarians or subject specialists for reference questions. Crane and Pavy report the combining of several service desks - a merger motivated by the departure of some library staff, a decrease in reference questions, and multiple referrals between desks (29-45). Johnson, Jennings, and Hisle describe lessons learned from experimenting with a combined circulation/reference desk at Appalachia State University (107-124).

Health sciences libraries have been active in this movement toward combined service desks (Bradigan and Rodman, 367-78; Murphy et al., 379-93; Moore, McGraw, and Shaw-Kokot, 79-86). Allegri and Bedard report the results of a 2005 survey of 17 libraries in the Association of Academic Health Sciences Libraries, showing that nine of the libraries had moved to a consolidated service desk (31-47). Bracke et al. at the University of Arizona (248-67) and Jones and Zou at the University of Arkansas (4-14) studied service provision in their libraries to develop new staffing models providing circulation and reference services from a single desk. Indicative of a lack of consensus regarding the number and placement of service points, Bugg and Odom describe a transition from a reference desk to a model with two information service desks (193-204).

### **The Past at Miller Nichols Library**

The Miller Nichols Library has always had separate service desks for Reference and for Access Services/Circulation. In the last decade, the needs of students and the services provided at the two service desks have changed considerably. The number of questions asked at the reference desk slowly decreased, while the number of extended research consultations away from the desk increased. The nature of student questions also changed over time with ready reference questions diminishing and requests for technology assistance increasing.

In spite of these changes, the division of duties between the two service desks remained fairly traditional. Access Services staff referred all information and research questions to the

reference desk, visible about 30 feet away. Answering reference questions at Access Services was not only difficult, but teachable moments would have been lost, due to privacy hoods on the Access Services computers that prevented showing the screen to patrons or demonstrating search techniques. Although departmental policy and training required staff to walk patrons from one desk to the other, a need for expedience sometimes led to patrons being pointed toward the other desk. Access Services and Reference had separate phone lines, and patrons were transferred back and forth many times when the reference interview was inadequate or the question changed with each transfer.

For many years a combination of full-time librarians, part-time librarians, paraprofessionals, and student assistants staffed the reference desk. In addition to reference and directional questions, duties at the reference desk included maintaining and refilling printers, restocking supplies (staples, paper clips, etc.), logging visitors onto computers, assisting patrons with using Microsoft Office products, answering basic technology questions, and acting as an intermediary between the patron and the library's technology office. The reference desk was located in the midst of the computers and printers, so referring patrons to the Access Services desk for these services was illogical. Assigning questions to the most appropriate person at the desk never worked well, and a librarian might be refilling printer paper while a student assistant was answering a research question. The reference desk was open the same hours as the Access Services desk and was staffed with two people to answer very few questions between 9:00 p.m. and 11:00 p.m.

This arrangement of two service desks created a number of problems for library users. Patrons often did not know where to ask their questions. As noted, patrons were too often referred back and forth between the two desks, a situation unresolved by ongoing training. Patrons experienced multiple referrals for a number of reasons: poor reference interviews leading to a misunderstanding of the patron need, questions that morphed in the course of conducting the information assessment interview and questions that required the services of both Access Services and Reference staff members. Additionally, late

night staffing of the reference desk seemed to be a poor use of limited personnel and resources.

The first step toward addressing these concerns was upgrading the Access Services evening/weekend supervisor position duties to include providing reference assistance after 9:00 p.m. The Reference Department gave the individual hired for this position the same training as everyone who staffed the reference desk. The reference desk was then closed from 9:00 p.m. to 11:00 p.m. with a sign on the desk referring patrons to the Access Services desk. Given the limited number of questions asked during this time period, this solution worked very well.

Based on examination of reference desk question statistics, the hand-off to Access Services was eventually moved back to 8:00 p.m. The evening/weekend supervisor worked Saturday through Wednesday, which left Thursday evenings without her services. Since Thursday evenings are the slowest in the week, staffing the reference desk just one evening did not make sense. The two Thursday evening Access Services staff members went through targeted reference training, so they could answer basic reference questions. They also learned how to show patrons pertinent LibGuides and provided contact information for subject specialists for more involved questions. Using reference statistics to identify times with very few true reference questions, Access Services staff slowly began to cover other times, including some early mornings and intersession hours.

As members of the planning committee for a major renovation of the first and second floors, the Head of Access Services and the Head of Reference Services and Instruction had a unique opportunity to consider further changes. Both the reference desk and the Access Services desk resided on the first floor.

Through discussions with the committee, which included library administration, and conversations with staff in Access Services and Reference, the concept of a single service desk evolved as the best approach for students, faculty, and library staff. A model for a combined desk was the ground floor's Music/Media Desk that already provided both reference and circulation services for the Conservatory of Music and Dance and for media patrons. Much of the discussion within the two affected departments

centered on the concern that patrons continue to receive excellent service. The turning point in agreeing to implement a combined service desk came with the clarification that no decision is permanent. Openness to flexibility is vital. All agreed that if the new desk did not meet the needs of library users, the two departments would seek an alternative solution.

### **In Transition**

In order to provide continuous service during renovation in the fall 2010 and spring 2011 semesters, the first floor was renovated in four stages. The area that had been the Information Commons for ten years and which contained the reference desk was renovated during the third phase in November 2010. Rather than set up a temporary reference desk, the reference workstation was moved to the end of the Access Services Desk. This plan provided the opportunity to test the combined desk, ease into the changes, and address any staff anxiety. Any problems could be blamed on the interim setup and resolved before moving to the new service desk. At this time Access Services staff began to take on the responsibility of logging guest users onto library computers.

As with any change, this move had both good and not-so-good effects. Referrals were much easier between people staffing the same desk than they were previously, and the staff no longer had the sense of bouncing patrons back and forth. Access Services staff, within earshot of the reference part of the desk, remained alert to questions to the Reference staff and often offered to provide a guest logon without the Reference librarian asking for assistance. When the reference station was not staffed, Access Services personnel could use the dual monitor on the reference computer for working with patrons. During the intersession between semesters, Reference did not need to staff the desk at all. Access Services staff addressed all questions and, when needed, consulted librarians who were "on call." They found that the dual-monitor setup at the reference workstation helped them in answering reference questions. This arrangement also allowed for training of evening Access Services staff who worked in the daytime during the shortened intersession hours.

As anticipated, many of the difficulties of the combined desk occurred as a result of the temporary situation. The former reference desk



was desk-height, and patrons sat down to consult a librarian. Patrons could not sit down at the high Access Services counter, and addressing longer reference questions was more difficult. The physical arrangement was also not ideal for the Reference staff. The workstation added into pre-existing furniture did not allow for a comfortable workstation. Reference staff sometimes felt like interlopers in the Access Services space. Because the construction funneled most patrons to the reference end of the counter first, Reference staff referred many circulation requests to Access Services staff. Unused to making numerous referrals, the Reference staff were uncomfortable with not being able to answer so many questions. Training on making positive short-distance referrals helped both Reference staff and patrons. Access Services staff were unsure of which tasks they wanted to turn over to the student assistants. It took several weeks of having a combined desk to see which duties the student assistants should perform.

The interim combined desk also provided a chance to address staff anxiety and concerns. Staff began to see that patron service would not suffer and might improve in some ways. Student assistants could be successfully trained to handle additional tasks, such as public printer maintenance and guest logons. Staff from other library departments had expressed concerns that Reference was dumping tasks on Access Services. These concerns seemed not to come from either Reference or Access Services, and the two departments worked out an equitable balance of responsibilities.

### **New Service Desk**

An oddly significant decision in moving to a combined desk was naming the desk or service. Except for the specialized Music/Media desk on the ground floor, the combined desk on the first floor of the library would now be the only service point for library users. First Floor Service Desk seemed to be the most comprehensible name to use and represent the purpose of the desk to patrons.

As verified by the temporary combined desk, the new desk design needed to allow Reference staff to sit down with patrons; however, Access Services staff found counter height more conducive to checking out books. The new service desk had to accommodate both needs. The architects' design showed a high counter

with two circulation stations in the middle with a desk-height station at each end. One low station is now used exclusively for reference assistance. The other desk-height station serves multiple needs, including providing space for an additional Reference librarian or wheelchair accessibility for checking out books.

### **New Service Model**

In conjunction with designing a combined service desk, Reference created a new service model. During the previous year, the Reference Department had moved from usually having two people staff the desk to usually having one person at the desk and one person scheduled as a back-up. The person at the desk could call the back-up any time a patron was waiting for any need. Often that meant that librarians would come from their offices to log in guests or restock printer paper. This practice was more efficient than having two people at the desk all the time without diminishing patron service. Still personnel resources were not used as effectively as desired.

In the new service model, only one Reference person staffs the service desk at any time. That person is responsible for answering questions that are anticipated to take less than 10 minutes. During weekdays (9am – 5pm) the scheduled on-call person answers questions expected to take longer than 10 minutes but is not called out for simple quick questions. If patrons are waiting for assistance, Access Services staff members perform triage to determine how best to assist waiting patrons, including answering basic questions themselves, calling the on-call librarian, or referring the patron to a subject specialist. Patrons also often contact librarians in their offices for assistance, and librarians make appointments for research consultations in their offices, at public work stations, or in the new glass-enclosed consultation room.

The Access Services portion of the desk is normally staffed with one student assistant or, during busy times, two student assistants. The Access Services staff members can see the First Floor Service Desk from their work area and will come to the desk to assist patrons when necessary. One difficulty with the new service desk is that loud air handlers often make hearing conversation at the desk difficult from the staff work area. To mitigate this problem student

assistants are trained to inform Access Services staff when they need assistance.

Another goal of the new desk and service plan was to funnel all Reference and Access Services calls through one main phone line. The reference number was removed from all print and internet directories and set to go to voicemail directing patrons to call the main Access Services number. Access Services staff members answer the phone and handle circulation related issues. They also address basic reference questions and transfer more advanced research questions to the unpublished Reference phone number, which only accepts on-campus calls.

### **Cross-training**

Many tasks that were performed by Reference librarians and staff are now assigned to Access Services student assistants. These tasks include logging guests onto the public computers, adding printer paper, restocking supplies, and adding toner to public printers. Access Services staff members were formerly the back up for guest logons and for printing problems; now they are the primary staff handling these issues.

Following the model first established with the Evening/Weekend Supervisor, all Access Services staff members are trained to do a reference interview, to perform basic catalog and database searching, and to direct patrons to appropriate LibGuides and other research help on the library web site.

Reference librarians, Reference staff members, and graduate teaching assistants have been trained to perform basic circulation tasks, thus expediting services for library users. When Access Services personnel are occupied with assisting other patrons, Reference staff can pull reserve and held materials and do simple check-in and check-out of books. To keep the reference station distinctive as a place to ask questions, the circulation module is not available on the reference computer. When helping with Access Services functions at busy times, the Reference staff move to one of the other three computers to assist with circulation issues.

### **Assessment**

One focus of the library's assessment program is creating the ability to make dynamic change. After a few months, a variety of assessment methods are already in place. Although the new service desk seems to function smoothly,

assessment brings to light opportunities for improvement. For example, a dual monitor was added to the computer at the second lower station to facilitate Access Services staff providing reference services. A part-time Access Services position was reclassified to an evening position to provide consistent double-coverage during evening and weekend hours using staff members who have greater responsibility for answering basic reference and technology questions.

### **Staff Feedback**

Library managers encourage staff at all levels to provide feedback about their experiences at the service desk. The group with primary responsibility for staffing the reference station, including Reference librarians, staff, and graduate assistants, along with the Head of Access Services, meets monthly to discuss problems, concerns, and issues that arise. This group has initiated improvements in the provision of many reference services, one example being the Text A Librarian service. When on-desk staff members were responsible for Text A Librarian, the average response time to questions was 11.6 minutes, due to the priority of assisting on-site patrons. In an effort to improve response times, the group decided to answer texted questions in the office shared by most members of the group. After a brief trial, the group reported that they were tied to their office desks, limiting their availability for other projects. A review of the Text A Librarian questions revealed that most were very basic, non-reference questions, often regarding library or university facts. The group developed a new plan to have the departmental Administrative Assistant monitor Text A Librarian. When she is not available, the service is monitored at the service desk. This usually occurs during times when fewer patrons in the library need assistance. Although the average response time has remained at 11.6 minutes for texts answered from the service desk, the Administrative Assistant's answer response time averages 7.3 minutes. This plan has proven successful for everyone involved. Many patrons' texts are answered more quickly, and the arrangement works better for staff workflow.

### **Staff Survey**

As part of continuous assessment, a survey was sent in July to all current service desk personnel who also worked at one of the two service desks before October 2010. The purpose of the survey

was to determine the effectiveness of the combined service desk from their perspective. The survey was sent to 25 people, 16 of whom responded.

#### ***Survey Responses – Resolving Patron and Staff Frustrations***

A crucial goal in combining the service desks was to resolve patron and staff frustrations better. The survey showed that 68.8% of respondents find that addressing patron needs is now easier. Half of respondents report that staff with the needed skills and knowledge are now frequently or always available when needed, while the other half respond that they are usually available when needed. Responses were mixed on the question of whether or not it is now easier to determine who is the most appropriate person available to answer a patron's question. While 56.3% think that determining who is the most appropriate person is now easier or much easier, 12.5% find it harder in the current environment. The remaining respondents see no difference. Staff members have fewer frustrations in the new model, as indicated by the positive responses to all survey questions. Also, greater than two-thirds of the respondents said that their skills and knowledge are now used more or much more effectively.

#### ***Survey Responses – Eliminating Multiple Referrals***

Another goal of combining service desks was to eliminate multiple referrals. When addressing patron needs that require assistance from both Access Services and Reference staff, 81.2% of respondents believe the combined service desk makes assisting the patron easier or much easier. Three fourths of respondents think that inappropriate referrals based on a misunderstanding of the patron's need now occur less or much less frequently. Comments indicated, however, that even though employees have been cross-trained, role distinctions still need some further clarification.

#### ***Survey Responses – Using Limited Resources More Effectively***

The survey results indicated that the respondents perceive that the departments are now using limited resources more effectively at the service desk. All respondents agreed that the number of staff available to assist users is now usually the right number, neither too many nor too few. According to 87.5% of the surveyed staff, the

new tasks assigned to student assistants (guest logons, printer maintenance, and supply maintenance) are now more or much more appropriately assigned than in the previous configuration, and two-thirds think patron technology needs are now met more or much more effectively.

The results of this survey will be used to determine any additional changes that might be needed for providing better service. As suggested by one staff member, a follow-up survey will be conducted after the fall semester.

#### ***Patron Feedback***

The library's LibQUAL+<sup>®</sup> survey administered this spring came too soon after combining desks to provide much information about the new service desk; however, the sole comment related to combining the desks was positive. When the new service desk has been in use for a longer time, further assessment will determine if the service is meeting patron needs.

#### ***Conclusions***

After only a few months, the new combined service desk is proving to be a successful merger of two services into one improved service point. This success is the result of a number of good choices in the planning and execution of the combined desk. The first important choice was to involve everyone in both departments in the planning, while giving each department the final say regarding its own part of the service. With a history of close collaboration, the heads of the two departments continue to work well together to coordinate efforts. Designing a physical layout that distinguishes Reference from Access Services by desk height allows both services to have the furniture that best serves its function and to give patrons visual cues to the different services. Everyone working at the service desk is cross-trained for other functions. No one is expected to be an expert in all services, but everyone can provide initial assistance and knows how to make a referral to a colleague with more expertise. Training in new functions occurred gradually and is ongoing. Dedicating one computer for reference service only with no circulation software ensures that reference interviews will not be interrupted or delayed for book check-out.

A major factor in the success of the change was a shared vision of providing a high level of friendly,

helpful service. Throughout the planning discussions within the departments, each issue always returned to the question of how the proposed change would affect library users. Equally important to the success was the department heads' commitment to flexibility, promised from the beginning of this venture. Problems will continue to be addressed on an ongoing basis. Ten years ago the Miller Nichols Library opened a new Information Commons. The plan is that by making small changes as needed, ten years from now the library will not need another major renovation but will still be in tune with the needs of library users.

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# Do I Have the Best Library Website on the Planet or What?

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## Abstract

In the past decade, many libraries redefined their user communities, their sphere of influence and their obligation to the communities they serve. Gone were the geographic limitations which previously influenced the physical library space and the content of library websites. Libraries began to look for ways to connect users with resources beyond local collections. The philosophical shift in libraries, from local to global, was reflected in the evolution of library websites into information portals. Users no longer visit library Websites solely for information about the local library. Instead visitors now expect library websites to provide access to information resources found in collections throughout the world. During the development of library managed information portals, many library websites became dumping grounds for links to vast numbers of off-site collections and to the administrative minutia of the hosting library, leaving patrons struggling to navigate through multiple layers of pages and menus in order to finally access the desired information.

Usage data and usability testing provide the basis for library development of effective, user-friendly interfaces. A successful library website meets the needs of the user - it is easy to navigate, aesthetically pleasing and results in few errors. Time spent analyzing an institution's website will result in a better user experience for virtual library visitors, leaving them with a positive feeling about the library. This session will highlight website usage data collection applications, define usability, outline formal usability testing methods, discuss how to integrate collected information with future website development, outline a sustainable usability schedule and discuss some of the usability study pitfalls and successes encountered by University of Nebraska Omaha Library.

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## Introduction

So, you developed a website for your library-- you love it, library staff think it is wonderful, but what about library users? As a developer and librarian, your primary goal is to create the best possible user experience for website visitors, one that connects community members with library resources and services. But how do you know if the library website meets the needs of the community? Are people locating the site? Once visitors access the site, do they find what they are looking for? Are visitors comfortable using the site? Performing a usability study of the library website will assist you in discovering the answers to these questions and quantify for you (and

library administrators) exactly what is working (and what isn't) within the website.

Although several instruments can be incorporated into a website usability study, we are going to concentrate on three specific components; the core task list, card sort and survey. The core task list provides hands-on data of how visitors maneuver within a site; while the card sort documents how users understand and interpret the organization/structure of the site; and the survey obtains participant opinions of and attitudes towards the site. Combining the data from each study element provides empirical evidence on which to base future website design and/or re-design efforts.

Table 1  
List of online analytics packages and survey tools.

Online Analytics packages and survey tools	
Name	URL
Google Analytics,	<a href="http://www.google.com/analytics/">http://www.google.com/analytics/</a>
GoingUp,	<a href="http://www.goingup.com/">http://www.goingup.com/</a>
Piwik	<a href="http://piwik.org/">http://piwik.org/</a>
SurveyMonkey	<a href="http://www.surveymonkey.com">http://www.surveymonkey.com</a>
Zoomerang	<a href="http://www.zoomerang.com/">http://www.zoomerang.com/</a>
Free Online Surveys	<a href="http://freeonlinesurveys.com/">http://freeonlinesurveys.com/</a>

The initial step in developing any type of website usability study is to assemble a team of individuals who will create facets of the study, recruit study participants, administer different phases of the study, compile data and analyze study results. In an ideal situation, the team will be comprised of a variety of people who are interested in the library website—library users, administrators and library staff. However, the inability to assemble a diverse team should not be a deterrent to conducting a website usability study. Successful usability studies can be conducted by as few as one or two committed individuals, when necessary.

Begin the process of developing the usability study by analyzing the website the study will focus on, along with any existing site data. Do an inventory of the website, identifying every link on the homepage and subsequent pages. Count exactly how many links exist on every page. Determine how many layers visitors have to drill-down through to locate specific information. Quantify overall site traffic—the number of hits that land on the site. Identify which features/links within the site have the highest number of hits and click-throughs. Establish which areas of the site have little or no traffic. Ascertain how visitors arrive at the site. Discover what devices are being used to access the site.

By collecting and analyzing existing data for the site, you will begin to form an understanding of how visitors are using the site. Website statistics provide fundamental information about site traffic, therefore (if not already in place), it is

important to implement some type of site analytics. There are several options for obtaining free website statistics. *Google Analytics* is used by many libraries to gather website statistics data. This free service from Google tracks incoming traffic to a site and provides data on how visitors locate the site, where they travel to once they are on the site, what kinds of devices are used to access the site and a whole lot more. However, there are a plethora of other web analytics packages like *GoingUp* and *Piwik* (see table 1) which perform the same functions. After an account is set-up on any of these services, the system generates a string of script that when added to webpages, allow the service to track incoming traffic and clicks within the site. When setting up an analytics account, make sure to connect the new analytics account to a general library email account and not a personal email account in order to maintain access to the account/data as staff members change.

### Core Task List

Capturing screen movements and narrative comments of study participants attempting to accomplish specific tasks while on a website demonstrates exactly how visitors maneuver within a site, as opposed to how they think they interact with a site. Perceptions may (or may not) reflect reality. Therefore to really determine how visitors interact with a site it is important to develop and administer a core task list study.

In developing a core task list tool for a usability study, consider the fundamental (core) activities visitors expect or want to accomplish on the Website. Some common library website pursuits include: locating specific materials (look up a book, DVD, etc); discovering when the library is open; determining how to renew material; locating contact information for the reference desk or specific library staff; and discovering what is going on at the library (book clubs, exhibits, speakers, etc). See table 2 for examples of core task list activities/questions.

At this point, it is also important to consider specific groups that use the site and identify unique activities or information they might seek within the site. Most library Websites are used by library patrons, other community members and library staff. However, within the broad categories listed above there may be clearly identifiable sub-sets like library board members,

Table 2

Examples of Core Task List Exercises
1. Locate the Library Web site on your browser screen.
2. Does the library own a copy of <i>The Iliad</i> by Homer?
3. Does the library have access to the <i>New York Times 1851-2006</i> database?
4. What time does the library close on Thursdays during the summer?
5. Locate the login screen for your library account.
6. Does the library have an ATM available?
7. Is a scanner available in the Library?
8. Laptops are available to be checked-out from the library for how many hours?
9. What is the phone number for the Library Director/Dean?
10. Locate the interlibrary loan logon screen.

faculty, library friends, reading groups etc. It is important to include tasks in the core task list instrument that target unique large stakeholder groups in order to ascertain if their needs are being met within the site as well as the needs of a general website visitor.

When creating the final core task list instrument, keep in mind the amount of time study participants will need to complete each task on the list. It is a rare individual that will spend more than a minute looking for something on a Website. So for the purposes of developing the core task list, estimate one question per minute when creating the final list. Therefore if study participants will ideally complete all tasks on the list in 10 minutes or less, the core task list should contain 10 questions or less. Once a core task list is compiled, test the instrument on someone who is not completely familiar with the site (like a student assistant) to estimate the time needed to complete the tasks. After the instrument is tested, the number of tasks/questions within the list can be adjusted to meet the desired time-frame.

In order to capture participant movements on the screen and participant comments, each computer used for the study will need to be equipped with screen and audio recording software and a microphone. There are several low-cost or free open source options for screen and audio recording software, including TechSmith's Camtasia (low cost) and free open source choices like, CamStudio, Jing and Wink.

### Card Sort

Library Websites are created by librarians and therefore can be rife with jargon as "library Web designers tend to categorize their sites using labels that are meaningful to them, but which frequently baffle typical users" (Nikkel and McKibbon 37). Another common problem with library websites is they are often organized according to various library operations such as circulation, interlibrary loan, etc, and because many users also do not understand the administrative functions of the library (Nikkel and McKibbon 38) this structure can be confusing for them.

These problems with website organization and taxonomy can be addressed by conducting group card sorting among library stakeholders. In short, card sorting is a usability methodology that assists with organizing web content in a way that is more intuitive for a given user population. It involves placing website categories on physical note cards and allowing usability study participants to place cards in groups that make the most sense to them. The benefits to card sorting are numerous. First, it provides a methodology to design, or in our case redesign, a website based on a user's frame of reference. Card sorting is also a means to gain insight into how users understand the topics and how they are organized (Zimmerman 441).

In order to create a website that has a more user-centered architecture, it is beneficial to conduct a

card sort usability test to discover and understand the frame of reference of your intended audience (Zimmerman 438). By applying the results of the card sort study to website design, the site will reflect the suggested categorization groupings and create a more user-friendly website.

### ***Card Sort--Methodology***

The first part of the card sort study conducted at University of Nebraska Omaha Library (UNO) involved an “open sort” where participants placed cards into groups they thought were logical. At this point, we were primarily interested in general patterns of groupings. To achieve this aim, we created 93 3x5 index cards which reflected the number of sections on the homepage of the website. Understanding that sorting 93 index cards at once is an unwieldy task, and therefore, may overwhelm our subjects, we divided the cards into four groups of 20-23 cards based on the current order of each section. Each card was numbered in order to simplify recording the raw data. We put out a call for volunteers via campus communication channels during May and June of 2010 with the promised compensation of a candy bar. We had 24 voluntary subjects perform the card sorting task. Some of the volunteers answered the call, but in order to increase the number of participants, we roved around the library and asked people at random to volunteer their time. Not one person we asked declined to participate in our study. The majority of participants were undergraduate students, but we did have 2 faculty members participate as well.

The second phase of the study was a “closed sort” which involved users sorting cards into pre-defined categories. For this exercise, we also decided to solicit for participants by the Milo Bail Student Center to ensure we also has some subjects who may not necessarily be avid library users. The specifics of the “open sort” required students to sort all 93 cards into the following four categories: Research Tools, Library Services, Library Information, and Unknown. These categories were created based upon the groupings from the first card sort activity. The previous participants tended to sort the smaller card set based on these groupings. We had 11 students participate in the “open sort”. As a result, our total number of participants increased to 35. Prior to meeting with the participants, the cards are

shuffled. The shuffled cards and a pencil are placed on the table. Before beginning the sorting activity, they were given a brief introduction with and basic instructions. Specifically, they were thanked for taking the time out to participate in the study. We informed them that we were currently in the initial stages of redesigning the Library’s website and we would like some input regarding how to make it as easy to use as possible. Then, we explained that the stack of cards in front of them represent sections of our website. We asked them to sort the cards in an order that made sense to them because we are interested in seeing how they would organize the sections into groups where they would expect to find the relevant information as indicated by the label. They were also told that they can create up to four columns, but no more than that. They were informed that they can make suggestions for category name changes and additions at any time during the study and we would make sure to record their suggestions.

Prior to conducting the study, one of the researchers found an Excel spreadsheet template used for recording card-sort activity. The template offers the following:

- In which categories each card appears
- How often a card appears in any given category
- Where cards appear by percentage
- The number of unique cards in a category
- Color coding to simplify interpretation
- Summaries of category contents (Lamantia)

The template is very simple to use. First, we had to input the list of cards into the Initial Card Count worksheet under the column Card Title. Then, we cut and pasted this list of card titles in the other three worksheets: Low and High Card Count, Card Placement Percentage, and Summary.

After each card sort exercise, we recorded the individual card numbers of the cards in the participants’ raw category in the matching column for our standardized category in the “Raw Data” worksheet (Lamantia). The card numbers were entered in each column designated by the participant. The Raw Data worksheet contains data that is used to calculate figures on each worksheet included in the template.



Table 3

Examples of Survey Questions				
Please place a check by the description that best describes your affiliation with the Library				
Student	Departmental Faculty/Staff	Library Faculty/Staff	Library Student Assistant	
Alternatives for public library: Community Member    Library Staff    Library Board Member    Library Friend				
Please rate your computer experience				
1	2	3	4	5
Very inexperienced	Inexperienced	Neither experienced/inexperienced	Experienced	Very experienced
Please rate your use of the internet				
1	2	3	4	5
Never use	Infrequent use	Neither frequent/infrequent use	Frequent use	Very frequent use
Please rate the Library Web site for ease of use				
1	2	3	4	5
Very difficult to use	Difficult to use	Neither difficult/easy to use	Easy to use	Very easy to use
Please rate the overall effectiveness of the Library Web site				
1	2	3	4	5
Very ineffective	Ineffective	Neither ineffective/effective	Effective	Very effective
Please rate the overall appearance of the Library Web site				
1	2	3	4	5
Very unappealing	Unappealing	Neither appealing/unappealing	Appealing	Very appealing
How often do you visit the Library Web site?				
More than once a day				
Once a day				
More than once a week				
Once a week				
Once every two weeks				
Once a month				
Less than once a month				
Once a year or less				
Never				
I am satisfied using the Library Web site				
1	2	3	4	5
Strongly disagree	Disagree	Neither agree/disagree	Agree	Strongly agree
When you are looking for research information and assistance on the internet, where do you look first?				
What do you LIKE about the Library Web site?				
What do you DISLIKE about the Library Web site?				

### Survey

The last component of the website usability study outlined here is the survey. A survey allows study participants to articulate their opinions about the library website and provides feedback about the aesthetics of a site. In addition, when

demographic questions are included in the survey, perceptions and attitudes can be isolated and attributed to specific segments of the community,

assisting developers to meet the needs of specific sub-sets of the library community.

Surveys can be done in the traditional written form or online. There are several low-cost or free online survey platforms available, including *SurveyMonkey*, *Zoomerang* and *Free Online Surveys* (see table 1).

When done in conjunction with other elements of the usability study outlined here, the survey can be relatively short and include only basic demographic questions (like age, affiliation—

faculty/staff/undergrad/library friend, etc) and questions related to participant perceptions of and attitudes towards the library Website. See table 3 for examples of survey questions.

### Conclusion

Before implementing any phase of a website usability study (core task list, card sort or survey) consider the following: if study results will be published (outside of an internal working document), the core task list instrument, the card sort, survey document and participant recruitment announcements (like emails, flyers etc.) may need Institutional Review Board approval prior to initiating outside recruitment and participation in any and all phases of the study; usability study participants should be comprised of individuals from EVERY stakeholder group identified when preparing the core task list instrument; and finally, as an acknowledgement of the efforts of study participants you may wish to give small rewards, like candy bars, flash drives to participants or give participants the option of having their name added to a drawing for a gift card, etc.

As library budgets and staffs shrink, assessment of services becomes critical to leveraging resources for the best return on investment. For many libraries, the library website is the most visible promotional tool the library has and can be more heavily used than the physical library. Therefore, it is important to know how the site is

being used and if the site meets the needs of community members. Although developing and implementing a library website usability study takes a fair amount of time, the data obtained through the study will provide empirical evidence of the site's significance and usefulness to community members. Results from library website usability studies can also be used as starting points for planning the direction of future library virtual services, thus focusing development on areas important to community members. So, invest the time to discover how good the library website IS and find out how GREAT it could be by performing a library website usability study soon.

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## **Implementing LibAnswers at Multiple Service Points**

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### **Abstract**

On a trial basis during the summer of 2010, Western Washington University Libraries began using LibAnswers, a program that allows library employees to track desk statistics using its analytics tool while building a public knowledge-base of answers to user questions. LibAnswers also manages questions coming in via text message and an email submission form. After using LibAnswers for one term, the Western Libraries Reference Desk permanently switched to LibAnswers from Libstats. Personnel decided that LibAnswers could be adapted to track user statistics at eight other service points: Reference, Circulation Desks, Media Desks, Map and Music Libraries, Special Collections, Archives and the Center for Pacific Northwest Studies, and the Writing and Writing Instruction Support Centers. Working with each service desk, a common set of terms for statistics collection were developed to meet everyone's needs. Extensive training was done to ensure that all library staff understood the terms, how to apply them, and the need for reliable statistics. This presentation session will outline the challenges and benefits of transitioning to LibAnswers at multiple service points.

## **College Readiness Dialogs: Librarian Collaborations from High School to College**

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### **Abstract**

This presentation will highlight the College Readiness Dialog events held at Blue Valley High School in Stillwell, Kansas, in October 2010 and January 2011. Librarians representing 2-year and 4-year higher education institutions, as well as Library Media Specialists and teachers from middle and secondary schools, met in face-to-face sessions to explore the question of how to prepare students for the transition from middle and secondary level research to the demands of undergraduate research. A panel of high school and academic librarians will present what they have learned from the initial dialogs. This will include a look at the wiki which was created to provide an arena for information sharing and collaboration, description of the partnerships born from these events and ideas for expanding the collaborations to include other partners in secondary and higher education.

# Fu Can Cook: Using Chinese Cooking Techniques to Teach Library Instruction

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## Abstract

Academic librarians always find teaching new college students how to find academic journal articles within a 50-minute time frame a challenge. Part of that challenge is because of the complicated research process which can be very intimidating and overwhelming for freshmen college students. In order to make this teaching moment easy to understand, more effective, and entertaining, Chinese cooking techniques are applied. They include several basic steps such as a careful selection of ingredients (library scholarly resources including print and electronic), seasoning (ways to narrow down topics), preparation and cooking techniques (search strategies), cooking tips (Boolean operators, and truncation), and even the final presentation (citation styles). The “Master Chef” librarian conducts the library instruction with humor, enthusiasm, and entertainment. Feedback from students indicates that they enjoy such a light-hearted teaching method and hope the librarian will keep such a style in the future.

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## Introduction

For so many years, academic librarians have been in a challenging or sometimes frustrating situation. That is because they have to conduct library instruction for freshmen students in a one-shot, 50-minute class. They have so much content to cover in such a short time to meet expectations of their students and faculty. This challenge prompts them to explore new pedagogies to fulfill that impossible mission. They try to identify key issues and explore new approaches to make their one-shot class most efficient, effective, and productive. They hope when their students walk out of the classroom, they will know how to do library research successfully.

Many successful trials and methods have been reported. In 2009, two library researchers, Sittler and Cook published their edited book *The Library Instruction Cookbook*. They state “teaching is like cooking: it is about choices that inform your technique” (Sittler and Cook 5). That book opens a door for academic librarian to use real life experience to teach their library instruction class. Ninety-seven recipes (class outline and plans) are provided and cooking tips (search tips) are offered. The book is a practical collection of library instruction class plans which not only enhance the student’s learning experience but also reflect specific standards and

outcomes from *ACRL Information Literacy Competency Standards for Higher Education*. Each “recipe” is designed to meet some specific learning goals of library instruction.

Using cooking techniques to teach is also echoed in other areas. Savarese reports in 2010 that several professors at Harvard’s School of Engineering and Applied Sciences also applied cooking techniques to teach physics class. Such a novel approach has caught students’ attentions and better engaged students without a science background.

In this article, the author, inspired by the above practical pedagogies, finds that both Chinese cooking techniques and the library research process share very similar characteristics. They include more or less the same basic steps such as choosing a dish (a research topic), a careful selection of ingredients (library scholarly resources including print and electronic), seasoning (ways to narrow down topics), preparation and cooking techniques (search strategies), cooking tips (Boolean operators, and truncations), and even the final presentation (citation styles).

Instruction goals include:

1. Students will use a common life experience to understand the complicated library research process.

2. Students will use analogy and association to better remember the research process.
3. Students will take the library research class in a fun way so that they can focus more on what they learn in the class.

### **Literature Review**

Finding an appropriate pedagogy to teach library instruction effectively is a desire for every library instructor. In their book *Practical Pedagogy for Library Instructors: 17 Innovative Strategies to Improve Student Learning*, Cook and Sittler include various strategies and approaches that address library instruction theories and practices.

In his article “Why Should Librarians Care About Pedagogy”, Cook further illustrates the importance and usefulness of two major learning models: direct instruction and student-centered learning (Cook 3). Both models stem from the modern educational theory of behaviorism and cognitivism. Both theories provide a foundation for library instructors to apply a proper pedagogy to the actual learning environment that helps students gain information quickly and efficiently. Cook points out “the teacher can indeed shape student learning by controlling the manner in which information is presented; a good example of this is the use of analogies in instruction” (Cook 8).

Using analogies in instruction was proposed long ago. Many scholars apply those cognitive theories to many educational settings such as in the teaching of mathematics (Tunteler, Pronk, and Resing 44-60), in foreign language instruction (Hulshof and Verloop 77-90), and in science education (Coll, France, and Taylor 183-196).

Academic librarians are not excluded from using analogies in their instruction. They are practitioners of the behavioral and cognitive theories as well. Numerous examples of using analogies in library instruction are seen in library

literature. Sutherland and Winstler discuss analogy and its role as a practical bibliographic instructional strategy and try to define the analogy as “the comparison of one thing to another on the basis of some resemblance between the two” (295). From Boolean operators to databases, analogical models are presented to explain what these concepts mean to new students. Sutherland and Winstler also point out the danger of over use of analogy. “Clarity and balance help ensure that the listener does not mistakenly carry the comparison beyond the bounds dictated by the instructor” (296).

Another librarian Malone shares her use of analogies when she is teaching library instruction for international students. “The rephrasing of words or concepts by using analogies and synonyms will very likely increase comprehension as an English vocabulary” (Malone 140). She provides an example of referring a call number to the “address” of a book to her students in the teaching of the Library of Congress Classification and their library system (Malone 140).

### **Methodologies**

In order to teach library instruction in an effective and entertaining way, Chinese cooking techniques are applied and compared with the library research process. By taking advantage of a common Chinese cooking experience, a complex teaching moment of the library research process becomes fun and unforgettable.

The author is dressed up like a master chef with a shower cap and an apron that contains names of library catalogs and databases. He uses the costume to compare a flow of Chinese cooking techniques with the flow of the library research process. The following three figures indicate what happens in the class.

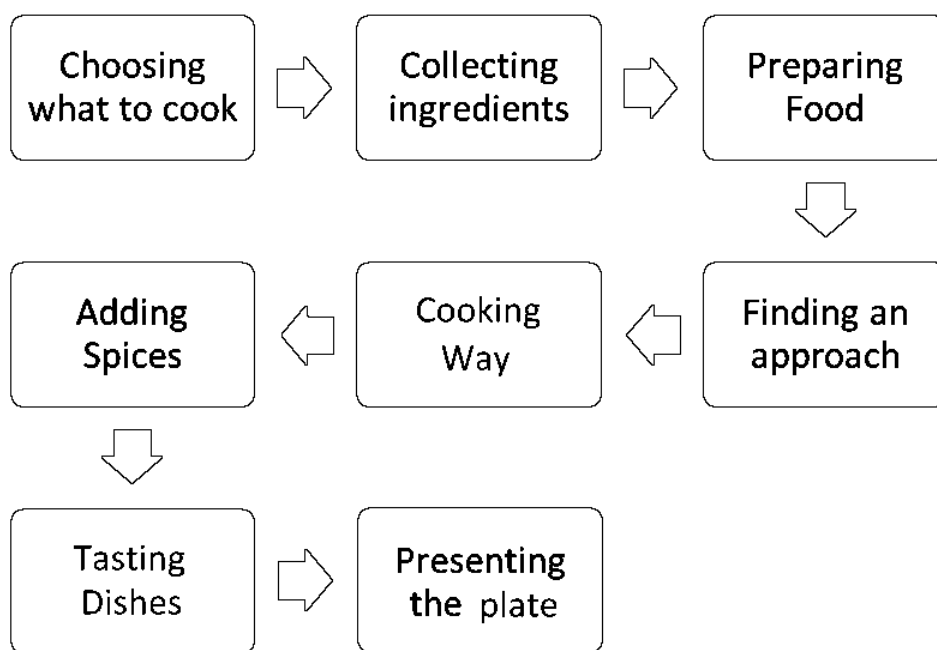


Fig. 1. Diagram of Chinese Cooking Process

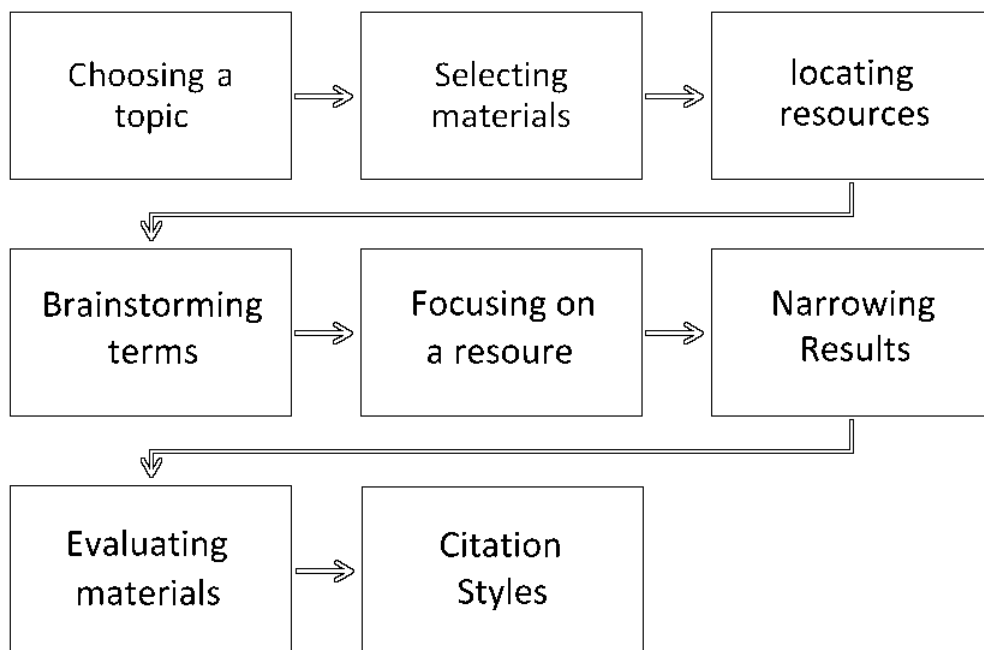


Fig. 2. Diagram of Library Research Process

Table 1  
Details of Two Processes

Chinese Cooking	Library Research
Choosing what dish to make based on personal tastes or based on what is ordered by a customer, e.g. Sweet and Sour Chicken	Choosing a topic based on a class assignment or personal interests taking into account availability of resources and scope of the topic <ul style="list-style-type: none"> <li>◦ Student personal interests</li> <li>◦ Encyclopedias</li> <li>◦ Current Issues</li> <li>◦ Teacher's assignments</li> </ul>
Collecting necessary ingredients	Selecting different types of resources that will provide proper information: <ul style="list-style-type: none"> <li>◦ Books</li> <li>◦ Journal articles</li> <li>◦ Databases</li> </ul>
Preparing your ingredients (resources) for the cooking process.	Locating the library catalog and database search interfaces on the library's webpage Learning how to use title, subject, author, and keyword to search
Finding an approach based on a recipe	Creating a search strategy and brainstorming for search terms. Learning how to use Boolean Operators to combine search terms
Determining a way to cook, (should I bake, grill, stir fry...?)	Focusing on either the catalog or a specific database for the information they need <ul style="list-style-type: none"> <li>◦ Book review</li> <li>◦ Book about global warming</li> <li>◦ Research article of literary criticism</li> </ul>
Adding salt, sauce, and other spices to specify a dish	Narrowing down to specifics or using truncation to expand results <ul style="list-style-type: none"> <li>◦ Print or electronic</li> <li>◦ Full-text or abstract</li> <li>◦ Scholarly or popular</li> <li>◦ Reference included or not included</li> </ul>
Tasting the dish	Evaluating materials <ul style="list-style-type: none"> <li>◦ Up-to-date</li> <li>◦ Accurate</li> <li>◦ Objective</li> <li>◦ Intended audience</li> <li>◦ Authoritative</li> <li>◦ Scholarly</li> </ul>
Plate Presentation according to the artistic nature of the dish	Citation styles <ul style="list-style-type: none"> <li>◦ MLA</li> <li>◦ APA</li> <li>◦ Chicago</li> </ul>



## Benefits

Using Chinese cooking techniques to teach library instruction is a simple and low cost approach to implement. It only needs an apron and a chef's hat, with some names of library resources such as catalogs or databases imprinted or stapled on the apron. If a chef's hat cannot be easily found, a shower cap will do as well.

This approach helps explain a complex library research process by using a simple life experience. Every student knows how to cook one or two dishes. By comparing a cooking experience with the library research, the student will surely understand and remember how library research flows.

Showing each step of Chinese cooking certainly engages students in the class and increases classroom interaction. If the librarian asks some questions related to its process and asks a student to point out the similarities, the student will find the research process easier to understand and entertaining.

Although it is a small practice, it enriches library instruction pedagogy and promotes diversity in both teaching and practice. Using Chinese cooking techniques can also be expanded and changed to using Italian, Mexican, and other cooking techniques to teach the library research process.

## Student's Feedback

After this new approach is applied, a survey is distributed to students for evaluation and it is filled out immediately after the library instruction class. It seems this Chinese cooking analogy has caught students' attentions and students respond with positive feedback to this Chinese cooking method. Here are some student comments collected by the author:

- "Keep it fun."
- "Great class, lots of useful information."
- "Fu Zhuo, you are the BOMB, Thanks."
- "Loved the costume – got our attention."
- "That guy rocked! Super entertaining and educational!"
- "Our instructor was AWESOME! He was nice, fun, and I learned A LOT."
- "The presentation seemed sort of rushed, but I like that you had each student try out on

searching on the databases. I also thought the handout you gave us was helpful."

- We probably didn't need instruction on each database. The class was informative and the handout was helpful. I just have a bad memory, so I can't remember the names."

## Issues and Challenges

The use of analogies in library instruction is a common pedagogy. Many academic librarians apply this method to explain library concepts to new college students. Using Chinese cooking techniques to teach library instruction is one of the latest efforts. However, there are some issues and challenges worth pondering.

The first one is how to balance the means and ends. For example, will the new approach take up already limited instruction time? Since there is only one 50-minute class time, adding some new approach means taking out some other content. What will happen if the teaching faculty asks to show more databases in the class? There is a need to keep a balance in illustrating the Chinese cooking techniques and library research process. Some extra time must be set aside for the students and the faculty to ask questions.

The second challenge is determining what level is this new approach more appropriately applied. Is it in a freshmen library instruction class or in a graduate level research class? It seems it is more suitable for a freshmen level class because graduate students are already very familiar with the library research process.

This new approach has only been applied for three semesters. Evaluation is conducted to find out the effectiveness of the library instruction but not just limited to the new approach. Will the teaching faculty and students really accept this new approach? The third challenge is to assess whether this new approach is better in teaching library concepts. An evaluation form targeting the effectiveness of this new approach needs to be designed and used.

## Conclusion

The purpose of using Chinese cooking techniques to teach library instruction is to show that a common life experience can be applied in order to make a complex lesson of library research skills easy to understand and full of fun. The use of analogies in instruction is intended to help

students comprehend easily and remember what they need to learn in a library instruction class for a longer time. However, the challenge always remains for academic librarians to teach new college students library information skills and research processes within a 50-minute time frame.

Once the students understand effectively the library research process, they can work on their research assignment or project independently. If the “Master Chef” librarian can conduct the library instruction with humor, enthusiasm, and entertainment, so can you do it in Italian, Mexican, Ethiopian, Thai, Indian, Scandinavian, Greek, Middle Eastern, Brazilian, Japanese, Korean, or other cuisines. Feedback from students indicates that they enjoy such a light-hearted teaching method and hope the librarian keeps such a style.

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# Is There Really an App for That?

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## Abstract

iPads have taken personal computing to a new level of convenience. Longer battery life, lighter design, and larger capacity make them a highly functional device. Their functionality depends on the apps one chooses to load on the device, and thousands of them have been developed over a relatively short period. Briefly surveying several applications illustrates their usefulness in the classroom, education, and beyond, but the focus of this presentation will be on using the iPad as an eReader and how it works with resources available through a library. Briefly highlighting apps that can be used in the classroom will reveal how different applications amplify content, support multimedia resources, and enhance the educational experience.

As an eBook reader, specific apps permit one to access proprietary content through major vendors such as Kindle and Nook as well as books in the public domain. iTunes U provides access to a wealth of instructional sources from psychology to Chinese Art, and subscription access to many periodicals automatically delivers these publications to your device.

iPad apps supplement instruction through providing multimedia access to language tutorials, translation services, and a variety of scientific disciplines. There are also a number of tutorials that function like high-tech flash cards, outlines, and other tools for reviewing facts, presenting ideas or managing information. One can even annotate an audio recording of a lecture in class.

Although the numbers of applications are constantly growing, most apps cluster around productivity tools, internet portals, informational displays and translation tools. Examining several types of apps reveal how the iPad accesses information, exchanges files, and facilitates interaction with the user. Through a brief survey, one can gain a sense of how this type of technology can enhance the classroom, the library, and empower users.

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## Introduction

Tablets have bulked up their capabilities while slimming their size to the point that handheld devices now rival the computing power of desktops a few years ago. Through offering longer battery life, improved connectivity, more computing power, and a convenient format, a number of devices have emerged to meet the demands of content hungry consumers on the go. Several categories of hardware have emerged; a slate tablet that relies on a touch screen; hybrid tablets that supports an optional external keyboard; dual screen tablets that extends the display over two screens, and a rugged tablet that is adapted to withstand use in the field. However, the versatility and convenient accessibility of the software define the practicality of these devices.

There are now over 329,000 apps currently reviewed by MacWorld, and by the time you read this article more will be added (“iPhone App

Reviews”). An equally robust selection of software is available for the other major operating systems through their virtual storefronts. Everything from checking UV conditions and timing the application of sunscreen to checking 3D imaging for thoracic surgery is now available through the virtual app store, which is conveniently only a few clicks away on the internet. I will focus on eReader applications available on the iPad. However, a brief survey of case studies will illustrate the range of uses mobile computing is finding in education, and provide a context within which the iPad as an eReader can be evaluated.

## Tablets in the Classroom

The convenience of mobile computing is made possible by a number of applications that support a wide range of tasks. Educators are using mobiles in a broad range of activities to engage students, enrich material, and expand the

classroom. In 2008, EDUCAUSE identified mobile broadband computing as a key technology, and concluded that “Access to-and portability of-content is increasing as smaller more powerful devices are introduced. Electronic book readers ... make it possible to carry vast amounts of information in a small package” (New Media Consortium 6). The following year, they reported that the versatility of third-party software greatly enhanced the functionality of these devices, that mobile computers were already integrated into campus networks, and “they can be easily adapted to a host of tasks for learning, productivity and social networking” (Johnson 2009 4). In 2010, they found that students were already carrying network-capable devices, and many faculty were using these devices for instructional purposes. “Devices from smart phones to netbooks are portable tools for productivity, learning, and communication, offering an increasing range of activities supported by applications designed especially for mobiles” (Johnson 2010 6). Surveying a few case studies illustrate the practical application of these mobiles.

Savilla Banister provided a concise summary of several initiatives that used an iPod Touch in the K-12 curricula spanning the areas of reading, mathematics, languages, social studies, and science. She highlighted the unique ability of this device to access multimedia resources with a variety of functional apps that enable students to take notes, access a calculator, use a map, and interactively access weather information. In addition, a number of apps were specially created for educational purposes. Through this technology, students can immediately access content, create and publish material, and focus their attention on the content. As a result, students are more engaged, and conceptual understanding is reinforced through these activities (Banister). Many of the apps she discusses are now available for the iPad.

In 2004, DePauw University equipped 4 classrooms with pen-based computers, which were used in 43 courses spanning the disciplines of computer science, economics and management, Japanese language, English, and communications. 28 of the 36 faculty that used these classrooms responded that they strongly agreed that the tablet was valuable to their teaching, and that they would continued to use it. The remaining 8

were either neutral or somewhat agreed that pen-based computing was beneficial to the class (Bonebrigh).

Mobile computers using pen-enabled data collection were used in three courses taught at three different institutions; Lawrence, Trinity and Vassar. These case studies illustrated how off-the shelf software could improve students’ fieldwork in science. Reviewing surveys and test scores led the researchers to conclude that introducing mobile computers in the field work of these classes improved mental modeling of the process of data-driven inquiry, increased the accuracy of data collection in the field, enabled greater student involvement, and resulted in a deeper understanding (VanCamp).

iPads are said to have made their debut in the classroom in 2009, when Cedar School of Excellence in Greenock, Scotland initiated a one-to-one deployment of iPads to their 100 students (“Lessons on an iPad”). In only a few years, thousands of educational applications were developed to enhance every area of study at every grade level. Specific apps range from those that support administrators’ use of iPhones/Pods/Pads to provide faster feedback to teachers, to access student data in real time, and to improve communication [Derringer]. Software has been developed to enable iPods/Pads to be used for audio recording in the field (“FiRe”), and information on the evolutionary timescale of living organisms is now available through TimeTree, an app created by Penn State University and Arizona State University (Dudley).

While investigating what apps would support Nursing programs, Diane Skiba discovered over 2500 medical apps, and recounted how a computer-based honors program at University of Alabama created an iPod app that reminded patients to check blood sugar levels. She also related how incoming medical students at Stanford are now issued an iPad (Skiba), and an iPad app accessed 3D reconstruction imagery for thoracic surgery (Volonté). However, Barrie McCombs recently concluded “it is hard to find physician-oriented medical applications among the many consumer oriented applications in the iTune store.” As the iPad finds its way into more medical schools, his concern may be washed away by a flood of newly developed apps.

Seton Hill recently distributed 1850 iPads to students and faculty, giving them an hour of training on its use. Faculty found that the convenience of the iPad devices supported students' communication, information gathering, note taking, reading, and interactive work. Although the iPad simplified accessing information, many used a MacBook for creating content (Gawelek). Additional initiatives are now frequently seen, like California's year long pilot comparing the performance of students using traditional textbooks and a newly developed app for Algebra for the iPad. Results from this study are expected in fall 2011 ("California Schools").

Why has the iPad taken the spotlight in educational circles? John Smart viewed the advent of the iPad in the following manner:

Today, 17 years after the Apple "Newton" MessagePad distributed in 1993, tablet PC's like the iPad are poised to live up to the hype that first surrounded them and realize their promise. ... Uncomplicated and easy to use for brief tasks, tablets seduce us into even more online social interaction, ereading, elearning, gaming and other activities, and bring us another step to wearable computing. (44-45)

The iPad is certainly revolutionary, but does it mark the beginning of a new type of computing device? David McCarthy identified several features eReaders need. They should have a large display, adequate battery life, appropriate entry mechanism [be it keyboard, mouse or stylus], as well as adequate memory and CPU speed. Lotta Larson identified several functions critical to eReader devices; among them text-to-speech capability, seamless reading, changeable font size, annotating text, and the ability to publish content. In addition, they must be able to access Internet resources. The iPad meets these hardware requirements, and the applications that run on this device appear to meet the needs of readers as the software undergoes constant updates that address instabilities, and improve functionality. Consequently, it appears the hardware has the potential to adequately support a wide variety of applications.

#### **Software and eReader Apps.**

Software for mobile devices is generally accessed through virtual storefronts, downloaded through the network, and automatically installed on the device. iPads use the iTunes Store, which

organizes content into Music, Movies, TV Shows, App Store, Books, Podcasts, iTunes U, and Ping (a social network). One can surf the store directly from the iPad through the network, or download apps from the store through a laptop or desktop, and later transfer them to the iPad. Selections are made and automatically debited from the user's credit card. Once an item is purchased, it becomes part of your virtual collection, and you are notified of updates as they become available. Apple maintains a website for education, and highlights significant features that support this area ("Education-iPad").

A number of sources provide information about new apps, and frequently include reviews, readers' feedback, and links. MacWorld provides searchable access to an extensive collection of reviews in a standard interface ("iPhone App Review"). Information is also available on many topics through various forums, such as iPad Forum. Many specialized journals review apps in their area, such as the review of Symbolic Calculator HD in *Mathematics and Computer Education* (Ostler). I want to arrange apps for the moment by the extent to which they are dependent on a network connection to function. There are applications that are self contained, those whose functionality is enhanced through connecting to additional resources on the Internet, and those apps that provide a convenient portal to remote resources on a network.



GoSkyWatch Planetary is an interesting application that takes advantage of the onboard sensors to provide the user with an interactive map of the cosmos. The map of the heavens changes in

relation to how the user holds the device. Raising the iPad lowers the horizon on the map; turn- and the images visible on the map change. One can zoom in an area, and move the map manually by pulling the map to the desired area with the touch of a finger. Images of many objects are revealed when brought into a citing circle, and additional information is available through drop-down menus. The screenshot below illustrates additional information available for Mars through this app (see fig. 1).

Additional applications take advantage of the GPS positioning, but require connectivity to pull information from the network related to your

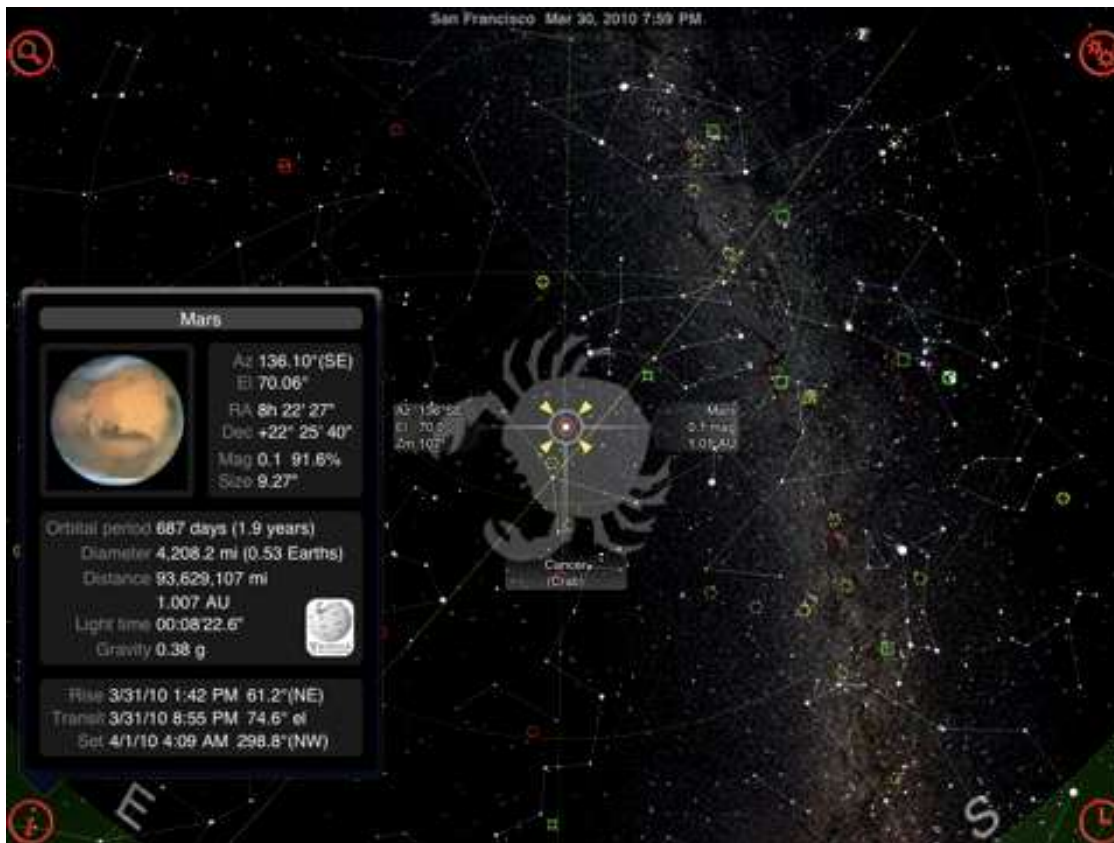


Fig. 1. Icon and screenshot illustration above are used with permission of GoSoftWorks.

position. Google Earth and The Weather Channel are examples of these programs. Google Earth uses your current location to download images of the surrounding area, and The Weather Channel uses your current position to provide information about local weather conditions. There are many educational apps that are self-contained, meaning that they are fully functional without a network connection once they are downloaded. These span disciplines of math, foreign language, science, history and social studies. Most can be found under the educational group within the apps section of the iTunes Store.



Some applications use network connections to enhance the functionality of the program, or the content available. The Elements: A visual Exploration is an example of an app that links

to additional networked resources that augment the application through an Internet connection. The periodic table functions as the home page. Pages of information about each element are

linked to the element on the table, including short videos. This app interacts with Wolfram Alpha, which is a search engine that requires an Internet connection to access additional content from the Internet. The screenshot below illustrates the additional information available on the iPad for Bismuth.

Many applications are dependent on a network connection to retrieve data, displaying the retrieved content on the tablet. WebMD is an example of this type of software. It provides access to first aid essentials, drugs and treatments and an interactive questionnaire to diagnose potential conditions from the symptoms you identify through responding to a number of prompts. A number of browsers and educational applications use active connections with remote networked resources.

### eReaders & eBooks

eBooks and the devices on which they are read have improved text distribution, access, portability and pedagogy. Kindle revolutionized the reading device as well as manner in which

## 83 Bismuth

The active ingredient in Pepto-Bismol brand upset-stomach medicine is 57 percent bismuth by weight. This is really quite odd when you consider that the element to the left of bismuth is lead (82), so toxic that entire toy industries have been turned on their heads trying to eliminate it, and the element to the right is polonium (84), a deadly radioactive poison used in recent times by Russian bad guys to eliminate inconvenient people.

Despite the fact that bismuth sits smack in the middle of the toxic heavy metals, so far as we know the metal form is completely nontoxic. (If you consume enough soluble bismuth salts, there are some side effects, such as your gums turning black, but this is very rare.)

Bismuth is known as the very last stable element: No element above 83 has even a single stable isotope. But bismuth is only *culturally* stable. By which I mean that everyone thinks of it as stable, and for all practical purposes it might as well be stable, but strictly speaking there are no stable isotopes of bismuth either. On the basis of theoretical calculations, people thought for years that the "stable" isotope,  $^{209}\text{Bi}$ , should be unstable, but it wasn't until 2003 that its half-life was finally measured and found to be  $1.9 \times 10^{19}$  years. (To put this in perspective, 19,000,000,000,000,000,000 years is about a billion times longer than the age of the universe. The stuff isn't going anywhere anytime soon.)

It is with some regret that we leave the realm of the stable elements. From here on out, the elements are touchy to have around and highly regulated, for health and national security reasons. But that doesn't mean you can't buy many of them. You can find at least one in the grocery store.

Our brave new radioactive path begins with polonium, a real doozy of a radioactive element.

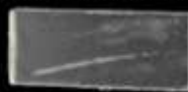
Bismuth heart, cast for fun.



The author's multimetallic chain contains one link cast from 99.99 percent pure bismuth.

Bismuth spontaneously forms large "hopper" crystals on cooling. When very pure bismuth is cooled very slowly, these can grow to huge sizes. This one is more than four inches tall.

Bismuth germanate,  $\text{Bi}_4\text{Ge}_3\text{O}_{12}$ , used in scintillation detectors.



Pepto-Bismol did not get its name by accident: The active ingredient is bismuth subsalicylate.



Thirty-pound ingots of pure bismuth are how the metal is often sold commercially. Broken in half, they show beautiful internal crystals.



Fig. 2. The Icon and screenshot illustration above are used with permission of touchpress.com.

content is accessed, and the Kindle app brought these improvements to the iPad. Faye Bormann examined how the Kindle reader enabled improvements in literacy efforts in a K-12 environment, concluding "for the first time we have access to a device that is a dedicated mobile reading platform." In addition, there were some unexpected pedagogical advantages through reading on a ubiquitous device. "Struggling readers are often faced with the embarrassment of being seen to be reading 'easy' books. With the kindle they can read independently" (Bormann).

Wikipedia Provides a convenient table that summarizes many of the features of 25 different reading devices and 18 different file types they may access ("Comparison of E-book"). This diversity underscores a compatibility challenge when accessing content, and readers frequently use proprietary formats that occasionally require one to coordinate Digital Rights Management through registration with additional companies. eReaders are generally evaluated on the flexibility and access to eResources, the readability of the text, the device's ability to support seamless reading (the degree to which

reader moves from page to page with minimal delays in rendering the page on the device), and the ability to customize text display through changing the font, size and background of the text (Bormann).

Kindle is an eBook app that displays eBooks, stores your library off the reading device, and provides an interface to the eBooks, newspapers and magazines available through amazon.com. It supports annotation through highlighting, bookmarks, and notes. The contained dictionary can be supplemented through accessing Internet content from Google and Wikipedia. Kindle synchronizes reader activity across multiple devices through WisperSync. Fontsize can be adjusted, and the background can be switched to light text on a black background, or black text on a Sepia background. Once the book is downloaded, it need not be networked to read it, but connectivity is needed to access your library, the Kindle store, and sync annotations. "Kindle for iPad excels because of its visual customizability, and its overall simplicity. You can tweak the screen to your liking, and then simply read. I use the app every single day, while

my Kindle 2 sits sullenly, untouched on my nightstand” (Friedman, “Amazon’s”)

The Nook is an eReader that displays eBooks, accesses your library, and provides an interface to eBooks, newspapers and magazines available through Barnes and Noble. It synchronizes across multiple devices, and provides bookmarks and highlighting, and notes. Definitions can be accessed through Google and Wikipedia. There are several choices to customize the size and font of the text, and the background color and brightness can be adjusted, but speed and access to public domain texts were not impressive.

On the whole, *BN eReader* performs merely adequately as an e-reader app. Were it all I knew on the iPad, I’d likely content myself with it, in spite of its limitations. But iBooks and Kindle both outshine *BN eReader* in several performance-related ways. Since the app itself is free, it’s easy enough to install to test for yourself. Right now, though, the app is simply inferior to its competition. (Friedman, “Barnes & Noble”)

Kobo is an eReader app that displays eBooks, accesses your library, and provides an interface to a virtual store. It is also integrated with social media, permitting one to share comments and reading preferences using accounts on Facebook and Twitter. The font and size of the text can be customized, and one can change the publisher’s text alignment. You can sync your current page between devices, and can access locally created PDFs and ePub documents through transferring the files from Dropbox and iDisk. Kobo supports the ubiquitous annotation functions of highlighting and bookmarking, and adding notes, and facilitates your sharing this information on your social media. The screenshot below shows how one can share comments about their reading experience with friends through social media.

I don’t know that the world needs yet another e-book competitor, but that’s not my call. If Kindle, iBooks, Nook, and the rest haven’t yet sated your unique e-reading hunger, *Kobo’s* certainly worth a shot; generally speaking, it works fine. (Friedman, “1.8 million”)

iBooks is an eReader app that displays eBooks, accesses your library, and provides an interface to a virtual store. It supports highlighting,

bookmarks and a search function. Selections can be copied as well. The background can be set to white and sepia. The font, size, background and brightness can be customized, and the titles are arranged on a virtual shelf created for each identified collection. Books can be shared among registered devices, and progress synced across devices.

Like the *Kindle* app, *iBooks* is an excellent e-reader that feels impressively like the future—while simultaneously feeling a heck of a lot like an actual book. Right now, Amazon’s dominating selection renders it the top dog in the iOS e-reading world. But if the book you’re after is available for iBooks at a good price, the app provides an immersive and thoroughly pleasant reading experience, particularly on the iPad. (Friedman, “Despite”)

Stanza is an eBook reader that offers many of the same features as those of the readers described above. Like Kobo, information can be shared through Facebook and Twitter. However, the number of virtual stores linked to Stanza sets it apart as an eReader. Currently there are eight sites for free content, and four book stores, including BooksonBoard, O’Reilly, All Romance eBooks, and Smashwords. It can read books in a variety of formats, and files can be shared from your mac/pc through Calibre, an open source application supporting eBook conversion. Books can be arranged by title, author or group. Although highlighting is not supported, one can add notes to the text, and look up definitions.

Where *Stanza* bests its competitors is in its customizations. The app sports impressive display controls: You can choose from more than 40 fonts (although, admittedly, you’ll likely never want to read a book in Marker Felt or some of the other more whimsical fonts offered). You can also adjust not just font size, but also font and background colors. (Friedman, “E-reader”)



iAnnotate is a robust PDF annotation tool. It is included in this section because it provides access to many of the same resources as the apps described above. PDFs can be loaded into this app through docking the iPad, through a network connection enabled by



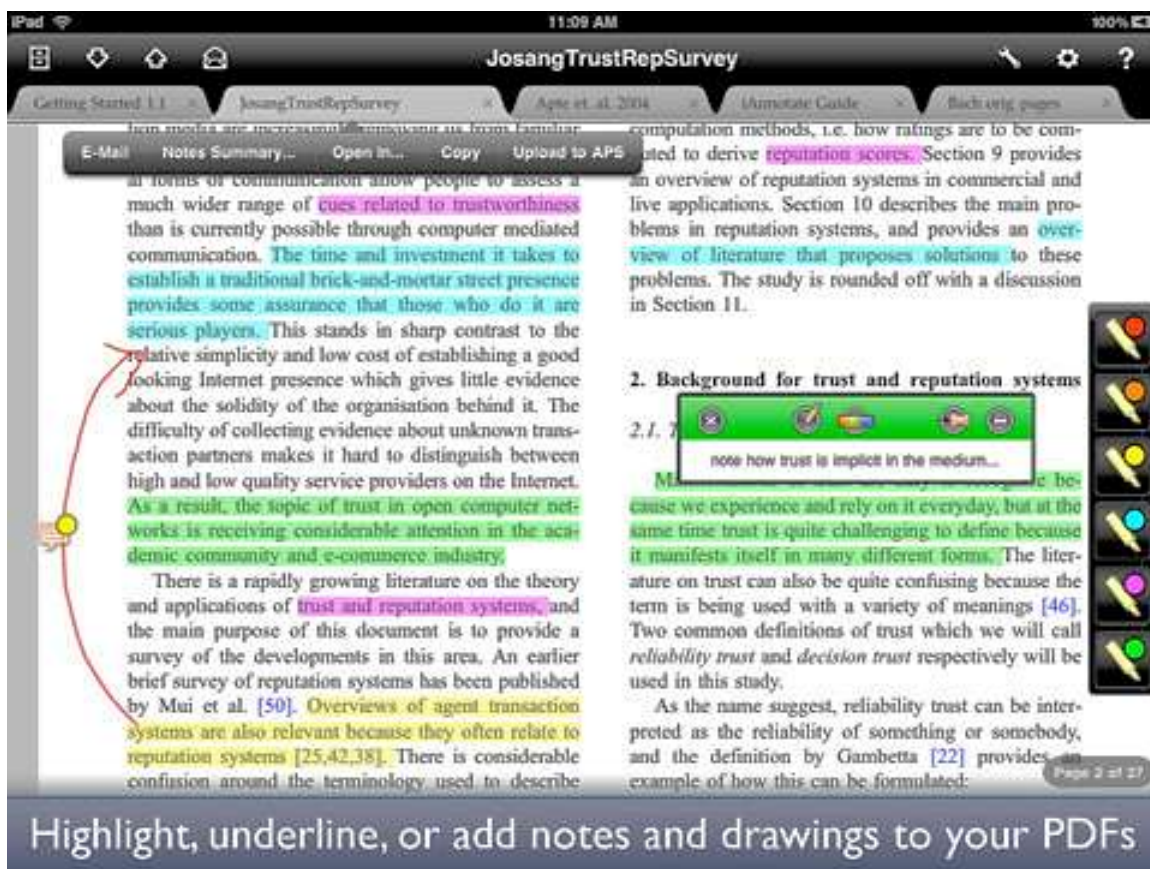


Fig. 3. The Icon and screenshot for iAnnotate is used with permission of Aji LLC.

AjiServices [a laptop client], through email, or Digital Dropbox. Once the document is in the app, it can be annotated using highlights, underlining, free-form-drawing, or adding notes. These annotations are integrated into the PDF document so these annotations can be viewed in Adobe reader or Acrobat. The screenshot below illustrates a variety of annotations that can be made on a PDF document.

Libraries continue to transition from print to electronic resources in response to publishing decisions and patron preferences. Ross Duncan identified several factors that are propelling this transition. In time, more books will be published electronically, and the eReader devices will be more powerful and more integrated into the lives of library patrons. As a result, libraries need to find ways to provide their patrons with access to electronic versions of the print resources libraries traditionally provided. Most articles are available in an HTML or PDF version, both of which many eReaders can accommodate. However, accessing books in an electronic format becomes somewhat problematic. *Overdrive* provides a feasible

solution to distributing electronic material to individual reading devices while observing DRM.



<sup>1</sup> *Overdrive* enables a library's digital collection to be accessed from a number of reading devices. The library purchases the management system, and patrons download this client for their device. This system enables patrons to browse the collection, use their valid library card to "check out" the book, and install it on their reader for the duration of the checkout period. Libraries can limit the number of books one can simultaneously load and the loan period. Patrons use this virtual library in the same fashion as many on-line stores. They browse the collection by category or keyword, select items by putting them in their cart, and check out by loading the titles they selected to their device. The app comes with a countdown feature that reminds you how long the book will remain on your device before it expires. Because *Overdrive* uses Adobe DRM, one needs to register with Adobe before content can be loaded on the device.

## Conclusion

Is the iPad a revolutionary device? Eric Walters and Michael Baum arrived at opposing conclusions. Walters thought the quick access to inexpensive apps, portability, and connectivity provided a new environment for computing. However, Baum thought “New technology revolutionizes only if it’s new capabilities actually improve learning” (Walter). Furfie came to a slightly different conclusion. The iPad is truly designed for “anyone who doesn’t need the power of a regular PC or Mac” (35). All three perspectives are right in a sense.

The iPad provides a fairly robust networked-device on which one can accomplish rather specific tasks through the use of a specific application. Whereas laptops typically supported rather generic computational tasks of word processing, spreadsheet processing and creating presentations, tablets have evolved to support rather focused tasks through the development of small inexpensive apps. In other words, the tablet evolved to reliably and conveniently accomplish a fairly large number of routine needs, and a specific app is developed for each task. As an eReader, there are several apps that provide access to an extraordinarily wide range of titles, and provide a high degree of customizable reading experiences. The flexibility of the device supports a much broader range of uses than merely reading. Consequently, if there isn’t an app for a particular task one wants to use an iPad for, there is a good chance that someone will develop it.

## Note

1. The icon for *Overdrive* is used with permission of OverDrive Inc.

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