13TH ANNUAL

Northwest Missouri State University November 1, 2013

brick & click

an academic library symposium

Brick & Click Libraries

An Academic Library Symposium

Friday, November 1, 2013

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Abstract

Instagram has taken our technology-driven culture by storm, particularly among younger smartphone users. This popular app allows users to quickly snap a photo, transform it by adding filters and effects, and share it across numerous social media platforms. With 40 million photos uploaded each day, Instagram users are driven to share, like, and interact with fellow camera phone enthusiasts. College students, known for their interest in sharing their experiences on social media, are drawn to this free app. According to a Pew Internet Survey, Instagram is especially appealing to adults aged 18-29. Academic libraries have an opportunity to engage with their primary user base through this new social media tool in very creative ways.

This paper describes how the technology works and how the authors use Instagram on behalf of their institutions. With creative planning and timely photos, their libraries have successfully connected with students, members of the campus community, and other libraries across the country. Examples will inspire attendees to think about implementation, or how to improve an existing presence. The paper covers creating content, driving "followers" and "likes", but also workflow considerations and tying existing programming to Instagram.

Introduction

Take a picture, edit it, and share it with friends. This is the process that 90 million Instagram users know and love. Instagram is a free and simple photo app, available for iOS and Android devices, that allows users to document and share their lives in photo form. Launched in 2010, the app sought to make taking mobile photos "fast, simple, and beautiful" ("Welcome to Instagram"). Instagram was insanely popular right out of the gate, ranking number one in the App store a mere twenty four hours after its release ("First Three Months"). Currently, one hundred million users share close to 40 million pictures a day through the popular app that also links to other social media sites, including Twitter, Facebook, Tumblr, and Foursquare ("Join the Instagram Team").

The Pew Internet and American Life Project found that thirteen percent of Internet users surveyed identified themselves as Instagram users. Pew also discovered that this app particularly appeals to adults 18-29, African-Americans, Latinos, women, and urban dwellers (Duggan and Brenner). Businesses such as Nike realized the app's instant popularity with their key demographic and developed tools, like Nike PHOTOiD, that integrated their product into the Instagram experience. Users can upload an Instagram photo to the NikePHOTOiD website and create a sneaker with colors from the photo. Users then share their pictures in an online gallery powered by the Instagram API (applications programming interface) and can even have the sneaker custom made (Nike PHOTOiD). Libraries are taking cues from the business world and embracing the app as a way to share their library's brand with users.

Literature Review

The use of social media by libraries is a newer but popular topic. Descriptions of the application of social media to libraries can range from a broad overview of the different tools ("Social Media") to using social media to reach a specific goal, like advocacy (Dankowski). A full analysis of case studies of libraries and their use of specific tools can be practical and useful.

Burkhardt encourages libraries to consider why they want to use social media and what they hope to gain from it (10). Each library is different, so the end goals and preferred social media tool(s) may vary institution to institution. Kho found that the immediate nature of social media can improve response time

to positive and negative feedback, which relates to providing valued customer service (31). Creating social media channels and sharing with followers allow libraries to engage with new technologies as powerful communication tools.

Instagram was listed as one of 18 "great technology initiatives" for libraries because it creates a visual representation for events, services, and resources available (Kroski 52). Although many libraries have a presence on Instagram, the literature on academic libraries and Instagram is very limited. This paper seeks to fill that gap in the research and provide practical insight on using this popular mobile app to engage users.

How Libraries Use Instagram

Lessons from Rice Library

Rice Library at the University of Southern Indiana (USI) serves a diverse population of undergraduate and graduate students in Evansville, Indiana. Social media responsibilities fell to the Reference Department but were often ignored or neglected. The library maintained a Facebook page that experienced sporadic interactions with different user groups. When analyzing the Facebook data, one thing became clear. Users responded well to pictures, especially pictures of the different spaces within the library. When thinking about how to move the library's social media presence forward, the department knew they wanted to invest time in a platform that was visually stimulating and dynamic, and allow the library to share posts to Facebook and other channels. Several staff members were personal Instagram users and recognized the potential of this platform to fit the needs of the developing social media plan.

The library began testing the Instagram waters in the summer of 2012. An account was created and linked to various social media channels including Facebook and newly established Twitter and Foursquare accounts. Without many events in the library or on campus during the summer, the account focused on showcasing overlooked parts of the library building. Pictures of artwork, the library exterior during a sunny day, and even the intricate patterns of the library's carpet were shared. The library also showcased future events and services that were launching the following semester. Little by little followers of Rice Library began to grow. Current students as well as alumni and staff began to follow the library's account and comment on pictures. By the end of the summer the library had a modest but promising total of 43 followers.

As the fall semester began, the library officially promoted the Instagram account and actively courted potential users. Signage was posted throughout the library with account details. Posts were made across other social media channels encouraging users to follow the account. In addition to posting pictures of the Rice Library and its activities, the library started to engage with the Instagram community at-large. The library became a model for using Instagram on the USI campus. Soon, other university departments, like News & Information, set up accounts as well. The library's Instagram presence continued to grow over the next year and as of June 2013 the library had 122 followers.

Lessons from Roesch Library

Roesch Library serves faculty, staff, and students at the University of Dayton, located in Dayton, Ohio. After successfully implementing a presence on both Facebook and Twitter, the library decided to sign up for Instagram following a student worker's suggestion. Student workers are a great source of information regarding social media trends, particularly student preferences on campus. Similar to other instances where a librarian began using social media channels on behalf of Roesch Library, the librarian who initially set up the account was already an Instagram user with a personal account. This allowed the librarian to see how users interacted with one another (likes, hashtags, etc.) before introducing the library as a user.

At the time, Roesch Library was undergoing major exterior construction. One of the first photos shared was a posed picture of a student holding a pair of free ear plugs that were available at each service desk (see fig. 1). The caption described how the library may get noisy during this academic year and that the

ear plugs will help cancel out the construction noise. Instagram became a great way for the library to communicate news and construction progress.

Fig. 1. A student promotes free ear plugs. The caption read, "Is construction noise distracting your studying? We offer ear plugs at our reference desks!"

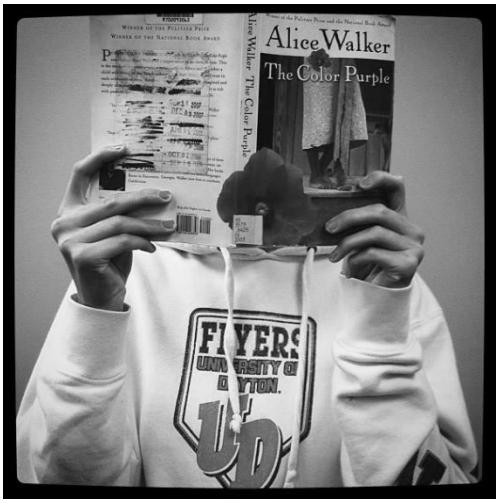

Fig. 2. Banned Books Week photo. The caption read, "The Color Purple by Alice Walker was banned for homosexuality, sexual explicitness, and offensive language #bannedbooksweek".

Photos with a filter effect are recognizable as a product of Instagram. The photo of the student wearing ear plugs (with a filtered effect) was used in other marketing materials related to the construction and availability of the ear plugs, including a bulletin board poster, quarter sheet fliers, and website/social media posts. By using the photos from Instagram in print and other online outlets, audiences will know about the library's use of Instagram. It's a great way to promote a new or established presence on Instagram.

One staff member cannot be everywhere to document events so sharing Instagram responsibilities is an important consideration. Student workers can be a great resource for providing Instagram content. The library's marketing and events student worker has provided Roesch Library followers with a student perspective, thanks to her frequent posts. To a student, uploading a photo to Instagram may be second nature to them already. This can mean a constant flow of new content while the student is in or outside the library.

Instagram provides Roesch Library an opportunity to rethink its programming and outreach to students. The library's 2012 Banned Books Week promotions were nearly all on Instagram, featuring a series of photos of students with their favorite banned books (see fig. 2). Contests, which are covered in a later section, have helped promote new spaces and services. Overall, Instagram has been a new and fun way to connect with students and other libraries through photos.

Fellow Instagramers

Academic libraries have embraced Instagram as a social media tool. Rice Library and Roesch Library get many of their content ideas for Instagram by following other library accounts. In this section, ways to use Instagram will be explored using other academic libraries as examples.

Event and Student Promotion

Your library's events can instantly be promoted with an Instagram photo. For example, UCLA Powell Library (http://instagram.com/ucla_powell_library) pays particularly good attention to showcasing upcoming and current happenings in the library, especially during their finals week period. Powell

constantly uploads new photos to share the wide range of finals week activities such as visits from therapy dogs, origami crafts, and free coffee. Powell Library doesn't limit Instagram content to library offerings; it has the whole campus in mind and uses their account to promote other units' finals week services to students.

This library has also found a clever way to showcase student-produced content. Using a screenshot of a student's photo, Powell Library uploads the screenshot on their Instagram, adding kudos and the creator's username in the caption. This approach shows user engagement and library-focused marketing with unique hashtags. People may feel encouraged to share with the library's Instagram account in order to have a photograph featured.

Status Updates

North Carolina State University Libraries (http://instagram.com/ncsulibraries) has an Instagram account that highlights the construction and completion of their new library, Hunt Library. NSCU Libraries created an engaging contest to promote student photography of the new building, using the hashtag #myhuntlibrary ("Show the World Your New Library and Win an iPad Mini"). The library created an online gallery of photos with #myhuntlibrary using the Instagram API. Select photos are accessioned to the NSCU Archives in order to document and preserve the story of Hunt Library ("About"). This type of contest promotes participation and increases the variety of images of a new, state-of-the-art library for archival purposes.

Duke University Libraries (http://instagram.com/dukelibraries) uses Instagram to share behind-the-scenes looks of their conservation area and staff using the hashtag #conservation. This promotes a typically unseen department within academic libraries. The photographs document conservation staff processing collections, exhibits, and sights around the library.

Instagram provides a venue for libraries and librarians to network with each other by seeing and sharing library activities. By following other libraries, you can easily gather ideas not only on Instagram content, but spaces, services, and beyond.

How YOU Can Use Instagram

Setting up an Instagram account is a relatively painless process. However, it should be noted that the account must be created through an app on either an iOS or Android device as there is currently not a registration interface on the web. If you maintain a personal Instagram account, you will need to log out of the personal account to create a new library account. You will also need to log out each time you wish to post to your library account. When creating an account, libraries will want to tie the account to a generic library email address. This allows multiple staff members to post and administer the account if need be. Each Instagram account has a small amount of real estate for profile information. It is important to fill this portion out and let users know who you are. Many libraries provide their URL in this space and their slogan or branding message.

Perhaps the most important part of setting up your Instagram account is linking it to other social media platforms. In order to link your Facebook or other social media account to Instagram, you first must be sure that you have the proper administrator rights for the different accounts. Once verified, you simply follow the steps within the app to connect, making sure that you are linking the Instagram account to the library social media account rather than a personal account. Once you set your sharing preferences, you will verify each time you post which account the picture should be shared with (see fig. 3).

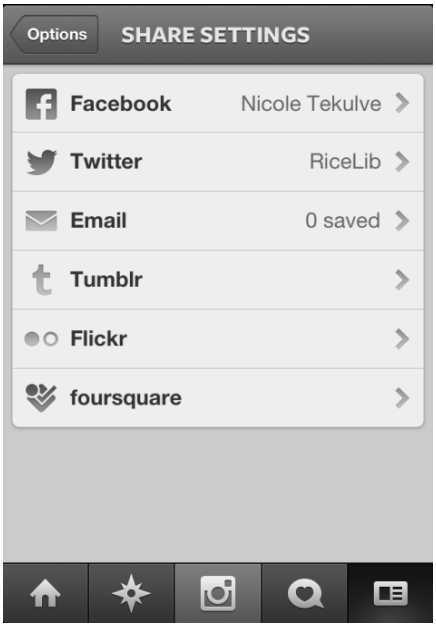

Fig. 3. Share Instagram photos to other social media accounts.

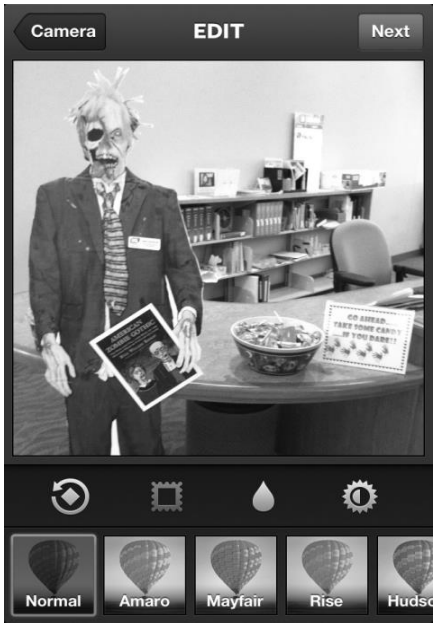

Fig. 4. Ways to edit your photo.

Posting pictures on Instagram could not be easier. Instagram allows you to shoot directly from the app or import the pictures stored in the photo library of you smartphone or tablet. Any photo or visual in your photo library can be uploaded to Instagram. Once you either take or select the photo you'd like to share, you can begin to transform the photo. Built in tools allow you to crop, rotate, frame, blur, or enhance your photos. Instagram currently offers twenty different filters to alter your image (see fig. 4). Users can stick to the basics of point, shoot, and share or get creative using the many built-in tools.

Features

Users of Instagram can choose to share the location of where a photo was taken. This creates a link of all photos taken at that particular location, which can be a quick way for libraries to see photos taken in and around the library. Libraries should use this location feature, so visitors can see the library's Instagram photos mixed in with other users' uploads. Content from users that have enabled privacy settings will be hidden from the search results. Users with private accounts restrict their content to only the followers that they approve. Even with the absence of some user photos, searching for Instagram photos taken at your library's location can give you a unique perspective of how students are using your building.

Instagram users have created a variety of hashtags that libraries may use to promote their services, resources, or events. Hashtags are both searchable and hyperlinked so a group of photos using the same hashtag can be easily found. People use hashtags to find and be connected to similar photos. Hashtags are not required, but are often a popular way to find and categorize photos. At Roesch Library, students often use the hashtag #clubroesch (the student-created nickname) to indicate the photo was taken in the library. Photos that use hashtags can be retrieved by using Instagram's search feature or by clicking on the hashtag. This way, other students can see the other photos using #clubroesch in addition to their own. Similar to the location feature, searching for hashtags associated with your library can inform libraries about student experiences with events and spaces.

Roesch Library's account frequently uses the widely used hashtag "#tbt" which stands for "Throwback Thursday." The library uses #tbt as an opportunity to showcase a relevant or timely photo from its Archives and Special Collections on Thursdays. One of the more popular #tbt posts was a 1982 photo of an annual student summer trip to Daytona Beach, Florida, right before the 2013 trip was to take place (see fig. 5). The library tagged the trip's Instagram account, which then "re-gramed" (re-posted) the photo,

which received 54 likes between the two accounts. Hashtags and tagging other accounts make for an effective photo caption in order to communicate with other Instagram users.

Fig. 5. A popular "Throwback Thursday" post using a photo from University of Dayton's digital library, digital.udayton.edu. The caption read, "#tbt Dayton to Daytona, 1982.@dyt2dytna".

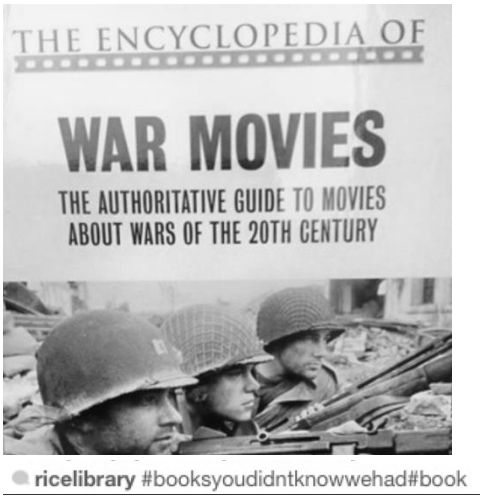

Fig. 6. Promoting unique titles with the hashtag #booksyoudidntknowwehad.

Rice Library made a concerted effort to follow other academic libraries for inspiration. One trend that emerged from examining other libraries' Instagram accounts was collective hashtagging. Much like the #tbt hashtag, libraries are developing their own unique hashtags to promote their collections. UCLA Powell Library uses the hashtag #BooksYouDidntKnowWeHad to showcase interesting items from their physical collection. Rice Library began participating in this hashtag and posted photos of odd reference titles, books with unique covers, and books related to upcoming seasons, holidays, or events (see fig. 6). This hashtag also became a way to showcase more popular titles in the collection that students assumed the library did not have.

Hosting a photo contest is a way to promote a new presence and encourage photos in and of the library on Instagram. Roesch Library ran a photo contest using only Instagram during the State Library of Ohio Snapshot Day Week in October 2012. The goal of Library Snapshot Day Week is to show how libraries each day have an impact ("Snapshot Day: A Day in the Life of Ohio Libraries.") and the library hoped people would share their own experiences through Instagram. Students submitted photos simply by tagging their photo as #clubroesch. The student who took the photo that received the most likes won an iTunes gift card. Everyone who entered won a USB drive. Winners were "tagged" by their Instagram username within the caption of a photo with directions on how to retrieve the prize. The winning photo, with 32 "likes," was a shot of the sunset out one of the top floor windows.

Another contest Roesch Library held via social media was voting on the name for a new piece of group study furniture. The library wanted the students to make it their own while giving it a recognizable name. People voted on Facebook, Twitter, and Instagram to decide whether it would be called Sync Space, Media Runway, or Tech Table. Instagram users posted a comment on the photo of the new furniture in order to vote using Instagram (see fig. 7). Tech Table won the contest, with most of the votes coming from Twitter. This was also a fun way to market the new furniture, while encouraging engagement with students using three social media presences.

Fig. 7. Furniture naming contest. The caption read, "Hot new group study spot in#clubroesch! What should we call it? A. Media Runway B. Sync Space C. Tech Table".

Fig. 8. Announcing the #clubroesch V.I.P. contest. The caption read, "Do you come here often? Like this today (4/22) to enter the drawing for the Club Roesch V.I.P contest! The V.I.P gets their own study room and prize pack for finals week!"

The most popular contest at Roesch Library is the recurring Club Roesch V.I.P. contest. The prize is a key to a private study room and stress-relief prize pack for finals week. The week before finals, students are invited to retweet the contest announcement on Twitter and 'like' the Instagram photo with the contest announcement (see fig. 8). A username is drawn at random and that person becomes the V.I.P. 140 entries came through Twitter and 62 entries were from Instagram for Spring semester 2013.

Contests and fun new activities using Instagram may get you positive press on campus. The University of Dayton alumni magazine's online newsletter covered all three contests at Roesch Library, which opened up the opportunity to increase followers even more. Include contest information on your library website, newsletter, or other platforms to increase awareness.

Conclusion

Rice Library and Roesch Library consider their use of Instagram a success. Followers increased after the libraries promoted their presence and engaged with fellow users. Libraries can use the app to reach a student population that is accustomed to 'following' and 'likes' to engage with others. At the submission of this paper, Instagram announced an upcoming video capability. Libraries may also find using short videos on Instagram as a creative way to communicate.

Libraries can be part of Instagram and use the tool as a part of ongoing promotions, contests, and events. Using popular hashtags or creating a new one specifically for the library can allow libraries to join the larger Instagram community in an effective way. An inside look of students' experiences within the library building can build up librarians' knowledge about events, space use, and more. Instagram allows academic libraries to be where the students are (virtually) and communicate using a mobile app that is fun to use.

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Life on the Bleeding Edge: Migrating to OCLC's WorldShare Management Services Next Generation Integrated Library System

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Abstract

In 2012 the Nebraska Independent Library Consortium (NICLC) became the first consortium to migrate to OCLC's WorldShare Management Services (WMS) library automation system as a group. With WMS, OCLC has re-imagined the integrated library system, streamlining traditional processes and integrating discovery and electronic resource management toward the goal of providing a complete suite of library management tools in a single platform. Using a panel discussion format, several library directors from NICLC member institutions will discuss why the consortium made this change, lessons learned from the migration process, how WMS has changed workflows in each department of the library, the pros and cons of WMS, implications for system administration librarians and how moving to "the cloud" has changed NICLC. With the one-year anniversary of the migration in the fall of 2013, the Brick and Click Symposium provides an excellent venue for members of NICLC to share their experience while the change is still fresh yet enough time has lapsed to provide perspective.

Planning at the Speed of a NASCAR Race: the Reinert-Alumni Library Reconfiguration

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Abstract

In September 2012, Creighton University officially announced that 7,000 square feet of the Reinert-Alumni Memorial Library would be reallocated to other university departments and construction would begin in December 2012. The reallocated space housed the journal collection and designated quiet study space. Over the next three months the library staff engaged in rapid planning and identified areas of need. The overall goal was to minimize the impact of the loss of space without compromising the collection or the student study space.

During the planning process several themes emerged: the need to effectively communicate the role of the library, the need to advocate for students, and the need to preserve the function and operation of the library. With a modest budget for carpeting, lighting, and new furniture the library staff attempted to create an inviting space which addressed the current needs of Creighton students.

One third of the print journal and microforms collections were recycled. Compact shelving was installed on the lower level in order to house the government documents and call numbers PS through Z. Unfortunately, seating for over 100 students was lost. New furniture replaced many of the 1960s wooden tables and 1980s wooden study carrels. Moveable tables and chairs were purchased so that students could create collaborative working environments. New lighting and access to power outlets improved previously underutilized areas.

During construction of the new university office space and the installation of the compact shelving, the lower level of the library was closed to the general public. Patrons did not have access to the majority of the general collection or designated quiet study space. The library staff either retrieved requested items or offered to purchase the title in ebook format. Fortunately, the lower level was reopened to the public before mid-terms but the office space construction continued into April 2013.

Given the short planning timeline and accelerated construction schedule, the library staff made quick decisions and sought to create a better library space. Various communication methods were used to keep the Creighton community informed of the changes. Emphasis was placed on maintaining a high level of customer service, and increasing usage of the remaining library space. The Reinert-Alumni Memorial Library staff was challenged with creating a plan, having it continually changed by the contractors and project managers, and finding a way to make it work.

Introduction

Creighton University's decision to relocate the College of Business into the Harper Center rather than building a new facility resulted in a massive relocation of offices and departments. One proposal involved placing the Center for Student Success and Retention on the upper level of the library in an area occupying around 4,200 square feet. From February 2012 to August 2012 several plans emerged with different occupants, but the Reinert Library leadership team wasn't informed of a definitive timeline or which office would occupy the space. In September 2012, Creighton University administration announced that 7,000 square feet of library space would be reallocated. The Interdisciplinary Ed.D. in Leadership Program would occupy 3,000 square feet on the upper level. The Creighton EDGE Program would occupy 4,000 square feet on the lower level. Unlike the recent trend which forms campus partnerships between the library and other areas of academic support, these would be stand alone departments occupying former library space. The plans built walls rather than designing a space which conceptualizes the content of the space and how people interact with the space (Nitecki 31). Staff was caught by surprise by the amount of space reallocated and the construction start date of December 2012.

Space on university campuses has become a precious commodity. Sellers and Gragg determined that campus building renovations can result in the shrinking of library space (608).

Design and Use of the Building

The Reinert-Alumni Memorial Library is centrally located along the campus mall and averages 342,900 patrons a year. The building is comprised of three floors with the lower level designated as quiet study space. An observational survey of space usage from January 24, 2011 to February 14, 2011 determined that 53% of people in the building are located on the Main Floor, 30% on the Upper Level, and 17% on the Lower Level. Patrons are engaged in a variety of activities with computing (67%) and studying (30%) the most popular. Students prefer a variety of seating and study space options. Tables in well-lit areas are the most popular as well as group study rooms. Some new furniture has been purchased over the years, but the majority of the furniture is study carrels and wooden tables from the 1960s and 1980s. Several sections of the building are poorly lit and finding a power outlet is a challenge. Tables and carrels with built-in lighting need constant light bulb replacements. While some floor outlets are available, these are not always located within reach of the seating and the draped power cords tend to create safety hazards. Adequate lighting would greatly improve the usability of many areas on the upper level. Areas with improved overhead lighting or sufficient natural light, such as the main floor, have a higher use.

The Collection

All of the space in the library building is occupied. In 2010 the library off-site storage facility was slated for demolition and the materials removed, so relocating materials to off-site storage was not an option. Mobile shelving was the only viable solution for creating the necessary space. Preliminary discussions attempted to determine the type and amount of mobile shelving required. Creighton University Facilities Management suggested a local contractor who would utilize the current shelving on carriages which would be operated manually. Library staff advocated for a national company with experience in electronic library mobile shelving. A video highlighting the safety hazards of manual mobile shelving in public areas was highly successful in effectively communicating the concerns of the library staff. A local representative from the national company reinforced the safety and the superiority of their product. Facilities Management agreed to contract for electronic mobile shelving. The same contractor would unload and load the books onto the shelves.

Logical placement of the collection was a concern since the general collection has an odd split with call numbers C-G on the upper level and the rest of the collection housed on the lower level. Due to structural requirements, it was necessary to locate the mobile shelving on the lower level. The area occupied by call numbers PS through Z was determined to be the best location. In an effort to preserve the function of the library, several changes were made to the location of the collections, and how the material was shelved.

The Government Documents were relocated to the lower level and placed on the mobile shelving. This collection tends to have a lower usage. The juvenile and curriculum collections were moved to the upper level, and placed at the start of the print journal collection. The current periodicals are now located on the main level. The loose issues of titles which are bound as a print volume are shelved with the bound volumes. An oversized collection was created for items which were too large for the mobile shelving. These titles are housed on the first stationary row of the mobile shelving. The creation of an oversized collection and the new periodical shelving procedures did lead to changes in the Technical Services workflow. Large items which fall in the PS-Z call number range are flagged for the oversized collection. Periodical shelving procedures were updated to reflect the new practices.

Concrete pillars occupy the aisle between the ranges housing PQ-PS and the mobile shelving. In order to maximize the aisle area it was decided to place the first stationary row of mobile shelving between the pillars. ADA compliance required the removal of one section from each of the PQ-PS ranges. Thus the books were shifted into the smaller space. Once the mobile shelving was installed the books were shifted again since it was possible to spread the titles out onto the ranges.

Student Study Space

The relocation of the library collection resulted in minimal negative impact but the loss of student seating was difficult to overcome. Improving the current study space was a high priority. With the loss of seats, areas which were underutilized due to poor lighting or lack of electrical outlets needed to be addressed. Applegate outlines how an effective library addresses the entire spectrum of student needs with planning in place for all weeks of the semester (345). Informal discussions with students about their seating preferences confirmed general trends which had been observed by staff. Students like room to spread out; many like the cozy feeling that studying by stacks or in carrels provided. Tables by windows were popular unless the lighting was insufficient. The staff planned to replace the 1960s wooden tables and 1980s study carrels. While the tables could seat four people, one person was often the only occupant. Tables with privacy screens would allow more people to occupy the space, and still allow for group interaction if desired. Dividers increase the likelihood that more than one person will sit at a four person table. Six booths with high partitions create an illusion of isolation for students wanting to block outside distractions. Seating placement is also important, so that the maximum amount of seats could occupy the minimum amount of space.

The area previously occupied by stacks of government documents was converted into an open study space with tables, which can be reconfigured to address changing needs. Library personnel created space for the Interdisciplinary Ed.D. in Leadership Program by aggressively weeding the print journal collection.

Weeding the Journal Collection

Thomas and Shouse describe a similar project which needed to clear space in a short amount of time. The time constraint forces quick decisions and often leads to a more aggressive approach (93). Recycling one third of the print journal and microform collection was an easy answer to loss of space on the upper level. Removal of one title with a large print run can clear several shelves. Titles were identified for weeding based on the availability of perpetual access, freely available online access, scattered holdings, and no usage in over twelve years. Adequate shelf space needed to be cleared so that the entire journal collection would remain on the upper level. Splitting the journal collection between floors was not considered a viable solution. After the initial shelf space calculation, additional titles from databases such as PsycARTICLES and Communication and Mass Media Complete were identified with the understanding that journal backfiles would be purchased if the library lost access to a title. The original plan involved withdrawing all the identified titles and then recalculating the required shelf space. This would allow for the opportunity to plot out new study space and determine the best location for the start of the journal collection. The university mandate to be shovel ready at the start of construction required that the shifting and weeding of the journal collection occur simultaneously. With the assumption that additional print runs could be weeded once the title became available in a journal archive, the collection was shelved with little room for growth. Aggressive weeding and allowing little room for growth cleared the needed space, plus an additional five ranges. This provided the opportunity to recoup some of the lost seating.

Communicating the Changes

Before construction started, the Head of Access Services sent announcements over Jaynet News, the campus communication listserv, describing the closing of the lower level and the construction start date. The Library Director was interviewed by the student newspaper and highlighted changes taking place and new campus partnerships. Once construction began a white board was placed at the entrance with daily updates. The board listed what was taking place that day and the level of anticipated noise. The free earplugs proved extremely popular. A design board with fabric samples was also placed at the top of the stairs as a visual display of the new space. Updates were also posted on the library's Facebook page and a Twitter account was created. By utilizing various communication methods, the library staff kept the campus community informed of the progress and changes.

Impact of the Construction

Construction began after the Fall 2012 semester. The lower level closed to the general public on December 19th and reopened on March 1st just in time for mid-terms. Anyone needing a book was escorted to the lower level to retrieve it, or a staff member could retrieve the necessary title. Library staff had been concerned that some of the requested titles would be blocked by the construction, but the concern proved to be unfounded. From December 19 to February 28 the library circulated 1,776 titles from the impacted call numbers. During the same time period last year the library circulated 3,000 titles. Thus the closed stacks resulted in a 41% decrease in print book circulation. Service points and the gate count were also down for February and March. Patron counts for February 2013 were the lowest in five years. The installation of the mobile shelving was completed in mid-February. Facilities Management requested that the lower level remain closed so that the new fire alarm system could be installed which delayed the opening of the lower level by two weeks.

The furniture arrived in stages throughout March and April. The library staff had been told that the furniture would be ordered in January, so that it would arrive during Spring Break. The order was placed the week of February 11th causing the majority of the items to arrive March 29th, well after Spring Break. Additional complications developed when the installation of lighting on the second floor was delayed until summer. The new furniture did not have built in lighting, so lamps had to be purchased for use until the overhead lighting was installed.

Many of the problems and issues encountered were caused by rushed planning and short timelines. Decisions were made based on the information available at the time. On several occasions the library leadership team was given seconds to reach decisions. Often a decision was made with the hope that it could be changed at a later date if needed. The location of the mobile shelving was permanent, but everything else could be tweaked. Less than one month after the new furniture had been installed on the lower level, the University Administration announced that 1,500 square feet of the lower level library space had been allocated to a newly formed department with a need for office space. This plan resulted in the loss of an additional 61 seats in the designated quiet study area and the furniture, which had been ordered to fit the oddly shaped space, needed to be installed elsewhere.

Conclusion

Today's library is a combination of physical space and virtual resources. It is a place where students, faculty, and staff can discover, evaluate, and synthesize information in their pursuit of knowledge. The physical space is still critical for the engagement of student learning, providing library services, and housing the collection. It is necessary to effectively communicate the needs of the library to University administrators who are focused on placing university departments in a highly visible location on campus. The loss of space forces difficult decisions in an attempt to minimize the negative impact. The Reinert-Alumni Memorial Library leadership team believes that preserving student study space is paramount, and all decisions were made with that objective in mind.

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Research Rescue: Beyond the One-Shot Instruction Session

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Abstract

In this paper, we describe our experiences with organizing our instructional team, having taught a suite of research and skills classes to undergraduate and graduate students. We tailored the classes to small groups and focused the classes on interests and needs instead of teaching one-shot instructional sessions (where many skills are covered in one session) and the teaching method is typically by lecture. We knew that University of Missouri-Kansas City (UMKC) undergraduate and graduate students are diverse in their cultural backgrounds and work experiences. People who are new to American culture, people who have worked before college, and people who hold jobs while attending college, have similar challenges when it comes to academic life. They may find class expectations challenging to manage, their skills may be outdated, and they may be hesitant to ask questions. As teaching librarians, our team was on a quest to learn how best to address these students' unique needs. We learned that being a self-organized, small, nimble, and efficient team gave us flexibility to be creative and adaptive when it came to addressing students' needs. We learned that problem-based scenarios and teaching in small groups worked best with these students. Our teamwork will continue in the 2013-2014 academic year, as we explore alternative models for teaching research and associated information skills in a way that goes beyond the library one-shot and serves the unique needs of a student group at UMKC.

Introduction

The *Five Laws of Library Science*, a theory proposed by librarian S. R. Ranganathan, is accepted by many librarians worldwide as the foundation of librarianship. The fifth law, "The library is a growing organism," applies to information literacy programs that are evolving across academia. This is the case at UMKC Libraries.

Currently, the library offers one- (and sometimes two- to three-) shot instruction sessions, for classes that are initiated by course instructors from the various colleges. To request a class, the teacher can call or submit a form from the library website, and the instructional session will be assigned to one of the instructional services librarians. UMKC Libraries is also creating a new model of information literacy dissemination which will combine online tutorials and a flipped classroom approach in an embedded curriculum for the University's general education program.

While the new program is an exciting improvement that builds a foundation for all students, the Research Rescue team responds to students' individual needs. The classes offered by the Research Rescue team are intended to work with students in a stepwise approach, in order to respond to any of their unmet learning needs, and build on their success.

Our program planning process began with an important contact that occurred in early December 2012. Fu Zhuo, Liaison Librarian for the School of Education, reached out to the Assistant Dean for Student Services, and offered to give an orientation to library services for new education students. After this initial session, the Assistant Dean invited Fu Zhuo to present another orientation for graduate students in education who would be enrolled during the following spring and fall semesters.

Meanwhile, on several occasions the four of us had talked informally about our individual areas of subject or software expertise, and the types of in-person instruction we would like to offer students. From these conversations with each other, from working with students in one-shots, and talking with students during individual consultations, we decided to form a cohesive team arising from our individual interests in the research process. Our primary student audiences were non-traditional students, especially students returning to college after a long break from education, and international students. We felt this supported UMKC's strategic goal to "place student success at the center," and was a good fit with the Libraries' instructional plan (3).

The classes would be small, hour long, hands-on, and problem-based, meaning that the students could come to them with a learning objective in mind. With these elements in mind, we designed our menu of classes.

Fu Zhuo created "Library Research" to teach students how to address the challenge of finding quality academic resources in print or online if they don't know where to begin looking. This class is tailored to research papers and assignments, with a focus on locating and using subject-specific data sources, and evaluating sources.

Jen Salvo-Eaton designed "Library Services" a class for students who need a general overview of library services, and an overview of the library's physical and virtual services. The class introduces students to online services like document delivery, text-a-librarian, and to physical spaces, such as the service desk and group study rooms.

Jen Salvo-Eaton also created "Just for Graduate Students" to help graduate students make the transition from novice to advanced researcher. "Just for Graduate Students" is a series of four separate sessions, which are crucial skills in graduate education: 1) writing literature reviews; 2) creating professional poster presentations; 3) using WorldCat to expand research; and 4) conducting interdisciplinary research.

Susan Sanders created a class on using Zotero, a free web-based citation management tool for saving citations in one click from the Internet while doing your research. She also instructed students on EndNote, another popular citation management tool.

Gloria Tibbs created classes on three Microsoft Office 2010 applications (Word, PowerPoint, Excel), in a suite of classes named, "Ask Gloria!" Most students who use these applications are unaware of what these programs can do, or face roadblocks in the middle of a project. Gloria showed them ways use these applications successfully, and easily.

The workshops were designed with these student-focused objectives in mind:

1. To make research and library instruction classes easily and quickly available
2. To give students the chance to schedule a class, or a one-to-one session
3. To provide guidance during a project at the point-of-need, so that students can successfully complete their work
4. To enhance students' academic library experiences through focused attention from librarians who are knowledgeable about using a variety of teaching techniques.

The team formed with these instructor-focused objectives in mind:

1. To make the process of creating and implementing a new teaching service easily and rapidly accomplished
2. To maintain a supportive, collaborative, team-based teaching experience for instructors
3. To maximize and grow our strengths in content areas, in instructional techniques and technology, in evaluation, and in the process of sustaining a collaborative team.

Review of the Literature

Our literature review confirmed problems we encountered in our teaching and assessment experiences with one-shot classes, and inspired us to change our organizational structure and approach to instructional

delivery. Walsh and Inala say that in a traditional course students are evaluated at various points in time and by various methods in order to detect any problems the learner may have in understanding. However, one-shot library instruction sessions tend not to follow any curriculum or provide opportunities for longitudinal assessment (11). Furthermore, the one-shot does not allow for librarians to build a collaborative relationship with students or instructors. Jacobs and Jacobs detail their experiences with a writing and research collaborative where one librarian was not a "guest lecturer" for a single class period. Instead, a team of librarians and the instructors created a learning community that developed over the course of the year (76). This model helped the team to create an environment where students could become engaged in more effective thinking about the process of research.

The Research Rescue team felt that meaningful assessment, a critical component of the learning process, was difficult to incorporate into a one-shot session that is typically sixty minutes long. Watson says that in a one-shot session students are easily overwhelmed with an overabundance of information about the library's resources, catalog, databases, and services that are presented in a lecture format (3). Active learning techniques are difficult to employ in a lecture environment, yet Houlson describes library sessions at the University of Minnesota that employ active learning techniques, so students with different learning styles gain research competencies by seeing, doing, reading, and talking (104).

According to Song, a primary role of library instruction is to communicate to graduate international students the role of the library as a provider of relevant information to enhance their learning, more than a place to study (32). He says that international students' lack of experience with library databases deters them from exploring databases that are available to them because they do not know what to expect from the library (33). Adult learners who are returning to school after a significant break from their education experience have similar characteristics and anxieties when it comes to using the library. According to Cooke, adult learners are "afraid to ask questions, do not want to appear unknowledgeable, or are overwhelmed by the entire academic research process" (110).

Our Marketing Strategy: Getting the Word Out

We began the program by offering the workshops for the first time at the start of the spring 2013 semester. Naming the new team-based program was important for reaching the student groups because the name would draw attention, signify meaning, and set the story line for the UMKC Libraries' information literacy message. We wanted to say that librarians teach specialized skills to help students succeed more efficiently and effectively in the research and writing process. The first iteration of our name was "Learning Ladders" which we agreed was not descriptive enough. "Research Rescue" came about because we wanted to highlight our teaching role and connote that in the students' process of learning to plan, conduct, and present research successfully, librarians should be included as teaching partners who have specialized skills.

As the spring semester unfolded, we analyzed the class registration numbers and the student feedback. We concluded that the name "Research Rescue" was too obscure and even negative. We feared students overlooked our program's services because the name was too puzzling, and they did not understand what the name referenced. Furthermore, student feedback conveyed that the word "rescue" was not exactly associated with building success, but negatively associated with failure. We wanted to clarify and change this, so we surveyed a sample of students on the Miller Nichols campus.

We described the program, posed two questions, and asked students to record their responses on a blank sheet of paper. First, we asked students to suggest names for the program. Second, students were asked to list all the words they would look for on the library website to find library workshops on research skills. Seventy-one responses were gathered from forty-one students. One-hundred and two keywords were extracted from the responses and the keywords were ranked. Twenty (51%) students chose a name or responded with the keyword "research." Fifteen (38%) students chose a name or responded with the keyword "workshop" and eleven (28%) of students chose a name or responded with the keyword "library" (see Figure 1). We omitted "library" to avoid redundancy, and made our new name "Research Workshops."

Creating "Buzz" for the Classes

We wanted our classes to be a part of student and faculty conversations taking place across the campus: in dormitory rooms, classrooms, and all collaborative spaces. For our first marketing effort, we used our library liaison connection to students in the Social Work program, attended an orientation fair for new students and used word-of-mouth advertising with other students and faculty. Later, we created flyers and posted them on bulletin boards throughout the Miller Nichols Library on the Volker Campus, our main undergraduate campus. Larger sized flyers were posted on-campus, in the Student Success Center and in various buildings on campus. Soon, we arranged to meet with faculty who work with students at the Student Success and Writing Studio. As a result, registration for the Microsoft Word, Excel and PowerPoint classes went from two students per month to an average of eight to ten students per month.

We were also invited to attend an on-campus student mixer hosted by the School of Education Graduate Student Association, which was a successful networking tool, not only with students, but with other campus administrators. This event gave our team an opportunity to speak directly with students about our class offerings and with other staff representatives around campus who could help us spread the word about our service.

Using Springshare LibGuides, we created an impromptu website for our service, which hosted a registration form (an embedded Google Form) and a description of all of our classes. Students could also sign up for a mailing list to receive announcements when new dates and times were posted to our class offerings schedule. The LibGuide also provided a unique URL for our service. The LibGuide was in use from the early spring semester through the summer semester. In an attempt to make this service a more permanent fixture of UMKC Libraries, in conjunction with our Virtual Library Team, the content moved from a LibGuide to the library website. The website space launched just prior to the start of the fall semester.

Pillars of Planning: Student Comments and Our Observations

Our team's focus on providing services to international students and adult learners led us to tailor our instruction to these groups. UMKC international students were excited and awed by how much information they could get from our library print and electronic resources. The international students appreciated the tools that are available on some databases, such as article translations and the audio features. We supported adult learners by getting them up to speed with technology and a strong start in the research for their advanced degree. We had the opportunity to make sure that all students were aware of their subject liaison librarians who can assist them with specialized subject knowledge about their fields of study and their profession.

Challenges

Graduate students were eager to learn about citation management software. Those who knew about the programs wanted to save time to quickly collect and link to their research, add citations while writing and format a bibliography automatically. Citation management classes for Zotero and EndNote Web were offered periodically through the spring semester, with an option to schedule appointments for individual assistance. Students were asked to bring their personal laptops to the class, and prior to the class the instructor asked about their previous use with citation management software. During the three-month timespan, a total of twelve students enrolled, but only five students attended the classes.

The high number of no-shows was felt by all of the Research Rescue team members and was discouraging. When contacted for follow-up, the students apologetically explained that they either forgot about the class, that they had scheduling conflicts, or that they could not get out of end-of-the-work-day obligations. Yet many students who replied to the follow-up contacts still expressed an interest in attending classes in the future or in learning the material in some other way (tutorial, handout, individual consultation).

Our Colleagues Get Involved

Although our classes were planned for an intended audience of transfer students, international students, and non-traditional students, there was an unexpected, secondary consequence of offering our workshops. Our library colleagues took some of our classes to learn a new technology, practice using an unfamiliar database, or observe our way of teaching and engaging diverse students. Colleagues were eager to learn about the teaching strategies we were using with the students.

Advantages in Instruction Environment

In a formal, traditional library class, the focus is on the librarian who delivers a lecture in a teacher-centered approach. Our model changes that because it focuses on the individual student's needs. It is a problem-based model because the small groups of students come to the workshops with learning needs of their own, rather than an instructor's objective. The small class size makes it manageable to work with students, whether it is stepping aside to help with their individual questions, or to group the students in pairs to help each other. The instruction is more individualized, and improves the environment for both librarians and students by allowing more interpersonal interaction. Such tailored and individually-focused learning experiences have led our students to have personally rewarding, successful library experiences.

Academic libraries can be daunting and mysterious. Personalization of the services that we provide by using photos of the librarian, or personal name, as in "Ask Gloria!" gives the institution a "face," reduces students' library anxiety and makes them feel welcome.

Our model offers other advantages as well. Since we offer both scheduled class times and individual consultations, students can get the attention they need when it is most convenient for them. Since each class can be tailored to meet each student's unique needs, students can repeat the same class multiple times and always learn something new. Each class starts with getting to know the needs of those attending; the workshop instructor then tailors the class to address those needs and relate them directly to student coursework, projects, or academic programs.

Student Assessment and Program Evaluation

During the spring 2013 semester, each team member used his or her own evaluation with the students after their individual workshop session. At this point, we are considering how to design formative and summative assessment tools that could be used in every workshop.

Our Year-End Retreat, and Reward

To celebrate our workshops and teamwork we met to discuss our successes and plan for the coming academic year. During the meeting, we discussed our pilot semester, challenged ourselves to examine what worked and what did not, and sought out new tools and new ways of doing things that would help for the upcoming year. We realized that we needed to boost our marketing and re-brand our service to draw more attendees but from the feedback we had received from students already, we knew that the content of our classes was addressing their needs. It was all an attempt to draft a "recipe for success," one that we could put into action for the next semester.

Our strengths and advantages were our teamwork, our team's nimbleness, our commitment, and lack of fear in trying new ways of getting things done. On one of the last days before summer semester, we enjoyed a team lunch at a local restaurant and reflected on our "recipe for success" and the long revision process that it took to get to that point. We believe that our service reflects our institutions' goal to place user needs at the center of our teaching and the value of working together to make that happen.

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Our Student Library Workers Rock!
Investing in the Student Staff Development Process

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Abstract

There are few things any library can successfully do without qualified and dedicated staff members. Student staff members, especially in academic libraries, are essential to ensure that the library can continue to function. Since student staff are relied upon to this extent, it is essential that they be both high quality and well-trained employees. Additionally, library employment should not be considered a separate entity from a student's educational process but can, and should, be considered an integral part of that process.

This presentation describes how staff at a small academic library increased the effectiveness of its student worker program by focusing on the development and assessment of student worker performance. Drawing on professional library literature, business practices and other sources, greater systematization and rigor were brought to the student worker employment practices. This included the interview and hiring process, the training program, and performance assessment. Both qualitative and quantitative measurements were used to assess student work. Competitions were used to motivate and engage student staff members. Results of this on-going process are provided, along with conclusions regarding the successes, failures and ongoing tweaks of this particular approach.

We believe that this presentation will be of definitive benefit to other libraries seeking to develop and grow in the areas of student staff training and development.

Introduction

Libraries across higher education are grappling with a variety of challenges– reductions in staffing levels, redefinition of librarian roles, competing information resources, declines in institutional budgeting – challenges which effect basic library services. Additionally, significant time and effort is needed to maintain previous tasks and responsibilities while exploring, testing and adopting new methods of reaching patrons. Demonstrating the library's value while continuing to work interdepartmentally and integrating across the campus and curriculum also occupies the focus of librarians. We believe there is an underutilized resource that academic libraries can harness to enhance their basic services – namely, the student staff.

In this paper, we posit that an investment of time and effort to refine how an academic library engages a student during their term of employment with the library will lead to greater library success.

Literature Review

In the 1950s, professional librarians comprised 50 to 90 percent of the staff in college and university libraries. By the late 1980s, support staff members were outnumbering librarians by a ratio of two to one (Stanfield, Palmer 635). During the 1990s, libraries surpassed the point where students were viewed, according to Clark, merely as a "…labor reserve for the monotonous and repetitive tasks that are necessary for successful library operation" (87).

Historically there have been three areas that student training resources have identified as being essential to student staff success: hiring, training, and developing. A fourth area, assessment, has also been added in recent years keeping with the movement of higher education in this direction (see Chouteau, Heinzman 2007; Lemery 2008). When development is mentioned in these resources, it is often referenced with the goal of training student staff members to take on additional responsibility (Baldwin and Barkley 170-

171). Peters and Vilelle's 2008 article focuses on developing a particular group of student staff, namely shelvers who received a high amount of directional and item-location questions from the library's customers (63). Douglas Hasty suggests that "…employment of students, more common in the library profession than in many business environments, allows library student staff to become invaluable public relations assets" (32). Additionally, customer service has been added as a necessary student staff value. Kathman and Kathman state "If libraries do not provide consistent, quality service, their competitors will take away large parts of the market" (176). This focus on customer service not only provides impetus for students working with library customers but also lays a foundation for students to develop other, transferable skills within the scaffolding of their library employment.

The shift to become less library-oriented and more customer-oriented as a profession has directly affected how student staffs are trained or viewed. Student development articles written in the mid-1990's do not share the same stress or focus on customer service with articles from the early 2000's. It is doubtful that this was due to a sudden rise in the importance of customer service for the library profession, or because student staffs were suddenly unfriendly and had to be retrained. Rather, the rise of outside forces, competing with library services in conjunction with the overall growth of general service industries brought customer service to the forefront as an essential attitude for people working with people. Libraries were no longer guaranteed traffic as the gatekeepers of information. If patrons now had a bad experience, they could go other sources for their information needs (176).

While there has been a noticeable increase in the focus on customer service in the library literature, there is also an increased focus on "data and feedback from students and supervisors" (O'Neil, Comely 100). While articles from the 1990s are, for the most part, largely unconcerned with formal assessment processes, they are not devoid of suggestions for evaluation. Gail Oltmann's article *The Student Perspective* references an ARL SPEC Kit survey (1990) which contained three separate evaluation forms of student staffs. Oltmann also cites a 1992 study by Kathman and Kathman calling for "the use of performance measures to communicate expectations…" and notes that "supervisors should analyze tasks, write and review job descriptions for student staff and decide what results are expected from the work. They should then write performance measure to address those results" (73). However, there is less specific focus or emphasis on performance measures, evaluation, or feedback. The end of Oltmanns' article does not revisit performance measures explicitly - the closest statement being "…students must know that there are policies and procedures to manage student staff, just as there are policies and procedures for full-time employees" (75).

If student staff members are valuable to the library then they should be treated as such. It seems that this is not always the case. An attitude towards student staffs becomes defined by resignation or even resentment when considering hiring and training student staffs. Too often "libraries employ students not because they are good or even okay employees, but because it has somehow become our responsibility as librarians to hire college students" (Gerlich 147). Caring about clear expectations and communicating those to the student staff makes an obvious statement about the library's attitude toward the student staff. Training provides an obvious opportunity to develop student staff members. For nearly all student staff, this position will be their introduction to library work. While the bulk of training will cover the specific steps and details involved in a variety of library tasks, training in more abstract areas can also occur.

"Training does not end with instructions. It must include the supervisor's setting an example of the work ethic encouraged by the library culture, and of the sense of fair play, encompassing both positive and negative feedback, that each library promotes for its employees" (Burrows 83). Clear communication to students is foundational to their success as library workers. "The training process really begins with a well-written job description. Based on this job description, clear performance measures should be established for the position" (Kathman and Kathman 178).

Consider that "many (students) are working in a professional environment for the first time and need guidance about behavior and attire" (Clark 87). Or that most student staff members have not previously been exposed to basic library operations. "By guiding students who are assisting other students, librarians create an environment where an informal learning community can grow, encouraging students to realize

that the library offers more than just a computer station for working on assignments and checking e-mail" (Stanfield and Palmer 636).

While there may seem to be a certain lack of weight or focus on formalized measures in the older professional literature, there is a definitive sense that the standards and expectations for student staff are the ones librarians and para-professionals also follow. "To fulfill the library's service needs, the student staff should receive the same type of customer-service skills training and supervision that would be provided for full-time and career service staff" (Hasty 34).

Student staff should not be held to an arbitrary list of standards; rather, all staff members are held to the same standard in order to represent the library well to all who enter it. "If the time, effort and money which we spend on student training is to be worthwhile, it needs to serve not only routine patron needs, but also must in concert with staff supervision, provide librarians with some level of opportunity to exercise academic leadership on their campus" (Burrows 85).

Expectations and Communication

In order to have student staff members who rock, we would suggest that there are two basic areas that need to be addressed at the very beginning of the process:

1. Clear expectations for student staff behavior, work, and attitudes.
2. Consistent communication of those expectations.

These may seem like needlessly obvious principles. However as we planned changes for our own approach to student staff development these two areas continued to re-assert themselves as essential building blocks for how the other areas were developed. We were cognizant of the outcomes we wanted from our students, how the ideal student work would look, and tried to work to create an approach that would help our student staff achieve those ends. Instead of providing irregular or inconsistent standards of practice, we sought to provide highly visible and easy-to-remember measures by which the student could be successful.

Failing to set clear and measurable expectations or to communicate clearly and consistently is to set student staff and supervisors up for disappointment and potential failure. In many cases the clarity of communication is limited to particular areas such as training and not abstracted out to include the student's general approach to their job. If it is acknowledged that customer service is important, how do you measure the "customer service-ness" of your student staff? How do you set the clear expectations for customer service or staff behaviors and attitudes toward customers?

To improve in the four areas of hiring, training, developing and assessing, we identified the values and goals necessary for our student staff to succeed - to perform in accordance with the library's values, goals, and mission. For our student staff to rock, we determined to improve our communication of expectations to them in quality, quantity and type. We sought to communicate our expectations often through various means so that the student staff would clearly understand the goals and values of the library. Our goal was not to give student staff more things to remember or a list of guidelines to ensnare them. Rather, our goal was to identify effective student staff qualities so they would succeed in their job.

This initiative in student staff development was undertaken at a small academic library in Pennsylvania during one academic year. The campus consists of about 700 FTE students including a substation distance-learning population. The school offers undergrad, graduate, and postgraduate degrees. The library staff consists of several part-time paraprofessionals, two full-time professional librarians, and twelve student staff employees who worked an average of eight to ten hours each per week. The professional librarians jointly supervised the student staff.

Hiring

Hiring students can be an intimidating process – for both the interviewee and the interviewer. In a 15-20 minute interview, how can a supervisor determine if this student is going to be a good fit in the library? Will s/he get along with the other library staff and the library users, be a dependable employee and

understand library values and principles? Not to mention that many candidates may have never interviewed before or never even held a job (see Murphy, for example).

There are ways to use the interview to develop the student staff. This is the opening opportunity for shaping a student's perception about working in the library and for communicating the expectations of supervisors. Our first step was to provide interested students with a small set of documents that constitutes an information packet. It includes a job description, a letter describing the interview process, and an application form.

The job description provides clarity regarding responsibilities and standards of performance – this may prove beneficial to students who are not entirely sure what library work involves. The interview letter describes the process so that the student clearly understands what they must do and what steps are involved in the hiring process. It also reminds students to treat the interview as a formal job interview. The application form requests basic information about the student including past employment, relevant skills, etc.

Now that these expectations have been stated, the hiring supervisors have the opportunity to gauge how the candidate treats those expectations. This may involve how an applicant presents themselves for the interview, how familiar the applicant seems to be with the job requirements, or their level of engagement with the process. This may have the happy result of allowing a better assessment of a student's qualities for library employment. Even if a candidate is not hired, participating in an interview, reviewing a job description, or thinking about what a job entails may better prepare the student for future opportunities.

When students are hired at the Baptist Bible College and Seminary library, they are hired for one year. This gives both the library and the student an opportunity to continue or end employment. A final individual meeting at the end of the year discusses each student's performance during the year. We review the starting goals and ask each student to evaluate his or her performance. While not every student invests themselves in meeting their goals to the same degree, several students indicate they are deliberately trying to improve in areas previously identified by supervisors.

Training

Training also provides a chance to communicate the value of student staff. We fail student staff by applying unrealistic expectations or communicating our expectations poorly without investing the proper time and training. While the attitudes of librarians towards student staff are usually positive, the distinction in position, education, age, and other categories can sometimes lead to attitudes that devalue student staff. But these distinctions matter less in the practical objective of assisting patrons. Librarians have multiple work incentives: salary, benefits, and philosophical underpinnings of the vocation. Student library staff do not necessarily have those same incentives or philosophical underpinnings but "like permanent staff, students take pride in their jobs and they want to feel that they contributing to the success of the organization" (Clark 87).

It is no secret that much of the work student staff members perform is monotonous and repetitive. But it is also essential in meeting the needs of patrons. In keeping with the priority of library customer service, training can be shaped to emphasize the importance of even the most mundane tasks. We believe that it is essential to impress upon the student the value of the job that they are doing.

Much of our training approach overlaps heavily with our approach to development and assessment. If training is being done well, it is directly linked with both of these areas. It is very easy to walk a first-time student through a tour and basic training of duties. However, as laid out in the literature review and in our experience, this is not sufficient. Development and assessment augment ongoing training and support to help student staff be equipped. We sought to follow Hasty's advice in providing our students with "…instruction in basic customer service principles and specific library-service practices. Each student assistant must realize that his or her role…is crucial and is not overlooked" (35). Student staff members that cannot answer questions do not feel equipped and subsequently will not see themselves as valued contributors.

In order to communicate this to our students, training was not seen as a one-time thing but an ongoing process, encouraged by the soliciting of questions and feedback from student staff. Additionally we paired up first-time student staff with a more experienced and careful student staff member so that the new student staff member could benefit from the mentoring approach. By monitoring and tracking particular staff processes, such as shelving, reference transactions, book processing, full-time staff members were able to pinpoint particular areas with individual students so that issues could be addressed quickly and directly.

Developing

Student development is recognition that training is not a one-time occurrence, but an ongoing program of measurement and feedback that organically links training and assessment of the student staff contributions to the library. Consider that " …no efforts are complete unless the skill and knowledge obtained during training are used and enacted" (38). Library employment is then viewed as an integral component of a student's academic experience and career arc, rather than a discrete, isolated event. The ability to make this connection includes tangible feedback and clear communication.

Chouteau and Heinzman's 2007 article "Gone Fishing" is an excellent example of a library taking a business narrative, specifically the "Fish!" philosophy, and creatively improvising on a key aspect of that narrative to create a unique motivational and assessment tool. To motivate and assess our students as part of our plan for development, we met individually with each student staff member and identified their positive contributions and strengths. This provided definition about what qualities we valued and let the students know that we appreciated their service. We also identified areas that we believed they could improve upon (such as accuracy, problem-solving skills, or initiative). We also asked them to identify goals that they wished to set for themselves and provided some specific goals we had for them. This collaborative process involved the student staff in setting the standards for their own success and gave them a greater stake in their work. At the end of the year, we met again individually with each student and reviewed the collaborative goals. We provided our assessment of their performance and identified, as specifically as possible, the things we appreciated about their work in the library.

In addition to individual development, we also pursued development as a group. In revising our student development, we wanted something that would help the student staff with team coherence so we sought to encourage significant shared experiences. To foster communication we had arranged to meet every three weeks for an hour as a team. In order to build a stronger sense of team in a fun, informal way, we dedicated half of every meeting to playing a game. We wanted a cooperative and competitive game to help us become more familiar with each other and more accustomed to collaborating and working together. We divided the staff into three teams and adapted the cards from the game Cranium to suit our purposes. Team points were tracked throughout the year and simple prizes were awarded to each member of the winning team.

During our end of year interviews, several students identified the team building game as the reason why they felt so connected to other student staff members. Students also remarked that these game times gave opportunity to get to know other students better and to better cohere as a staff. Since not all students get to work with the other students, there is limited interaction between them. The game time created shared experiences which in turn, created a more relaxed atmosphere. If students are more comfortable around each other, tasks are more easily shared, cooperation is more natural, and investment in one another's success, as well as the success of the library, is more likely.

The other half of each meeting was used for announcements, changes in policies or procedures, scheduling issues, and other information. We also encouraged student questions and comments which proved a very valuable way of identifying items or problems needing our attention. It was not always easy to get them to ask questions or make comments so there were times where we did not proceed until at least a minimum number of questions had been asked. Finally, we periodically had a group discussion centered on an aspect of library philosophy or work objectives to encourage them to think about library goals and objectives in a deeper sense.

These group and individual elements were combined at our final staff meeting of the year. In front of the student staff, the library director addressed each student by name and identified one particular aspect that library staff appreciated about that individual. These qualities were pulled from full-time library staff observations. This provided an opportunity for the entire staff to see the contribution that the particular student staff member had made, as well as the variety of valuable qualities demonstrated. Singling out individual student staff highlights that the library staff pays attention to student staff performance, cares about them as individuals, and values their service.

Assessing

The recent emphasis on assessment and evaluation in higher education offers profitable ways for libraries to think about student staff. For example, we developed a rubric that established measurable standards for poor, good, and best performance across six aspects of behavior and attitudes (see table 1). Each of the six aspects had three specific categories for a total of eighteen measureable items. Each student received a copy of the rubric and it was reviewed at that time in a group meeting. The rubric helped us be very explicit about our expectations for student work performance in the library. It also forced us to establish more measurable standards for assessing student performance.

Table 1
Rubric Establishing Measurable Standards for Poor, Good, and Best Performance across Six Aspects of Behavior and Attitude

Area of Assessment	Needs Improvement	Good	Superior
Quality of Work	Does not follow directions, policies or guidelines given. May require additional retraining.	Typically follows directions, policies and/or guidelines. May require retraining in a particular area.	Follows all directions, policies and/or guidelines. No additional retraining required.
	Work that is claimed to be complete is typically missing substantial pieces. Overlooks or forgets details. Work is characterized by frequent inaccuracy.	Work that is claimed to be complete is usually completed satisfactorily. Most details are addressed. Work is characterized by a good level of accuracy.	Work that is claimed to be complete is excellently done. No details are missed. Work is characterized by extreme accuracy.
	Does not stay on task. Does not complete work without prompting. Often distracted by non-work related matters.	Typically stays on task well. Completes most work without prompting. Occasionally distracted by non-work related matters.	Always stays on task. Completes all work without prompting. Not distracted by non-work related matters.
Area of Assessment	Needs Improvement	Good	Superior
Communication - Interaction	Provide directions or instruct-ions that patrons have difficulty following. Treats patron questions as an inconvenience or interruption.	Provides directions/instruct-tions that patrons can follow. Most patron questions are welcomed.	Provides excellent directions/instructions that patrons can follow. Follows up with patrons to ensure needs were met.

	Does not communicate with other student staff members when working in the library or shift changes. Fails to notify staff in a timely fashion for covering shift(s).	Communicates clearly with other student staff members when working or during shift changes. Typically gives adequate time/notification to cover shift.	Communicates clearly with other student staff members when working or during shift changes. Typically gives adequate time/notification to cover shift. Instructions leave no doubt or confusion; help to clarify/shed light on particulate situation.
	Fails to notify or inform library staff of issues related to library operations.	Leaves notes/emails for other staff/librarians. May require follow up for clarification.	Leaves detailed notes/emails for staff/librarians. Requires no follow-up for clarification.
Dependability	Is often late or leaves early for unnecessary reasons. Calls in absent on a regular basis w/ no one lined up to take their shift. Forgets to come in when taking another student's shift**.**	Arrives on time. Rarely calls in absent. Schedules replacements in advance. Does not abandon post.	Arrives five minutes prior to starting. Never absent (sans legit. emergencies). Schedules replacements well in advance and communicates such to librarians.
	Rarely covers shifts for others.	Covers other shifts for others when convenient.	Covers shifts for others as they need.
	Frequently works on own reading/homework/projects when on the library clock. Does not accomplish much library work during shift.	Rarely works on own reading/homework/project s when on the library clock. Typically accomplishes most of all library work during shift.	Avoids working on own reading/homework/projec ts and accomplishes all library work during shift.
Initiative	Occasionally follows through w/ assigned tasks. Occasionally follows suggested improvements.	Typically follows through w/ assigned tasks. Typically follows suggested improvements.	Always follows through w/ assigned tasks. Always follows suggested improvements.
	When asked, with adequate time to think/prepare, unable to contribute ideas for library growth, adjustment or improvement.	When asked, with adequate time to prepare/think, contributes ideas to staff for library growth, adjustment or improvement.	Contributes unsolicited ideas to staff for library growth, adjustment or improvement.
	Rarely asks questions to clarify difficult or unclear job assignments.	Usually asks good questions to clarify difficult or unclear job assignments.	Always asks intelligent questions to clarify difficult or unclear job assignments.
	Does not take any initiative in looking for additional work/tasks.	Generally takes initiative in finding work to do when required tasks are completed. Occasionally will ask librarian for	Actively keeps oneself involved with library tasks. Is able to locate needed and necessary things to do. Asks

		additional tasks.	librarians for additional tasks.
Area of Assessment	Needs Improvement	Good	Superior
Attitude	Treats patron interactions as an interruption.	Treats patron interactions as part of the job routine.	Treats patron interactions as an opportunity to be useful.
	Some interactions with co-workers, patrons are characterized by disrespect and lack of courtesy.	Interactions with co-workers, patrons are typically characterized by respect and courtesy.	Interactions with co-workers, patrons are characterized by respect and courtesy regardless of the individual and/or individual's attitude.
	Exhibits a negative attitude towards assigned tasks. Personal issues or external circumstances consistently distract from work performance.	Exhibits a positive attitude towards assigned tasks. Personal issues or external circumstances rarely distract from work performance.	Exhibits a positive attitude towards assigned tasks. Personal issues or external circumstances do not distract from work performance.
Customer Service	Does not respond to patron requests in a prompt fashion. Sends users to areas rather than taking them to requested areas.	Responds to patron requests in a prompt fashion. Takes users to their requested areas.	Seeks out patrons to assist in the library; ensures user's information need is satisfied.
	Rarely knows the answer. Struggles to remember where to locate information. Painful to watch when answering questions.	Has a good grasp of where things are located in the library. Can locate some things by memory. If unsure, knows where to look or who to ask.	Has an excellent grasp of where general areas are located in the library. Can locate many things by memory (i.e. pertinent databases). Knows where to look or who to contact when needed.
	Has very little confidence in answers due to lack of preparation.	Generally well-prepared and typically projects confidence in answering questions.	Excellently prepared. Answers questions correctly and w/o second-guessing.

The goal of the rubric is to provide an objective standard of performance that the student and supervisor understand, recognize, share – a common point of understanding. It helps reduce the subjective element from the process of assessing student progress and work. We could have improved our use of the rubric by revisiting the rubric in subsequent student staff meetings or to highlighting it in other helpful ways.

While the development ideas above focused on qualitative measures, we also wanted to use quantitative measures, with the additional goal of providing tangible, clear feedback. This involved keeping track of how accurately students performed certain tasks – which in our library were reshelving books and processing books. We adapted Chouteau's and Heinzman's take on the Fish! concept to create visual cues

for student work. While we tracked processing accuracy without any special means, laminated, die-cut owls were used to help measure reshelving. When a student reshelved an item, she wrote her initials on the owl before placing it on the shelf to the left of the reshelved item. A supervisor collected the owls daily and kept track of how many were shelved accurately or inaccurately for each student.

Not only did this help us ensure that mis-shelved books were quickly corrected, it also communicated to students that we valued accurate work and that their performance was being measured. This improved our shelving accuracy and created a clear expectation in a non-confrontational way. This also allowed us to keep track of the total number of items reshelved and items processed, to which we also added a running total of reference questions answered by each student. We created a student staff bulletin board and kept track of how each student was ranked in terms of number of items shelved, processed, or answered. Since these numbers were arbitrary and dependent upon hours worked, shift circumstances, and available tasks, we did not use them for assessment, but as development. It provided a means of engaging students with their tasks and at the end of the year we handed out simple prizes for the student who had the most in each category. While not all of the students were motivated by competition, for some it was a noticeable positive factor.

Conclusion

The development of any library's student staff is an ongoing process that requires dedicated time, energy, creativity and commitment. Moreover, this process must be strongly linked to clearly communicated expectations along with basic assessment measures to provide the student staff with constructive criticism and meaningful feedback. We strongly believe that librarians who are responsible for the hiring, training, developing and assessing of student staff should view library employment of their institution's students as a unique part of their students' overall growth. Revising our own approach to student staff development has provided us with valuable insights and points to ponder, a strong core of student staff and, we believe, a stronger and more service-oriented library. Above all, the process of re-working our student staff approach has emphasized for us that the opportunities and rewards for investing in students are truly significant and well-worth the time spent.

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Students in the Director's Chair: Leveraging Student Talent to Create Library Videos

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Abstract

Recognizing the prominence of video in students' lives, the St. Mary's College of Maryland (SMCM) Library attempted to jump into the world of online video creation and sharing. Using a stipend granted by the college's Career Development Center, the library created a fellowship opportunity for a student interested in developing promotional and educational videos. The result was the beginning of *The SMCM Library in 60 Seconds*, a video series highlighting library resources and services of interest to undergraduates. Created by a student, for students, this project demonstrates that capitalizing on student talent is a worthwhile alternative for libraries short on staff and time but eager to create promotional and instructional videos for their campus community.

Introduction

The 2012 *ECAR Study of Undergraduate Students and Information Technology* reveals what librarians can easily see from the reference desk: Our students are connected. Whether their device of choice is a laptop, smartphone, tablet, or some combination of all three, undergraduate students use technology in their daily lives to connect to people and events on our college and university campuses (Dahlstrom 10). One of the more popular technologies among our hyper-connected students is streaming video sharing. With the proliferation of sites like Vimeo and YouTube, and apps like Vine's and Instagram's new video feature, it's no surprise that approximately 92% of American adults between the ages of 18 and 29 have used a video-sharing site (Moore 2). Students love video, and not just for entertainment purposes. About 45% of students wished their instructors would incorporate more web-based videos and video-sharing websites in their teaching, proving that video in education is a trend that continues to grow (Dahlstrom 11) (Kaufman and Mohan 2).

Recognizing the prominence of video in students' lives, the St. Mary's College of Maryland (SMCM) Library attempted to jump into the world of online video creation and sharing. In the spring of 2012, the author applied for and was granted a $2100 stipend by the SMCM Career Development Center to create a professional fellowship opportunity for students interested in developing promotional and educational videos for the SMCM Library. The result was the beginning of the student-created *SMCM Library in 60 Seconds*, a video series highlighting library resources and services of interest to undergraduate students.

Literature Review

Academic librarians are no strangers to the use of video for educational and promotional purposes. Parker-Gibson's excellent history of the use of media in library reference and instruction mentions the use of film to promote libraries and instruct students as far back as the 1930s (63-64)! Throughout the 1980s and 1990s, video on tape was shown to be an effective method of supplemental library instruction, with students demonstrating increased knowledge of library research skills as well as decreased library anxiety after viewing instructional videos both in and outside of the classroom (Parker-Gibson 67-68; Nagy and Thomas 29; Tidwell). Library videos have also been shown to increase students' use of library resources and their likelihood of approaching a librarian for help (Wakiji and Thomas 214-216). In recent years, the increase in broadband Internet access and the proliferation and ease of use of streaming video sharing services has moved library videos online. Academic libraries are using video sharing sites like YouTube and Vimeo to bolster their online presence, promote and market their services and collections, and provide reference and instruction opportunities for students, faculty and staff well beyond the library's normal operating hours (Little 70-71).

The Brigham Young University's Harold B. Lee Library's Old Spice commercial parody, "Study Like a Scholar, Scholar," is perhaps the best known and most watched library promotional video in recent streaming video history, with over 3 million views to date (Little 71). Although few library videos have come close to sharing this viral fate, many academic libraries have found success with streaming video in other ways. This medium has provided an excellent opportunity for librarians to reach distance learners and online students in a way that is more engaging and entertaining than static, web-based HTML tutorials (Cox and Pratt) (Hahn). Many librarians have also found instructional videos to be useful for students in traditional college settings as well. Short, targeted information literacy instructional videos have been used to supplement face-to-face library instruction, which is of particular interest to those who adhere to the flipped classroom style of teaching (Little 71). These videos, when uploaded to streaming services like YouTube, can easily be embedded in course management systems and used in multiple courses. Librarians at the University of Idaho found that videos were particularly effective at teaching students library skills "which are best learned with visual, real examples" such as finding a book on the shelf (Henrich and Prorak 665, 667).

Other academic libraries have opted to use video for less formal means of instruction, choosing instead to offer entertaining vignettes that offer a humorous introduction to library services and collections. Librarians at the University of California, Los Angeles opted to create videos they dubbed "Library Instruction to Everyone--Bite-sized" or "LITE Bites" (Mizrachi and Bedoya 250). Ranging in topics from finding course reserve materials to tips for keeping information organized, these videos were not intended to teach students all about research in one sitting. Instead the creators' goals were to bolster "consciousness and positive attitudes toward the library and the research process" (Mizrachi and Bedoya 252). Arizona State University Libraries' popular "Library Minute" video series is similar in spirit, with each video entertaining and informing their student body about unique aspects of the library and its services (Perry). Librarians at the University of California, Northridge have taken this same light-hearted instructional approach and applied it to advertising services to faculty rather than students, with positive results (Martin 592, 596). Streaming video has also provided academic libraries with an excellent alternative to overwhelming numbers of student orientation sessions and campus tours. By embedding video tours and general introductions on their websites and capitalizing on mobile video technology, many libraries have been able to reallocate staff time to more meaningful, individualized interactions with students (Sandy, Krishnamurthy, and Rau) (Hickok).

Although the method of disseminating video over the years has changed dramatically, the intent remains the same. Librarians want to share the value of libraries with patrons and help them become familiar with library resources and research. To do so, many academic librarians have partnered with their target video audience: students. The Belk Library at Elon University provides one of the best examples of librarian-student collaboration in video creation. Students in a Professional Writing and Rhetoric (PWR) course worked with librarians to create library-related instructional videos for undergraduate students. After discussions with librarians and an extensive student needs-assessment, the PWR students developed a series of videos addressing skills and activities that were problematic for many undergraduates. At the end of the course the librarians continued to capitalize on student talent by hosting a library-related video creation contest for the entire student body (Bisko and Pope-Ruark). Librarians at the University of California, Los Angeles worked with students in a less academic setting to create their "LITE Bites" video series. Students on their university's resident life TV channel's production team wrote, acted in, and directed each video. The librarians focused on providing ideas and editorial oversight, leading to the creation of videos with a truly student-centered point-of-view (Mizrachi and Bedoya 250). Other libraries have taken a more structured approach and included students on their creation teams either as production experts or as means of including a viewer's perspective on video content (Perry 279, 282) (Martin 595). Building relationships with campus partners and students is a great strategy for librarians who are faced with limited budgets and production experience. Such partnerships can be crucial to producing engaging, high quality video to teach, entertain, and inform students. It's a strategy this author employed when beginning a video project at her library.

Background

St. Mary's College of Maryland (SMCM) is a public, liberal arts honors college with a primarily residential undergraduate population of approximately 2,000 students. Whether because of its proximity to the campus dining hall, its comfortable environment, or its spectacular riverfront views, the library has no shortage of student visitors. Although they are familiar with the library building and sometimes treat it as a second home, students are often unaware of certain library services and resources that could greatly benefit them throughout the academic year. Many students also lack basic library skills that were either not covered during first year instruction or promptly forgotten after their need expired. In an effort to combat the frequently uttered phrase of "I didn't know the library did that" and ensure that students could get help with basic library-related tasks whenever it was needed, the librarians decided to embark on a quasi-instructional, mostly promotional video creation project.

The SMCM Library encompasses the college's Media Center, which contains the hardware and software necessary to produce multimedia creative work, including videos. Although the equipment to shoot, edit, and share video was available, staff with both the knowledge and time to devote to such a project was unfortunately not. The Media Center is staffed with two excellent media specialists whose expertise is frequently in demand by various campus departments, faculty, and students working on multimedia coursework. Although they easily possessed the skill set to create high quality video, they were short on time and availability. Conversely, the author and her fellow librarians were only familiar with basic screencasting techniques and did not have the time to sufficiently learn to film, edit, and create videos for this project. Rather than remain in this quandary of talent and time, the author decided to capitalize on student talent to create instructional and promotional videos for the library.

The author applied for and was awarded a $2100 stipend through the SMCM Career Development Center's Professional Development Program (PFP). This competitive program provides selected college offices and departments with funding to hire junior and senior students in an internship-like experience. The program is jointly funded by the Career Development Center and the Student Government Association as a way of providing students with meaningful professional experiences and giving offices and departments impacted by budget or staffing challenges the support needed to tackle internal projects. The library's PFP proposal specifically sought out a student interested in media production with a focus on promoting the library and its resources. The selected student was a Theater, Film and Media Studies major with an interest in leveraging media sources to aid non-profit organizations. Although the student's skills with multimedia technology were basic, her high degree of professionalism, creativity, and strong interest in learning to use video hardware and software made her the best candidate for this fellowship position.

Video Development Process

The author was responsible for supervising the hired student and guiding her progress throughout the fellowship experience. In order to provide the student with a genuine professional experience, the fellowship was arranged as a client-developer relationship. The librarians provided the fellow with a pool of ideas for potential videos, including the library services and resources that they that were in need of promotion. However the librarians were also open to potential topics that the fellow thought would be beneficial to cover for students. The librarians and the student fellow developed a few guidelines for the creation of each video. The series would be called *The SMCM Library in 60 Seconds*, necessitating that each video be about 1 minute long (give or take a few seconds). Both the librarians and the student fellow felt as though brevity would go a long way towards holding student interest in each video. The videos would be primarily entertaining and informative, with just a hint of instruction as needed, giving them more of an "info-tainment" style rather than a truly instructional one. Each video would share common introductory and closing credits that would give the video series a consistent look and feel, but the content style for each video could vary. Within these guidelines, the fellow was responsible for writing the video script, recruiting student actors, filming, directing, and editing each video. She was given creative license to develop videos that she felt would be entertaining and relevant to college students, and the librarians were responsible for providing editorial guidance and clarifying any library-related information.

The student began her fellowship in October 2012 and spent much of the first semester learning about the Media Center staff, equipment and software through the set up and production of our first video. Needless to say, the production of this video was a learning process for both the student fellow as well as the librarians. While the fellow was learning the ins and outs of writing, filming, directing, and editing, the librarians were trying to develop film release forms and a process for providing timely feedback to the fellow during the video creation process. Through much trial and error, the production of the first video was completed. The result was a *Mission Impossible* style introduction to using the library's Interlibrary Loan service. The video followed an "agent" responsible for securing an article from a library outside of SMCM for an upcoming project. It was short, humorous, and informative, setting the perfect tone for future videos.

Through the production of *Using Interlibrary Loan*, the fellow and author were able to develop a framework for future video content creation that would remedy some of the stumbling blocks encountered by the fellow throughout the production and editing process. To begin, the fellow and librarian supervisor would collaboratively decide on the topic for the next video to be produced. The librarian supervisor would provide the student fellow with specific talking points that the librarians would like covered in the video and clarify any questions the fellow might have about it. The fellow would then develop the theme and script for the video, which would be shared with all librarians for comments and ultimately approval. The fellow would produce a draft of the video to share with the librarians so that they could provide feedback and follow up with edits as needed. The video would then be submitted to the librarian supervisor for final approval, publicity, and posting to YouTube. Through this structured framework the fellow would be able to avoid some of the time-consuming revisions that plagued production of the first video and follow a more streamlined process for the creation of future videos.

This is My Library

After the creation of the first video, the fellow and librarian supervisor decided to tackle a topic that was of great interest to the librarians as group: How do students *really* use the library? The librarians wanted a general promotional piece that could be shared with new students and visiting prospective students to inform them about unique spaces and opportunities within the library. To develop the content for this video, the student fellow devised a short web-based survey that was distributed to the all-students campus email list. Students were asked about their favorite things to do in the library, their favorite spots in the building, and what they believed made the SMCM Library unique. Respondents were given the option to include their name and contact information if they wanted to be featured in the filming of the video. From the information shared by 116 student respondents, the fellow was able to compile different library experiences into a video called *This is My Library*. In it, students were featured using the library's group study rooms, editing video in the Media Center lab, taking advantage of comfortable study spaces, and even playing games in the library. It was the perfect piece to kick off the library's video series and share information about the project across campus.

In order to ensure the widest possible audience, the release of *This is My Library* was publicized on several different fronts. In March 2013 the SMCM Library Director sent an email to all students, faculty, and staff, with a brief description of the Professional Fellowship Program project and a description and link to the video on the library's YouTube page (http://www.youtube.com/SMCMLibrary). Following the advice of Colburn and Haines to "link to the video frequently and in relevant locations", the video was featured on the library website's homepage, Facebook page and Twitter feed (26). The fellow even contributed a post to the library's blog on her experience creating the video (Robb-McCord). The video was shown during the college's spring semester Admitted Students Days to enhance to the library tour and was shared with the college's public relations office. Overall viewership of the video has been modest--about 158 views to date--but will hopefully increase as more videos are created and the campus community becomes accustomed to expecting new releases.

Future Directions

The current student fellow is scheduled to continue working on videos for the SMCM Library through the end of July 2013. As of the writing of this paper 2 additional videos--*How to Find a Book* and *Understanding Call Numbers*--are currently in post-production and require additional vetting and editing before they will be released on the library's YouTube page during the Fall 2013 semester. Although a true series video release didn't take place during the 2012-2013 academic year, the library now has a promotional piece and will have three additional videos to release during the Fall 2013 semester (*Using Interlibrary Loan, How to Find a Book,* and *Understanding Call Numbers*).

In June 2013 the author applied for and was granted a second Professional Fellowship Program stipend for the 2013-2014 academic year. A search for a new student fellow will begin in September 2013, this time with help and recommendations from the Media Center specialists who have strong relationships with Theater, Film and Media Studies majors as well as students with an interest in video production. The hope is that they will be able to encourage students with extensive video production experience to apply for the fellowship, thereby cutting down on teaching time during the fall semester of the project. The focus of the fellowship will continue to be on creating "info-tainment" style videos with a particular emphasis on publicizing several new initiatives the library has planned for the fall. These initiatives would greatly benefit from the promotion that a well-timed video release could provide, so the hope is to have a much faster turn-around time for each video of about 1 month. This would give the library about 3 videos each semester, which would truly flesh out the series.

As the library continues to embark on this video production process, it is essential that each video's effectiveness with students is assessed. Doing so will help the librarians determine if the style and length of the videos should be modified and what topics students would like to see addressed in future videos. This feedback will help guide and shape the 2013-2014 fellow's experiences creating library videos for his or her peers. The library supervisor will create short surveys to accompany the release of each video in the fall of 2013 that will question undergraduate students about the helpfulness of each video as well as try to determine their reaction to it. Ideas for future videos will also be solicited in this survey. With this information the library will be able to continue to create videos that are student-centered and effective at marketing its services and resources.

Conclusion

In many ways this video production project has been a learning experience for both the student fellow and the librarians. Although the audience, intent, and subject matter of the videos was planned out well in advance of the start of this project, the author and student fellow learned the ins and outs of video production by doing it. Only by creating the first *SMCM Library in 60 Seconds* video were the author and student fellow able to identify the production and editorial processes that were most effective for this project. Despite initial production hiccups, this partnership proved to be beneficial for both the library and the student. Participation in this project gave the student fellow real-world employment experience and a portfolio of creative work to be shared with future employers. The library gained an excellent promotional video piece and the start of an effective video series that will market services and collections to undergraduates throughout the 2013-2014 academic year.

Viewing the library's services through a student lens is a process that most libraries can and should replicate. With a small amount of funding, existing video equipment and editing software libraries can provide an internship experience for students that will help design a peer-to-peer video marketing campaign. Doing so gives librarians insight into how students view the library and what they would tell their friends about it. By capitalizing on student talent, librarians have the ultimate insider advantage, and are able to create effective and entertaining videos for students, by students.

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Children's Collections in Academic Libraries: Views on Relevancy and Collaboration

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Abstract

Many colleges and universities with teacher education programs maintain children's collections for use by future teachers. This paper discusses how one academic library transformed its P-12 children's collection into a vibrant and essential part of the library that reflects current curriculum trends and provides an example of a high quality classroom collection. The key to this transition was collaboration between library staff and education faculty.

Introduction

For the better part of four decades, academic libraries have purposefully maintained children's literature collections to "support the study of children's literature at all levels" (Hirsch, "You Have" 13). Notwithstanding the study of children's literature as a literary form, the primary goal of most children's collections in academic libraries is to support their teacher education programs (Williams 60) which are invested in teaching future educators about literacy development. Children's literature is the cornerstone to that literacy development. One key component to this literary learning is the development of a classroom library center, a collection of children's literature that is used not only within the literacy curriculum, but also throughout the entire curriculum itself. As Frank Serafini says, "readers do not become readers in a vacuum. They need access to books and other reading materials, support from a community of readers,… a somewhat comfortable place to read, and someone to talk with about what they have read" (31). The classroom library provides just that environment, an environment that children's collections in academic libraries should emulate. The development of a relevant P-12 children's collection happens through the collaboration between academic librarians, library staff and education faculty.

Children's Literature in Today's Schools & Academic Libraries

Elementary schools use children's literature as a primary source in the elementary reading curriculum, which has now expanded to include using literature in the content areas as well (Serafini 32). This literature-based movement, which began in the 1990s, emphasized having children read stand-alone, unabridged books on their own rather than relying primarily on basal textbook readers. J. Michael Palardy indicates that this type of reading instruction:

> Gets youngsters "elbow-deep" into the best of written language and has them actively involved in the learning process. Quality trade-book literature, as opposed to the contrived literature of basals, speaks directly to the emotional development of youngsters, as well as to their interests, needs, and concerns. Youngsters are more intrinsically motivated to read when the material is significant to them, the plots engrossing, the characters "real," and the language full and challenging instead of controlled, stilted, and designed primarily for the development and practice of skills. (67)

The key to such a literature-based program has reading, and lots of it, at its core. This requires an environment rich in reading materials of all types and forms, from books and newspapers to fiction and nonfiction. It is no wonder that this movement expanded beyond the reading curriculum to include all areas of the curriculum. Barbara A. Lehman indicates that classroom collections should include various "interests and reading levels" that reflect multiple "cultural backgrounds and experiences. It should include not only books of literary quality that are identified via book reviews and award winners, but also books that provide an "authentic presentation of diversity" and focus on topical studies. Classroom

collections, and by extension, academic children's collections, should include a wide array of "genres, authors and illustrators," as well as "folklore, poetry, biography, and informational books" (75). Additionally, as reading and learning change in today's classrooms, both classroom libraries and the academic libraries that support future teachers need to extend into the digital world, proving access to "online resources, e-books, and other digital content" (Serafini 31).

Integrating literature into P-12 classrooms is not always easy. Nancy L. Williams and Patricia T. Bauer report that teachers have often relied on using random books that were gathered inconsistently and kept in their classrooms. Their classroom collections often did not meet their needs because they did not have time to devote to their collections, did not know where to find the books they needed, were unsure of what title should have been included, and did not know how to match materials with standards (15). For many of the same reasons, often times the same holds true for academic librarians. Teacher education programs aid future professionals in learning how to locate, obtain, and evaluate books for the classroom. It stands to reason, that the role of curriculum material centers, and especially P-12 children's collections in academic libraries, is to provide a wider variety of materials for those future teachers to explore in order for them to set up their own unique yet smaller and specific collections. Justina O. Osa writes:

> Teacher education majors need to be exposed to these [instructional] materials, see their instructors/professors model integrating them into in-class instructional activities, and have assignments that demand that prospective teachers identify and use these materials in completing assignments and in lesson plan development and lesson delivery … The education librarian who has the responsibility to choose high quality materials relevant to the objectives and processes of the teacher education programs has a significantly important task. (Osa 133)

The Association of College & Research Libraries' [ACRL] "Guidelines for Curriculum Materials Centers" states that children's and young adult literature should be part of the collection; yet, beyond award winners and notable books, it gives no guidance for selection. Curriculum materials center guides indicate that librarians in charge of the centers may find it mandatory to have a background in juvenile literature, but give very little information about selection guidance (ACRL; Carr 4, 94, 106). A review of the literature, and the own experience of this article's authors, suggest that library science students preparing for careers in academic libraries are ill prepared for working with children's literature (Bay 2; Hirsch, "On Becoming" 2; Williams 58). Despite these deficiencies, the authors have learned through their own experiences that professional relationships, collaboration with the teacher education program, and the use of key resources in the collection are essential in making a P-12 children's collection into a vibrant resource for students.

History of the WSC P-12 Children's Collection

Wayne State College (WSC) in Wayne, Nebraska, began as a teachers college and continues to have a strong teacher education program. To support the needs of education students, U.S. Conn Library has, from its early history, maintained a P-12 children's literature collection. The collection is housed in the Instructional Resource Center (IRC), a part of the Library that is home to curriculum materials, an extensive film collection and other multimedia collections. To date this collection includes easy/picture books, juvenile fiction and nonfiction, and a young adult (YA) fiction and nonfiction collection. The Library also participates in an examination program with several publishing houses. Publishers send books to the Library, at no cost, in return for making reader reviews of the titles available for others to read. The collection has grown rapidly since the inception of the program (circa 1996). At present the entire P-12 children's collection holds approximately 23,000 items. On average each item has been used (either internally or checked out) 5.65 times. The easy/picture books make up the largest part of the collection and see the most use, followed by juvenile nonfiction. In comparison our academic education collection (Dewey call number 370-377.999) has approximately 6,600 items with an average use of 2.41 times per item. Size and usage indicate that the P-12 children's collection is an important and valuable part of the Library's holdings worthy of extensive attention.

The Library has maintained its P-12 children's collection for as long as any current staff member can remember. Several items in the collection date back to the early 1900s; however, there is no record as to

when they were purchased. There are no records indicating how collection development was handled in the early years; however, purchasing may have been based on awards and popularity. The Library owns all Caldecott, Newbery, and Nebraska Golden Sower award winners indicating that this may have been a basis for selection. There are many well-known titles spanning the decades, but not every title that you might expect to be included in a core collection. The collection began to grow more rapidly around 1996, when the library director at the time started the examination program. The Library houses the materials on shelving separate from the regular children's collection. Students and other interested parties are encouraged to read the materials and write reviews. The reviews are printed on book plates and are available through the Library catalog. After a period of three years in the examination collection, the items are moved to the shelves of the regular children's collection.

There was no specific budget line item for the collection prior to 2006. How items were selected or what budget they were paid from is unknown. The collection was in need of attention at that time when a librarian was hired with specific responsibilities to weed the children's collection. Prior to that, the only known concentrated effort in the way of physical maintenance to the collection was to rebind a number of titles. When asked how titles were selected for rebinding a previous librarian stated that she walked through the collection and picked titles she thought should be rebound without any specific criteria. The collection was left alone for an unknown period of time afterwards. Therefore, the first task for the new Collection Development Librarian was to weed items no longer used and to identify heavily used items for repair and replacement. An initial budget of $1,000 was appropriated for this task. Because this amount was not adequate enough to handle replacements and repairs in one fiscal year, it became a permanent and separate line item in the Library budget.

The initial round of weeding took place over three years. As is often common with weeding projects, the project was conducted with reservation as there was palpable resistance to heavy weeding in the collection. The next two projects included the removal of a separate children's biography collection and a juvenile reference collection. Titles with no use were withdrawn while titles that remained were relocated to the main P-12 children's collection. At the same time as these weeding projects, the list of award winners that the Library tracked was expanded in an effort to include ethnic groups that were representative of the region and young adult literature. Previous winners were purchased whenever possible for the American Indian Youth Literature Award, the Coretta Scott King Award, the Pura Belpré Medal and the Michael L. Printz Award. The new winner of each of these awards is purchased annually in addition to the Caldecott, Newbery and Nebraska Golden Sower titles. Other purchases at this time were based on reviews in professional publications and popular or bestselling titles.

Needs of Children's Collections in Academic Libraries

This journey learning about the needs of our P-12 children's collection at Wayne State College was an unguided reactive response to the needs of our teacher education program. What the authors learned in the process was the need to take a more active role in discovering what the collection needs and how it supports programs one's institution. It is important that librarians approach the collection from a professional educator's standpoint rather than simply as a consumer and collector of children's literature (Williams 58-59, 61). Justina O. Osa lists both understanding "educational theory, practice, and philosophy" as well as "current issues and reforms in education" as some of the important skills an education librarian should possess (133), while Virginia Kay Williams indicates that academic librarians who work with children's collections that support teacher education programs need "an understanding of how education students use juvenile literature, the characteristics of juvenile literature, and the standard tools available for selecting and evaluating children's and young adult collections" (59).

According to research in the education field, a good classroom library should include a variety of fiction forms including "contemporary and historical realism, fantasy, and science fiction," as well as collections of "favorite authors and illustrators" (Lehman 75). Children's fiction collections need to embrace topics across the curriculum:

> Incorporating picture books and novels in science, social studies, writing and math instruction brings the topics under consideration to life and demonstrates how literature is a way of knowing the world in which we live, as well as an avenue of escape into other worlds. (31)

While fiction has been the staple of many classroom collections, it is equally important to include children's nonfiction. Nonfiction not only aids children in learning about the world around them, but also provides an opportunity for teachers to help children discover how to read the nonfiction texts they will be exposed to in upper grades and in the world at large (Gill 260; Moss 6, 8-9). Nonfiction children's books also have the ability to motivate children to read. Nell K. Duke explains:

> Some young children find a way into literacy through informational texts that they do not find through narrative and other forms of text… Informational texts can capitalize on children's interests and curiosities, provide opportunities for children to apply and further develop areas of expertise, and provide valuable links to children's home literacy experiences. (202)

Indeed, children's nonfiction has the ability to "stimulate the intellect" and "instill passion" in children that fiction cannot do alone (Lehman 57).

What should a librarian look for when selecting children's nonfiction? Barbara Moss suggests they consider the five A's: "the *authority* of the author," "the *accuracy* of the text content," "the *appropriateness* of the book for children," "the literary *artistry*," and "the *attractiveness* of the book" (36). Much of this is aided in recent changes in the content of nonfiction for children, such as:

> Changes in subject matter, especially in whose story is being told; changes in where the information comes from, with an increase emphasis on authenticity, research, and acknowledgement of sources; and changes in how the information is presented, in writing style, book design, inclusion of elements other than text, and the blending of genres. (Isaacs 13)

Many children's award lists such as the Caldecott Medal and the Boston Globe-Horn Book Awards include nonfiction titles. However, there are now several awards dedicated to children's nonfiction titles for teachers and librarians to explore, such as the Orbis Pictus Award and the Sibert Medal. Lists of outstanding science and social studies trade books can also be obtained through the National Science Teachers Association and the National Council for the Social Studies. Also of use are websites maintained by children's nonfiction authors (Gill 266).

Responding to Needs Through Collaboration

Professional literature from the education field shows the importance of providing a wide variety of literature, both fiction and nonfiction. However, only through collaboration have the authors developed an understanding of how the Wayne State College P-12 children's collection is being used, what it is lacking, and how it can be made more accessible. The physical location of the collection has been especially helpful in nurturing that collaboration, as the IRC includes a full-time Instructional Resource Coordinator and a team of well-trained student workers who can assist students with location issues. The IRC workers and the Coordinator are responsible for stack maintenance and shelving of the children's collection. Their hands-on knowledge of materials provides valuable information about collection usage and condition. They are further assisted by the Education-Subject Librarian whose office is also housed in the IRC. Thus, when education faculty began conducting sessions of the Children's Literature course in the IRC, the time was ripe for collaboration.

Personal and professional interests of key education faculty, the Education-Subject Librarian, the Collection Development Librarian, and the Instructional Resource Coordinator sparked the next major shift in how the collection was used, developed, and promoted. The Collection Development Librarian began to be invited to give a book talk and discuss other topics concerning YA literature in the Young Adult Literature course. The Education-Subject Librarian started to take a more active role in working directly with education classes both inside and outside the Library building. Additional education faculty began to hold selected class sessions in the IRC and ask for assistance from the nearby staff. As a result of this collaboration, holes were identified in the P-12 children's collection. Collaborative relationships

expanded between librarians, staff, faculty and students. The librarians started to proactively ask for copies of syllabi and course assignments in order to assist students and drive purchasing decisions.

According to syllabi received, the most common assignments given to students have them select mentor texts from various genres and specific award winners. Genres highlighted by faculty include books for early childhood, picture books, traditional fantasy and fairy tales, poetry, modern fantasy, contemporary realistic fiction, historical fiction, nonfiction/informational books, culturally and socially diverse books, adolescent literature, mystery novels, science fiction books, folklore, biography, and chapter books (Dorman; Moeller; Sweetland). Because of this assignment, the authors developed brochures to highlight WSC owned award winning books, providing both physical copies and online. The award winner list was expanded to include more nonfiction and historical fiction. Additions to the list included the Boston Horn-Globe Book Award, the Edgar Allen Poe Award, the Orbis Pictus Award for Outstanding Nonfiction, the Sibert Medal, and the Scott O'Dell Award for Historical Fiction. Through this assignment, the authors also discovered that librarians needed to teach students how to search the Library catalog more effectively in order for them to easily access books of different genres. As a result, the Education-Subject Librarian now includes instruction on accessing the collection through the catalog in most of her sessions with education courses. Obtaining copies of additional assignments and syllabi as well as interacting more closely with faculty and students has also resulted in developing subject headings for math and music juvenile books, creating research guides to assist with award winners and specific genres (see http://libguides.wsc.edu/childawards), and purchasing materials based on assignments (i.e. read a-louds, content area units, early education science/outdoor education, family diversity issues, partnerships with Wayne Elementary, etc.).

Current Challenges

While the authors continue to collaborate with faculty regarding the P-12 children's collection, subtle changes in collection development continue to evolve. In an effort to create much needed shelf space, the juvenile fiction and nonfiction collections were recently weeded again. Through this process, patterns in usage were identified. These patterns have given librarians a better sense of direction for purchasing. The juvenile nonfiction collection is used across the board, but few titles have heavy usage. Fewer titles in the fiction collection are used, yet the most frequently used titles are used very heavily. Consequently, going forward every effort will be made to purchase a wide selection of nonfiction titles regardless of the author. The authors refocused fiction purchases on highly-regarded authors recommended by faculty and used in class author-studies. At times this requires the purchase of a second copy for heavily used titles.

Our next challenge concerns the fractured way in which the P-12 children's collection is organized. Currently, the library provides the following subsets in the P-12 children's collection: easy, juvenile fiction, juvenile nonfiction, YA fiction, YA nonfiction, examination-easy, examination-juvenile fiction, examination-juvenile nonfiction, examination-YA fiction, and examination-YA nonfiction. This creates shelving issues since a title can easily be placed in the wrong section if one does not pay close attention while shelving. Also, for some students, it can be difficult to navigate the different locations to find a specific title. Unfortunately, at this time the authors do not have a solution for these concerns.

The authors are also considering how digital technologies are affecting teaching children's literature in P-12 settings. Because of on-going conversations with education faculty, they understand the collection needs to expand beyond its physical environment to the digital world. Children born after 1980 are digital natives, meaning they have grown up with the digital world in their everyday lives (Houston 39). This means that most of our teacher education candidates and their future pupils are digital natives. Indeed, the digital world has already embraced children's literature. Books, both old and new are available in digital forms. Lisa Guernsey reports that in a 2011 technology survey by *School Library Journal*, 29% of elementary schools and 64% of high schools had ebooks in their collection. Additionally, 64% of school librarians were planning on or were considering purchasing ebooks in the next two years (30). This brings new challenges to both the education student and the academic librarian. Not only do teacher education students need to be exposed to these new materials, they also need to learn how to teach with them. Cynthia Houston indicates that digital information and print information are used differently: "As

opposed to books which they have learned to read from left to right and front to back, children approach digital materials nonsequentially, using hyperlinks to move from page to page or topic to topic." (39) Fortunately, there are many open access resources that librarians can point students toward. An excellent list of children's ebook collections is available on Dr. S. Cavanaugh's Educational Technology website (http://drscavanaugh.org/ebooks/libraries/childrens_collections.htm), some of which academic libraries can incorporate on their websites and research guides. However, it is important to keep in mind that digital children's collections are designed more for the adult than the child. Much of this is a result of a focus on transferring print books into digital formats where the emphasis is on the book and not the interface. Project Gutenberg, for example, provides text only of children's books. However, some collections like the International Children's Digital Library (http://en.childrenslibrary.org) and Bookpop (http://www.bookpop.com) have worked to incorporate digital book design into their collections (Houston 41, 45).

Digital children's collections also provide new opportunities to expand on the physical collection. An ebook projected onto a screen, becomes, in essence, a big book, allowing teachers to share in a whole new way (Guernsey 28). Digital collections provide access to books in multiple languages, often with either visual or audio translations that translate into even more languages, allowing students to explore different cultures and experience key titles in their own tongue (Houston 41). Education classes at Wayne State College have just begun to embrace the power of these new resources. To see how the library can support faculty members and their students, librarians have begun conversations with faculty and now provide digital resource lists in online subject guides. What comes next is unknown. However, the authors know is that it will take collaboration to ensure the P-12 children's collection remains relevant and useful to all stakeholders.

Conclusion

The author's experiences in working with the P-12 children's collection at WSC are not unique. The literature review shows that other academic librarians have been through a similar process. Academic librarians are not always well prepared to work with children's literature. However, through collaboration between faculty and library staff, a children's literature collection can become an essential academic resource that reflects the changing needs of teacher education programs. Such collections provide a high quality example of what teacher education students' own classroom libraries could look like and allow those future teachers to develop the skills needed to establish their own collections, collections that will play a star role in the education of P-12 students.

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Librarians' Preference of Virtual Meeting Platforms

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Abstract

Virtual participation in professional organization and other committee meetings outside of one's home institution continues to increase as time and money for travel to these events decreases. As the profession moves into a model of increased virtual communication, questions arise as to the best platform and tools to be used for the most effective method of communication. This study seeks to determine which platforms are currently being used, which platforms are preferred by organizers and participants and which platforms will best serve the needs of the committee. Results of this study on preferences for virtual platforms can help individuals and organizations make decisions on the best tools for this method of communication.

Introduction

The ability to communicate with colleagues has changed drastically with the advent of new technologies. Meetings that were once only held face to face can now include members from different locations and time zones. While teleconferencing allowed for communication across locations and time zones, videoconferencing and web conferencing have provided for more robust interactions with images of attendees and features such as document and screen sharing. Current conferencing platforms provide as close to a face to face experience as technologically possible. The videoconferencing platforms of today are quite different than the first one, dubbed the Picturephone, introduced at the 1964 World's Fair by the AT&T Corporation (Sprey 42). Affordability and practicality limited the widespread distribution of this technology, which did eventually become more affordable and more widely used during the 1980's. During the 1990's, videoconferencing became even more affordable and widely used, especially with the introduction of desktop video systems (Sprey 42). The 2000's show even greater adoptions of these technologies as meetings go beyond desktops to mobile devices and applications.

Videoconferencing can be broadly defined as "two or more remote locations engaging in face to face communications" (Sprey 41). While this definition reflects the technology of the time the article was written, it still applies to today's internet videoconferencing, or web conferencing. The videoconferencing platforms reviewed in this study all provide the ability to have more than two remote locations connect with face to face communications. Many of these platforms provide additional features which include the ability to share screens and collaborate on documents. These platforms provide a great opportunity for libraries to collaborate and communicate, especially in regard to group and committee work outside one's institution. Decreased travel funds, scheduling and time away from the office all contribute to the need for strengthening virtual participation in library organization committees.

As co-chairs of a committee which traditionally met in person at conference, the authors sought alternatives because of travel limitations for committee members. In using a specific means of virtual communication (Google Hangouts), the authors began to wonder what other tools were being used to meet virtually and whether there was a strong preference of virtual communication within the profession.

Identifying what platforms are being used for professional communication that does not take place face-to-face is important in determining whether the current tools are meeting the needs of the groups and committees. This study seeks to identify preferences and perhaps even determine, or at least suggest consistency of use within the profession. With so many platforms available, this study seeks to identify those which will be most useful and valuable to librarians in their library committee work. The results of this study might suggest that library organizations should consider focusing on specific virtual platforms in order to accommodate a variety of needs for committee work.

Literature Review

The term "virtual meetings" typically refers to people who use technology to meet when they are unable to meet in-person. However, this type of meeting can vary by its setup, purpose, and use of different technologies and software. Virtual teams, for example, are often cited as meeting in small subgroups of team members meeting with other subgroups or they meet individually (Ale Ebrahim, Ahmed and Taha 2654). This term is common within business-related literature but virtual teams have been cited in library literature as well (Knecht 24). Some of the primary reasons to hold a virtual meeting are to deal with geographic and temporal for group meetings (Cascio and Shurygailo 362). DeLuca and Valacich also cite cost as a factor (323). With these factors in mind, virtual communication is being used for more than just meetings; it is also used for training, events, and conferencing (Flowers and Gregson 48; Cakir, 365). Borzillo identifies this extension of the virtual with the term virtual communities of practice (114). However, expanding the context of these meetings too widely can blur its purpose, especially as it relates to this study. It can also become complicated when referring to all the types of technology and software that have been used to conduct virtual meetings. Telework or teleconferencing technically falls into the realm of virtual meetings (Ale Ebrahim, Ahmed and Taha 2655; Topi 79). However, the majority of this study will focus on computer technology and software that has been used to hold these meetings.

There has been little to no research that discusses how the preference of virtual platforms affects virtual meetings. Articles have tended to focus upon individual platforms as a focus of their study, rather than comparing user preference between multiple platforms. Platforms such as Adobe Connect have articles that focus on classroom collaboration use rather than committee work collaboration (Cappiccie and Desrosiers 296; Kaufmann and Frisby 1). Literature referencing virtual teams often focuses on the structure, benefits, and drawbacks of group meeting within a virtual setting (Ale Ebrahim, Ahmed and Taha 2653-2669) including issues of interaction and communication styles (Ale Ebrahim, Ahmed and Taha 2659-2660; Gonzalez-Navarro et al. 1472). When virtual teams literature describes technology its often in reference to how technology affects infrastructure or the ability to meet effectively (Powell, Piccoli, and Ives 6-36). There has also been reference to technology within videoconferencing literature. Bross, Beck and Leffler discuss online issues to be aware of in order to hold a successful videoconference, such a dealing with audio echo and software glitches (203). However, there is little discussion of why people choose one platform over another, investigating all the reasons why they voluntarily participate in these virtual meetings, especially if they have an option.

While explanations of preference for virtual platforms was limited in the literature, one common theme was to explain the advantages of meeting virtually rather than face-to-face. Richards reflects on the benefits of using virtual meetings within her own library-related responsibilities; she addresses benefits such as cost, time, and the ability to choose a preferable format (79-80). Christina Wasson used an ethnographic approach to examine how virtual meeting attendees felt about their computer-human experience (103-30). Many participants liked the ability to multitask (Wasson 125). Wasson (125) believes that multitasking during meetings is not unique to the virtual setting but participants do notice the advantage of multitasking without creating too much distraction. Current literature presents an array of reasons why these types of meetings are advantageous but still have limitations (Flowers and Gregson 48-64). The goal of this article is to go beyond the advantages of virtual meetings and uncover why librarians choose one platform over another even though they all hold certain advantages.

Methodology

The authors created a 23 question survey using Survey Monkey. The survey link was sent to a variety of library list-servs and posted to related Facebook groups. Some examples include American Library Association (ALA) related list-servs such as ili-l, stars-l, rusa-l, acrl-ir and some other library-related listservs such as libref-l. Participants were asked about their experience with virtual meetings for library organization committees. Library organization committees were defined in the survey as meetings that occur outside of one's own library or institution. Examples of these committee meetings include national committees such as ALA groups, regional consortiums and state-wide groups. Librarians and library staff from both academic and public libraries were encouraged to participate. IRB exemption was obtained

through Binghamton University. The survey questions were written to gain an understanding of what is currently being used, what (if any) preferences in platforms might exist and whether the currently available platforms are meeting the needs of the profession. The survey also collected information on gender/ethnicity/age/type of library geographic location in order to explore possible patterns or trends in the use of virtual meeting platforms. The authors identified 14 virtual platforms (see table 1) for the survey and also allowed participants to write in any other platforms that may not have been included on the list. Participants were given the ability to write their own answers in for most of the questions where answers were provided and three of the questions were open form.

Table 1
Virtual Platform Choices Provided on Survey

AdobeConnect	ShowDocument
Blackboard Collaborate	Skype
Elluminate	Vyew
Facebook	WebEx
Fuze Meeting	Yugma
Google Hangouts	ZohoMeeting
GotoMeeting	321Meet

Results

There were 246 respondents for the survey, with 174 finishing the survey for a 70.7% completion rate. Considering the open nature of the survey distribution, it is not possible to determine a response rate, as the number of individuals who received the survey link is not known. It was the authors' intention to make the survey as widely distributed as possible in order to receive diverse results. The results show a greater number of academic librarian responses (75%), most likely due to the nature of the list-servs, which were predominantly academic. Respondents included media specialists, graduate students, library staff, archivists and public librarians. The majority of the respondents listed their employment as full-time. Thus, the results are heavily weighted with responses from full-time academic librarians.

Preliminary results show that there is a slight preference for virtual meetings (50.6%) vs. face to face (41.4%) for library organization committee meetings. The overwhelming reasoning for meeting virtually was to increase participation for those who cannot meet face to face (90.1%) with cost effectiveness being a second reason (70.8%). The platforms that are being used most often by the respondents are: WebEx, Adobe Connect and GoToMeeting. Adobe Connect, Google Hangouts and WebEx were selected as the platforms that best served the participant's purposes (see fig.1), though it is noted that these purposes will vary depending on the nature of the meeting.

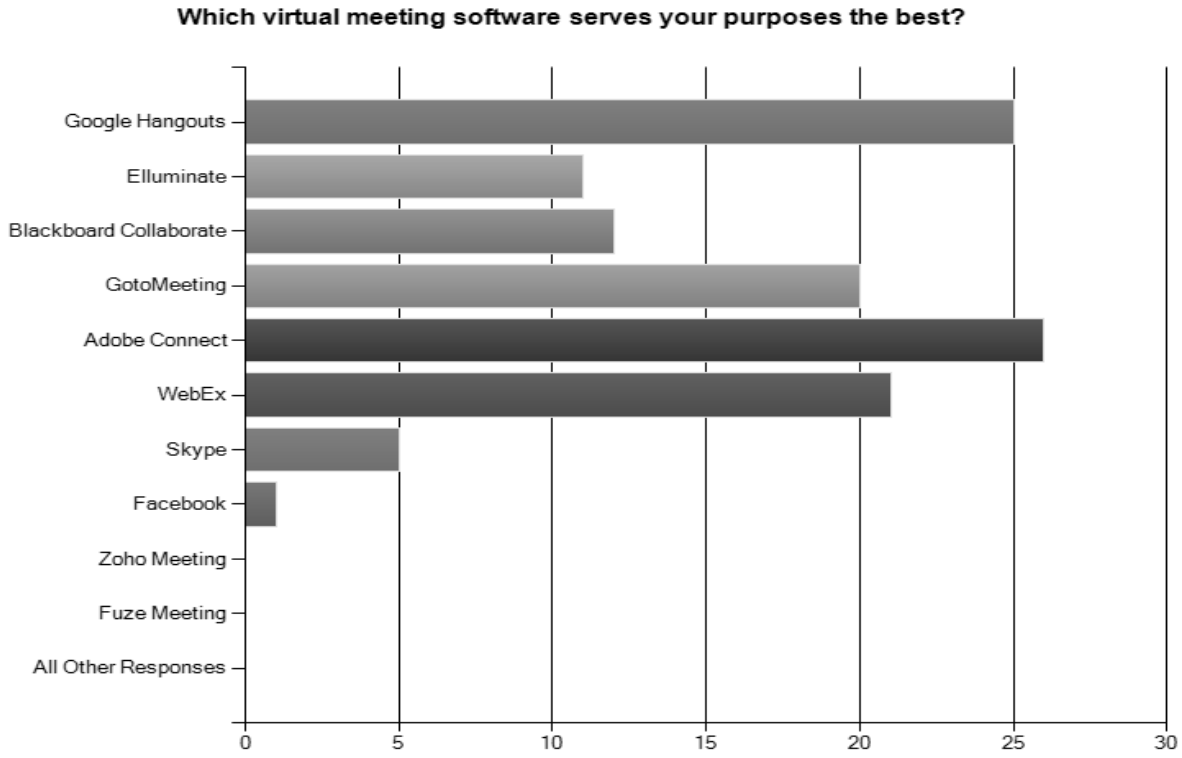

Fig. 1. Platform that serves survey participants' purposes best.

The five most important features of the virtual platforms are the ability to share and collaborate on a document, recording capabilities, voice muting capabilities, phone-in feature and an unlimited number of attendees (see fig. 2). Other important elements in selecting a virtual platform are ease of use, accessibility, cost and support. It is interesting to note that the platforms currently being used the most often are not the platforms that were selected as best serving the participant's purposes. Further study of the results and comments provided by the participants will be used in order to determine why certain platforms are chosen over others that may better serve the meeting attendees needs. The results will also be analyzed to review possible preference based on age, gender, geographic location and library type.

The preliminary results reveal that many different platforms are being used for a variety of reasons which include cost, ease of use, existing support, organizational use and not always being chosen because of preference. The authors hope to explore these results further in order to review the reasons behind both the choice and the preference while also seeking to identify areas of consistency in chosen platform across the profession. Feedback from this survey might assist meeting organizers in both choosing a platform and determining training needs. The results of this study will be of interest to librarians and library organizations who are seeking to explore virtual communication as well as those already taking part in virtual communication. The study can also be helpful for those outside of librarianship as other professionals and professional organizations increase virtual participation.

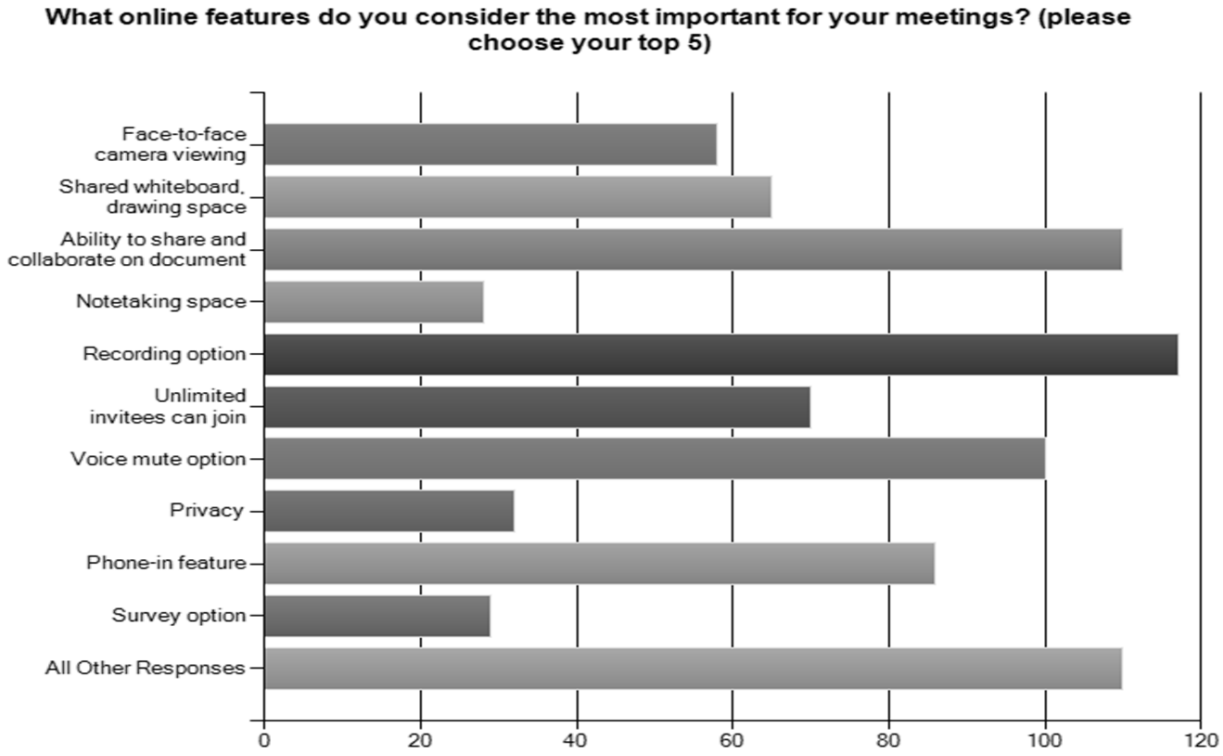

Fig. 2. Top 5 online features considered most important for meetings.

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Changemaking in Access & Outreach @ USD

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Abstract

University of San Diego (USD) is a change-making campus. As the hub and heart, the university library has taken on an active role in initiatives and innovative services. Educators by approach and change-makers by example, librarians are leading through and making a difference. This presentation will demonstrate how Access & Outreach Services Department successfully promotes changes and produces results. Through a changing=learning=improving=growing (clig) process, student workers are motivated, staff are empowered, patrons are engaged, and new services are created. By soliciting user feedback, assessing library operations, focusing on university missions, and organizing cross training, Access & Outreach has transformed the way it conducts business. Internally, it collaborates, breaks silos, and encourages synergies between areas. Externally, it reaches out to more extensive constituencies, serves those underserved, and forms partnerships across the board and beyond. Statistics are up with an average of 50+% increases in major areas. Staff and employees are recognized through various university awards and public recognitions, such as Employee of the Year in USD 2012. Student workers have retained and graduated at a very high rate. Customer satisfaction has been at an all-time high. Change-making is fun and rewarding. Being a change-maker makes Access & Outreach proud. Come learn why change-making is our DNA and leading access to success is our mission.

More Than a Poster:
How Marketing Can Revitalize Your Library's Community Engagement

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Abstract

"Marketing is not a poster; marketing is understanding your customers and creating products and services for them—that only you can uniquely provide."

--Alison Circle,

The Library Marketing Toolkit

Too often library marketing is a task that gets pushed under the rug or shoved lower on the list of priorities in favor of what is seen as more essential "library" services such as collection development, reference, and instruction. This reality is fueled by the idea that marketing is simply code for promotion or advertising, the icing on a cake built out of carefully curated resources and services.

Yet, holistic library marketing is driven by the need to deeply understand the communities we serve: what they need, how they need it. The idea is that gathering this type of market research will guide the creation of resources and services as well as how to promote them to the public. Marketing will also work to gauge community members' reaction to and perception of resources and services, creating a continuing feedback loop leading to on-going improvements.

Join us on the journey that began with research on modern academic library marketing efforts to the execution of a comprehensive plan which includes examples of how to get library staff on board, how to approach practical problem solving using participatory design, and how to effectively use of social media platforms.

Session attendees will leave with practical tools to use in implementing their own library marketing efforts. These will include a brief, targeted bibliography on marketing the academic library, frameworks for measuring impact of social media efforts, specific suggestions for successful social media interactions, and guidelines for implementing participatory design market research to solve real-life library problems.

Responsive Web Design:
How Mobile Devices are Changing the Way We Build the Web

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Abstract

The proliferation of mobile devices has reached a point that we can now assume our users are just as likely to visit our web sites using a mobile device as they are using a desktop or laptop computer. This has significant implications for how we build our websites and how they should function. In recent past, we developed separate websites for mobile devices or we created a native web application targeted to a specific device such as an iPhone or android phone. Maintaining separate web sites for mobile and desktop is no longer practical especially with limited resources and with the growing number of screen sizes both small and big.

Responsive web design is an approach to designing web sites so that a user's experience is not diminished due to the choice of device or screen size used to render the site. The web site is screen-size aware and rearranges its layout and features accordingly.

The developer's objective in responsive web design is to create a single site that serves all devices and screen sizes. Creating a responsive web site involves incorporating the following techniques into the site architecture: 1) flexible grid, 2) flexible images and 3) media queries. These techniques are simple, but their application to a whole site requires a lot of attention to detail. While the idea of creating and maintaining a single site seems like it would save time, experts involved in this type of development have reported that it can take almost as much time as developing two sites – one mobile and one desktop. That being said, a new philosophy has taken over in the web development world: mobile first. This means that you design your site for a mobile screen before you design a desktop or laptop screen.

Introduction

A news item in the April 15, 2013 *Library Journal* states: "In February, mobile browser usage grew to account for 13.2 percent of all unique visitors to a collection of 40,000 websites monitored by web metrics company Net Application, according to an analysis of its data conducted by ComputerWorld." (20)

The proliferation of mobile devices and their usage has reached a point that we can now assume our users are just as likely to visit our web sites using a mobile device as they are using a desktop or laptop computer. Some of our younger users may never visit our web sites with anything other than a cellphone. "… the Pew Research Center last month released its "Teens and Technology 2013" survey, which revealed that 78 percent of teens now own a cell phone and almost a quarter (23 percent) own a tablet computer … 25 percent described themselves as 'cell mostly' Internet Users" (Enis 20).

It is apparent that the way our web sites render on mobile devices needs to be a priority. Two trends that address this need are: 1) responsive web design and 2) mobile first.

This paper aims to present a simple overview of the concepts and techniques behind responsive web design and mobile first. It represents an added resource to the presentation given at the 13th Annual Brick & Click symposium, and is not a detailed narrative of the content presented at the conference. A companion web site is available indefinitely at http://www.uni.edu/~wynstra /click/responsive/

Literature Focus

One goal in designing for mobile devices is to focus on the core tasks that users want to accomplish and eliminate the unnecessary noise found in the desktop browser experience. I will incorporate that philosophy into the writing of this paper, and so I direct the reader's attention to just three excellent resources.

I recommend that the reader begin with Jeremy Snell's article entitled "Flexible Everything: Getting Responsive with Web Design." It is the best summary on responsive web design I have come across. Beyond the excellent summary of the practical aspects of responsive design, it includes a review and recommendation on CSS frameworks as well as themes that are available for the popular Drupal and WordPress content management systems.

Ethan Marcotte's short 90 page book entitled "Responsive Web Design" is really the first significant publication on the topic. The book's five chapters are about as concise, precise, and focused as you could hope for and they are titled: 1) Our Responsive Web 2) The Flexible Grid 3) Flexible Images 4) Media Queries and 5) Becoming Responsive. The book is extremely practical and includes numerous code examples and illustrations.

A companion book in the same series called "Mobile First" by Luke Wroblewski focuses on the way people use mobile technology and what this means for organization and design for the mobile user. The book is neatly divided into a why section and a how section for going mobile first. The following quote captures the attitude of the author:

"When you consider the amount of useless navigation, content flush, and irrelevant promotions that litter a typical web experience, you realize why the mobile diet can be good for both business and customers. Once people use the mobile version, it's not uncommon for them to pine for the desk-top version to be 'that simple'." (17)

Techniques and Concepts

I have essentially admitted that the reader should put this article down and find these other publications with due haste, but I will still take the time to explain the concepts behind responsive web design and mobile first.

The key concepts and techniques used to create a responsive web site are not that complex. The following list just about covers everything one needs to know:

- CSS stylesheets
- Flexible or fluid grids
- Stop Using Pixels! Use Ems and Percentage instead
- Base Fonts
- Media Queries
- Breakpoints
- Flexible images
- Viewport settings

The CSS stylesheet is the floor plan in responsive web design. It is that piece of code that instructs the browser how to display the content of the page it is rendering. It tells the browser how big to make the font, what font to use, where to put various pieces of the web page, and even whether to display a piece of content such as an image or hide it. Much of the work behind developing a responsive web site happens in the CSS stylesheet.

The flexible or fluid grid is established in the stylesheet by setting up a series of tags that use relative units of measure (ems and percentages) as opposed to absolute units of measure most commonly pixels. Pixels have been the preferred unit of measure for quite some time, but they do not allow a web page to flex in any way. Percentages are a unit of measure that is relative to the available space, so 100% of

display area says to use all of the display area, and 80% says to use only a portion of the display area. Ems are the preferred unit of measure for font size even though percentages work. Ems are referenced against the base font size which is determined by the browser. Unfortunately, not all browsers define the base font to be the same and this adds some complexity to standardizing a design across multiple browsers. A best practice in solving this lack of standardization is to use a reset stylesheet as the first stylesheet in a web page. This stylesheet explicitly overrides the browser defaults and leaves every browser working from the same base set of definitions.

The media query is the magic that activates the responsive design. The media query is essentially a pass/fail question sent to the browser to determine if the browser meets one or more conditions necessary to activate a section of the stylesheet. A media query is often used in a stylesheet and looks like this:

@media screen and (min-width: 1024px) { add appropriate styles here }

@media screen and (max-width: 364px) { add appropriate styles here }

Note that in these media query examples we are using pixels. This is because when we are doing a media query we are trying to identify the actual absolute screen size available for displaying the web page.

The media query can be utilized in two different locations within the website architecture: in the style sheet as in the examples above or in a <link> tag found in the <head> section of webpage itself. Link tags are used to pull in additional resources like stylesheets and JavaScript files to help the browser render a webpage. In this case, a media query is used to select a style sheet targeted to a specific size screen. If the media query comes back false, the stylesheet won't be used. Following is an example of what a media query looks like when incorporated into a <link> tag.

<link rel="stylesheet" media="screen and (min-device-width: 800px)" href="style.css" />

The breakpoint represents the screen size at which you want your website to behave differently. The breakpoint is the measurement that you include in the media query as either a min-width or max-width. If you are just starting with responsive design, follow the advice of those who have gone before. Ethan Mocotte recommends the following pixel defined breakpoints: 320, 480, 600, 768, 1024, and 1200, and they are based on some popular devices held in both landscape and portrait mode.

One thing to consider is whether to use min-width or max-width in your media query. Both accomplish the same thing, but in a different logical statement. When using min-width you are directing the browser to begin using the styles when the breakpoint is passed. When using max-width you are directing the browser to stop using the designated styles when the breakpoint is crossed.

When discussing flexible images we are actually speaking about multiple versions and/or variations of an image in different sizes and resolutions to accommodate not just screen size, but lower network capacity that may be available to a mobile device at certain times. A web page with numerous large images and additional resources such as JavaScript and style sheets, may take additional time to render as the device waits for all the pieces to be available for assembly. Additionally, images that are appropriate size for the desktop display area may seem huge on a mobile device, and push important content off the initial display on smaller screens. The details for creating images for responsive web design are covered in depth in Ethan Marcotte's book.

An import concept to be aware of with mobile devices is something called the viewport. It may be best to think of the viewport as the zoom feature. It allows a device to automatically zoom into a site or enables the user to pinch and pull a site to different sizes on a touch screen. The advice that is given concerning the viewport is to set some defaults using a meta tag. If you don't configure the viewport, each given device will behave according to its own default viewport settings. This will cause some displays to fully zoom in to a portion of the page or to fully zoom out to varying degrees. The bottom line is that different users will have different experiences with your site—some good, some bad. Here is what a <meta> tag for viewport looks like.

<meta name="viewport" content="width=device-width, initial-scale=1.0">

The above instruction found in the web page itself tells the browser to set the display size to the device-width, and not to zoom in or out initially. Some folks will lock the zoom capabilities by adding a *maximum-scale=1.0* or *users-scalable=false,* but this ends up taking away control from the end user, and is not be appreciated.

Conclusion

The focus of responsive web design is the end user experience. The responsive web site is screen-size aware and rearranges its layout and features accordingly. The responsive website does not just resize and rearrange itself, but it actually hides or reveals content to accommodate the screen size.

The focus of mobile first is the development and design process itself. It is a guiding principle that development should focus on the mobile experience first; everything else up to and including the desktop experience comes later.

These two concepts working together form the proactive change needed to meet the user regardless of which mobile device they visit our websites with. It is unlikely that our users will become less enthused about the convenience and the power of mobile devices so we ignore them at our own peril.

Additional Resources

I would like to leave the reader with a useful tool that can be used to test websites for their responsiveness. The web site is found at http://responsinator.com. The user plugs in a URL and the site renders the webpage in a series of mobile device simulations including apple and android type devices in both landscape and portrait orientation.

I have created a companion web site to this presentation at http://www.uni.edu/~wynstra/click/responsive/ that includes a number of additional resources and features related to the presentation material.

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Library Programs to aid in Student Retention

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Abstract

Student retention is an important issue for colleges and universities. It is simple to measure and it allows easy comparison among schools. Universities are active in creating new programs for students that help keep them engaged in their classes and involved on campus. This includes campus funded tutoring, freshman seminar courses, and intramural sports among many other things. These programs are important when it comes to campus life because it has been shown that student involvement is directly related to student success (Astin, Alexander W. Achieving educational excellence. San Francisco: Jossey-Bass, 1985.)

Student retention has also become an objective of academic libraries. Effective use of the library resources is an aspect of student involvement. It makes sense that success here can translate to academic success for students. Academic libraries are challenged to show how they contribute to college success and student retention. As difficult as this is, libraries are developing programs to do just that.

I intend to identify and describe library programs that are aimed at improving student retention and show how success can be measured. For example, freshmen students who are considered high risk for dropping out at John Carroll University, meet with a two member librarian instruction team, to receive a series of sessions to develop library and other research skills. I will identify these programs via a literature search, Internet searches and a survey of libraries. I plan to identify and describe six varied examples. For the presentation, I will concentrate on informing the attendees of the state of the art success strategies and measurement.

Breaking Free in the Special Collections and Archives: Shattering Conventions and Display Cases with Augmented Reality

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Abstract

Special Collections and Archives and the Technical Services Department at Emporia State University (ESU) have joined forces to achieve an innovative way to let delicate manuscripts and archival materials perform for patrons and visitors. The initiative involves utilizing mobile, augmented reality technology to bring these objects to life. Through free application mobile software, the ESU Special Collections and Archives is merging the boundary between the physical and virtual worlds, offering patrons the opportunity to go beyond walking through stationary exhibits of artifacts, to a full interactive experience.

Introduction

Archivists and special collections librarians, like other information professionals, manage, organize and provide access to a variety of resources. A primary challenge these professionals face is balancing the preservation and security needs of the materials under their care with the accessibility their patrons expect. How often have you wished there was a better way to let delicate manuscripts, rare books and archival materials perform for patrons while staying mindful of their care? Through free application mobile software and augmented reality technology, ESU Special Collections and Archives has merged the boundary between the physical and virtual worlds, offering patrons and visitors the opportunity to go beyond walking through stationary exhibits of artifacts, to a full interactive experience. Imagine an easy way for a handwritten music score or historic artifact to tell its story without requiring patrons to read any labels; a method that allows the object to break free of the display case in an explosion of audio, video and images.

Keywords: Archives, Augmented Reality, Auras, Mobile Technology, Overlays, Special Collections, Trigger image, User Experience, Virtual Reality.

Literature Review

What is augmented reality (AR)? Interestingly enough there is no universally accepted definition for the term "augmented reality." However, for the purposes of this study we will define AR using its basic principles and framework. Henceforth AR should be defined as "a computer-generated component that is added to the real environment" (Pence 137). AR is not a new thing; as early as 1960, AR has been on the radar of many computer techs alike. Though, due to the limited processing power of computers, AR was seen as an enormous expense with little return (Sutherland 757).

With the advancement of modern technology AR has reemerged in the U.S. military over the past 10 years in vehicles and aircraft (Shachtman) but beyond the military, AR has laid dormant over the past few years. However, with the rise in mobile technology AR is emerging via smartphones and tablets through mobile applications (Pence 138). Smartphones and tablets are the Swiss army knife of the 21st century, allowing users to experience our world in a variety of ways. With the development of mobile applications, the digital divide between software developers and everyday users is rapidly closing. AR is now a reality to everyday users outside of the U.S. military. As quoted from the 2010 Horizon report, "augmented reality has become simple, and is now poised to enter the mainstream in consumer sector" (21).

Enter libraries and archives. Today's patrons, particularly students, are increasingly tech-savvy and expect a certain level of convenience, immediacy and interactivity (Nagy 8; Becker 478-9). Considering that information is now readily available via the Internet, libraries and archives are challenged to compete

technologically to maintain their patrons. With shrinking budgets and the demand to stay current with contemporary technology, these institutions are faced with ongoing frustration in trying to provide 21st century services to their tech-savvy patrons with 20th century budgets. Studies have shown patrons are interested in utilizing library resources on their smartphones, tablets and electronic devices, providing libraries and archives with an opportunity to reimagine their services if they are willing to pursue it (Dresselhaus and Shrode 90; Wong 108). Incorporating free mobile and tablet technology in information resources and exhibits is an innovative and cost effective way to share materials while attracting patron interest and addressing their expectations.

A handful of libraries and archives have begun to utilize emerging augmented reality mobile and tablet technology as a means for making their collections more accessible and interactive for patrons. Some libraries are pursuing augmented reality as a way to assist patrons navigating through the stacks and browsing through resources by offering specific location information, circulation statistics and comments for each book on the shelf (Hahn 431). Another use of augmented reality in libraries and archives has been to share historic photographs. The City Archives within the City of Philadelphia Department of Records created a website, *Philly*History.org, utilizing geographic information systems (GIS) to share their geolocated digital photographs with patrons around the world. The website offers increased accessibility and searchability by geographic data, such as an address (Boyer, Cheetham and Johnson 564). In 2009, the Department of Records began collaborating with Azavea to develop a smartphone app for *Philly*History.org to further increase its accessibility and include an augmented reality aspect. After receiving a grant from the National Endowment for the Humanities to assist with exploring the use of mobile augmented reality technology, a prototype app was released in 2011 that allowed smartphone users to scan a current Philadelphia location and see historic images overlaid on top of it (Boyer, Cheetham and Johnson 661). Similarly, the University of Saskatchewan University Library and University of Louisville Photographic Archives (ULPA) have begun utilizing Historypin, a free website and smartphone app similar to *Philly*History.org that allows users around the world to contribute, view and interact with geolocated digital photographs (Harkema and Nygren 4; Reilly 20). This app also provides patrons with the ability to scan a current scene with their mobile device and see historic photos laid over it; however, a major difference is Historypin is provided free of charge, allowing institutions to increase the overall accessibility of their collections with little financial expense (Harkema and Nygren 5).

Methodology

In exploring how the ESU Special Collections and Archives might increase accessibility of its collections to patrons and further engage patrons in exhibits, we began researching mobile technology. Aurasma is a free mobile app available for Apple and Android mobile devices that allow patrons to experience a multimedia presentation by merely focusing their smartphone or tablet on a static image (Aurasma.com). To better understand how Aurasma works we must first define the terminology used when describing Aurasma.

Trigger Image:
An image that is uploaded to the Aurasma cloud databases. This image is detected through camera lenses and is the building block of auras. When detected this image yields an overlay.

Overlays:
Overlays are images, videos, and animations or even three-dimensional models that appear whenever Aurasma sees a trigger image that it recognizes.

Auras:
Auras are augmented reality actions – images, videos, animations and three-dimensional models – that appear when you point your mobile device at a real world image or object. Tying together two different pieces of information such as trigger images and overlays creates each aura.

Channels:

Channels store and deliver Aurasma content to users. Once a channel is created users must search for and subscribe to particular channels of their choice to receive Aurasma content.

The app works by identifying a paired trigger image and video overlay thus creating a multimedia aura. This was appealing to us since it would allow us to embed mini-tours or tutorials of objects featured in our exhibits, simultaneously increasing accessibility to our rare objects and exposure to additional information without asking patrons to read long labels.

In order to test effectiveness of the Aurasma app for increasing patron engagement, we designed a mini-exhibit and created multimedia videos for each object that linked to the exhibit. The objects we selected for the exhibit represented a range of media present in our collections, including a piece of artwork, a musical score, and a fraternity paddle from manuscript collections and a foundation stone from the University Archives. The objects were arranged as a smaller version of a typical exhibit; two were mounted on the wall and two were displayed in cases. All were accompanied by labels, approximately 100-125 words long, so the mini-exhibit could stand on its own without the mobile technology aspect. Once the objects were installed, we took photographs and filmed 1-2 minute video tours of each one using an iPad 2 and then uploaded the image and video files to a desktop computer. We enhanced three of the four videos with Camtasia video editing software by overlaying photographs of related materials in our collections and additional audio tracks. The videos were uploaded to Aurasma as overlays and linked to the corresponding trigger images, creating auras for each object in the exhibit. We placed the auras in a channel established for the ESU Special Collections and Archives so the content would be available to the public. A group of students was asked to experience the exhibit traditionally and provide feedback through a short survey. Once the survey was completed, the students were provided with an iPad or smartphone loaded with the Aurasma app and were asked to experience the exhibit again through the app. A second survey was then administered to gauge how the two experiences differed regarding engagement and dissemination of information.

Our Findings

The results of the first student survey revealed that students spent an average of 4.5 minutes experiencing the exhibit. Almost all of the students read the labels, but 30% noted they were too long. When asked how engaging the exhibit was on a scale from 1-10, the average response was 5.9. A follow-up question asked students how they thought the exhibit could be enhanced to increase engagement; responses included offering a tour and incorporating an interactive element. The second survey showed that students spent an average of 7.8 minutes experiencing the exhibits through Aurasma, a 58% increase in time. When asked how engaging the exhibit was with the added technological aspect, the average response was 7.4 out of 10. Results revealed that 90% of students preferred the interactive augmented reality experience compared to a traditional exhibit. However, although augmented reality was preferred it still needs to be refined to keep student interest.

To ensure comparative feedback was received, three types of auras were created for the exhibit. The auras consisted of: 1) a “tour” of the object, 2) a photo overlay, and 3) an on-camera “tour” with audio overlay. The “tour” of the object aura focused on a close examination of the fraternity paddle, consisting of an off-camera narration and on-camera exploration of various features of the paddle and related objects. In a traditional exhibit, this type of behind the scenes tour would not be possible, and even an in-person tour begins and ends with the display case and verbal references to other artifacts. The “tour” of the object aura shatters traditional norms and sets a new precedent for tours. The photo overlay auras focused on discussions of the piece of artwork and the foundation stone, each consisting of off-camera narration and overlaid related photos. More so than the “tour” of the object, which is filmed in real-time, this method allowed the featured objects to expand into mini-exhibits through the inclusion of countless additional images fading in and out of the video. Finally, the third type of aura further amplified the patron experience by bringing a seventy three-year-old musical score to life by combining on-camera narration with overlaid photos and music to give our patrons the full experience of not just seeing the music but hearing it as well. This hybrid effort combined different types of media overlays together, creating an aura that yielded a new type of interactive experience.

Based on comments from surveys, there was a significant decline in exhibit engagement for videos lasting longer than one minute. However, not every video that spanned past the one-minute mark was considered non-engaging. The longest video recorded, that of the fraternity paddle, posted the greatest amount of interest despite its duration of two-minutes and forty seconds. Our surveys indicated that the students enjoyed seeing a hands-on, special examination of this object. Additionally, students responded positively to the appearance of a second, related object that shares history with the fraternity paddle.

Advantages

A primary advantage to utilizing the Aurasma app is it is free and easily downloadable to mobile devices. Considering that 90% of our respondents noted they own smartphones and the ESU's University Libraries and Archives offer 20 tablets for patrons to borrow, the majority of our patrons have access to a mobile device of some kind. As our survey results showed, there was a strong trend in students being more engaged with the exhibit when using Aurasma. By offering the ability to overlay video, audio and photographs onto a real, though static, object in a display case, the app allows the patron to interact with and learn about the object in a way that is not possible by merely reading labels or taking a tour. Each object can expand into its own mini-exhibit by offering a virtual venue to introduce supporting images, audio and related objects.

Another advantage of the app is the ability to accomplish all steps of incorporating augmented reality into your exhibit via a mobile device. Not only did we capture the trigger images and overlays with an iPad, but we also loaded them to Aurasma, linked them together to create auras and experienced them through the app with an iPad. Although we chose to enhance some of the overlays by adding photographs and audio tracks with the program Camtasia, this was an optional step. It is worth noting that the aura that appeared most often in the survey comments was one that was not enhanced with Camtasia, but instead featured an in-depth tour of the object.

Aurasma also integrates with Google Maps. Part of the creation process of an aura is to pick a location and connect it to Google Maps. While this step is optional, using Google Maps provides greater visibility to augmented reality Aurasma projects. Using the GPS location from any Android or Apple device the Aurasma application can locate any publically shared auras from around the world. Auras are visible within the Aursama application providing users the opportunity to discover other aura locations in their area or anywhere in the world. Geolocation through this application unlocks new possibilities for patrons, opening the world to them in a whole new way.

Auras are also able to be programmed to perform actions when tapped and/or double-tapped. Options include having the aura fill the screen, pause/play, fade in/out, and link to a web page. This offers opportunities for increased patron engagement by empowering them to control their interactive experience with the objects. It also allows the institution to navigate patrons to websites, finding aids, digital feedback surveys, digital guest books, and/or social media.

Challenges

With any new software there is always a slight learning curve; however, Aurasma offered a new challenge which took a 45° learning curve to a 90° angle. Aurasma uses new terminology native to itself that must be defined and understood before commencement. The Aurasma software has a cloud-based interface that allows the user to upload photos, videos and three-dimensional imagery into four modules: trigger images, overlays, auras and channels. Each module coincides with all the others and every module is essential when completing any Aurasma project. This means that one must take the time to study each module, eliminating the plug and play method of learning. Consequently, this increases the amount of time for the initial set up of an Aurasma project.

We encountered a few technical challenges while using Aurasma. While the app will accept a number of video file formats, there is 100MB size limit per overlay that severely limits which formats can be successfully utilized. We found that the .mp4 format worked the best to balance quality and file size. We also learned that trigger photos and overlays must be landscape-oriented to display properly. Although the app will accept portrait-oriented images and videos, it automatically rotates them 90° so both the image

and video appear perpendicular to the viewer. This is somewhat inconvenient if the object in question is portrait-oriented, but is easily addressed. Another challenge we discovered is that once a video is uploaded to Aurasma as an overlay, the audio and video do not maintain synchronization. Although this is not an issue if the video only features someone speaking off-camera, if there is someone speaking on-camera there is a noticeable delay between video and audio. Based on this, we found it was beneficial to have a three-person team: someone to work the camera, someone off-camera describing the objects, and someone on-camera displaying the objects.

We also encountered a few challenges with the app's ability to match the correct trigger image and overlay. If the trigger images are similar in color or shape, the app has difficulty recognizing subtle differences and knowing which aura to retrieve. For example, our exhibit used two identical display cases to feature the three-dimensional objects: a wooden fraternity paddle and a foundation stone from the first building on campus. Despite the two objects being very different in size and shape, the app sometimes confused the overall shape of the display case in the trigger photos and played the wrong overlay.

Conclusion

Apps like Aurasma allow patrons to experience an interactive, multimedia exhibit by simply focusing their mobile device on a static object. This offers new opportunities for Special Collections and Archives to safely invite patrons behind the walls of display cases to actively engage in learning more about exhibited objects. Every object or place tells a story that is lost without exploration. Augmented reality gives patrons the opportunity to view specialized content not available to the general public. Watching how students interacted with their space while using Aurasma in the Special Collections and Archives raises new questions about the use of augmented reality beyond libraries and archives.

Further study is needed to realize the full potential of augmented reality in higher education. Moving forward, Aurasma could conceivably change how students learn and interact with their environment by shattering traditional learning models, where students are receivers of information. It can potentially empower students to become gatherers of information, actively contributing to the creation of knowledge. We believe that the future of education depends on change. With education budgets rapidly diminishing, Aurasma offers the possibility of a low-cost, curricular-wide enhancement to education. Just as the ESU Special Collections and Archives enhanced student interaction and learning through augmented reality, higher education has the opportunity to connect students to new ways of learning and processing information. Therefore, although Aurasma requires a time commitment to film videos and to learn the intricacies of the app, it is worth the time and effort to potentially discover a new information transfer model based around augmented reality. Aurasma combines familiar technology with location and space to innovatively attain the next level of human interaction and learning.

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The Library Extravaganza! Implementing a Welcome Event at Your Library

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Abstract

Held every fall, the Library Extravaganza at Indiana State University provides an opportunity for the library and selected ISU offices to highlight their services and resources to students, staff, and faculty during the one day event. An online version has been added for distance learners. This paper emphasizes the goals, evolutionary implementation and continual improvements to the event, serving as a potential model for other academic libraries.

Review of Literature

Several articles, including Fortson, Sahib and Spencer with the University of Alabama libraries, and Anderson at the University at Albany, State University of New York, highlight activities for students or specific groups such as freshman during the first weeks of school. Few of the articles focus specifically on the library; rather the entire campus participates in a welcome experience for the students. Events may be limited to a few hours one day, or stretch out for the first week of classes.

Planning the Event

The Extravaganza at Indiana State University started in the fall of 2001, as "Welcome to the Library," a two day event for two hours each day. The initial planning team consisted of two librarians and one staff member. The Dean of the Library approved our plan for the event and offered us a budget of five hundred dollars. Our goal was to get the students inside the library to meet the librarians and staff and look at the resources available. We had numerous decisions to make; a date and time (we did not want to compete with other events on campus or in the library), displays of resources, games, food and drink, prizes, gift bags, scheduling volunteers to work, and publicity. The planning team decided to hold "Welcome to the Library" in late August from 9 am to noon. After determining the dates and time, we needed to develop a theme for the event. The theme needed to fulfill our goals for the event: highlight the people and resources in the library, make all students (from returning to international) feel welcome, and have a good time. We chose "Passport to the World" as our theme for the first year. We believed this choice gave us numerous ways to highlight our resources and services to the unique groups on campus. We used floor to ceiling display cases on three floors of the library to display international materials from the library. We decided students would need to answer a question about each display case (3 display cases, 3 questions) to be eligible to win a prize. The questions were formed in simple sentences so students new to the English language would be able to participate. The questions were on one piece of paper with a place to write their name, e-mail or phone number.

The first floor display case held several travel guides, representing the countries of international students attending Indiana State University. A large map of the world was pinned to the wall behind the guides with national libraries of foreign countries highlighted. Handouts of the foreign libraries and their websites were available to pick up (now we would add the addresses to a Facebook page or a Libguide site rather than have a handout). For the first floor display, students were asked to write down the title of one of the travel books on display.

The second floor display consisted of fiction and non-fiction books by American and international authors. Students were asked if a particular author was shown in the display. The basement display window showed maps and international government resources printed by the U.S. government. Students were asked the title of a map on display. Students were given another opportunity to participate by guessing the number of pieces of candy in a display. For the first fair, we placed four paperback books in

a square and filled the center with candy and covered the entire display in clear plastic wrap. The person who guessed the correct number of pieces won the candy and the books. After the first event, we migrated to a very large clear plastic jar for the candy. This was hugely successful; students walked around the jar, used calculators, and almost begged to pick the jar up to help determine its weight. Our only restriction was that they could not touch the jar!

We also scheduled demonstrations for various products and services; for the first fair, displays were about wireless services, resources for students and library departments (Rare Books, Inter-library loan), and tours of the library every half hour. Students could decide how much they wanted to participate; if water and cookies was their choice, we were ok with that. We felt it was important for them to enter the library and meet the staff without any pressure to participate in tours or games.

How did we get the students into the library? Two staff members stood outside the library, handing out cold water and inviting the students inside for food, gift bags, and a chance to win prizes. When the students came into the library, they were greeted in the lobby by additional staff at tables with the cookies and gift bags. The bags were small brown lunch bags stamped with the library name and contained a pencil, bookmark, highlighters, sticky notepads and a few pieces of candy. In order to win prizes, students had to view the display cases and answer a question about each display.

The committee contacted local merchants to ask for prizes and we created our own prizes. One successful prize was a round clothes basket filled with soda, chips, cookies, and candy and certificates for free movie rentals. Other baskets contained different combinations of food or school supplies. Prizes donated by merchants consisted of gift cards, cash, and merchandise. The committee decided to keep track of merchants and not ask for donations from the same merchants every year. On the event days, we set up a poster in the lobby with the merchant's name and donated prize. This was an important decision as a merchant stopped by to see the fair and we pointed out his name on the poster.

Publicity and Volunteers

Publicity was important to the success of the "Welcome to the Library" fair. Eye-catching posters were placed in the lobby of the library. Flyers were put in dormitories, classroom buildings, and in the union building (a common gathering place for students). The student newspaper printed a notice about the event. Invitations were sent to the president and provost of the university. On the fair days, a banner outside the library announced the fair. The posters and flyers announced the event, including the days, hours, and location. We also emphasized the free food, cold water, and prizes. Our promotional activities paid off; for our first fair we had between 750 and 900 students participate in the event over the two days.

One of the reasons this event was a success was the volunteers. The staff and faculty at the library endorsed the idea and were happy to volunteer their time. One hour sign-up sheets were available to anyone who wanted to participate; they could choose to volunteer outside or inside the library. Several employees outside wore hats, costumes or very loud and colorful shirts; anything to get them noticed by the students walking by the library. Volunteers blew bubbles or played musical instruments to increase the chances they were noticed by students. Students who wandered in and partook of the food and events told us they really enjoyed the free items and the chance to break the ice with the library and its workers.

After the First "Welcome to the Library" Fair

The first thing the committee did was to take a deep breath and congratulate the volunteers and ourselves. The event was a big success. Then we started to critique the event and plan for the next year. We made the following changes: the event was scheduled for one day and would run from 10 am to 2 pm. The cold water was a success, but chips were more popular than cookies; the next year we offered the cold water and a variety of chips.

We also wanted to highlight more library services and resources the next year. We discussed incorporating funny or scary stories about the library during tours or talk about the furry, eight legged creature found by a staff member in the library. It was important to the planning committee to make the event different each year by featuring different services and resources—to keep the interest of the

students. The "Welcome to the Library" fair continued for two years with a budget of five hundred dollars each year and volunteers working to make the event a success.

A New Name

A new Dean of Libraries signaled a change in the "Welcome to the Library" fair when she directed staff to carry out her vision of what would become the Extravaganza, an event with a much larger budget and the required involvement of every library employee. Other changes included moving the event to September and adding an extra hour to accommodate the more elaborate plans. Information tables were set up all around the main floor to highlight more library services. The volume and quality of prizes was increased and the free food upgraded. The staff that had stood in front of the library distributing cold water was replaced by a live band and since 2010, with a DJ who blasts out hit after hit. Staff and student workers were now indoors, handing out goodie bags with prize punch cards and staffing information tables where they chatted about services or materials at their table displays. They mark punch cards that qualify the student who has listened to ten presentations about library resources or services, to win a prize. They have handed out enough free pizza, popcorn, and soda to satisfy the hundreds of students, faculty, and staff who come through the doors on a weekday in September to learn about library services.

Extravaganza's Evolution

The planning for the Extravaganza now begins much earlier and involves more staff. The small planning committee which had before handled all the details of the day's plan has now expanded its membership. The budget increased dramatically. Chairs were appointed and subcommittees were quickly formed and assigned responsibility for publicity, food, prizes, entertainment, handouts, determining the services that would be featured, and local arrangements such as floor plan layout, furniture arrangement, and technology needs. Unsurprisingly the extra volume of activity being incorporated into the event has resulted in a need for complete staff involvement to assure its success. One thing was as true in 2001 as it is in 2013: the library remains open for "business as usual" during these special events. If any employees aren't directly involved in Extravaganza activities they are working at the public service areas throughout the library, so all library faculty, staff, and student workers are involved.

Word quickly spread around campus that the library was the place to be and be seen on Extravaganza day. Many faculty now require their students to attend the event, either as part of the class for the week or as an opportunity to earn extra credit. The library provides an attendance card for the student to show the professor. Through the following years, other campus departments have eagerly requested table space to promote services they provide. Mindful of keeping the emphasis on library services, the dean developed the criteria that organizations that are granted a table must provide services that apply to all students, not to a particular group. For example, one such department who was accepted was Facilities Management which oversees the university's recycling center that opened in May, 1990, and has become a nationally-recognized community recycling center and education center to promote sustainability and recycling throughout the university, the city of Terre Haute, Vigo County, and the state of Indiana. Pens, lunch, and tote bags all made of recycled materials proved to be popular giveaways at their table. Students also have the opportunity to get to know the Associate Dean of Students and Ombudsperson who regularly staffs a table as do the staffs of Commuter Student Services, the Student Academic Services Center, and the Career Center.

Did We Mention Free Food and Prizes?

Refreshments were always served but have been upgraded from cookies, water, chips, hot dogs and soda, to what is very popular: pizza and soda. The food committee works with a local pizza business that accepts the challenge of delivering five hundred pizzas in three choices (vegetarian, pepperoni, and sausage) between 10 a.m. and 3 p.m., at a cost the library can afford. The Circulation Department's student workers are kept busy using the library's popcorn machine to provide popcorn throughout the Extravaganza.

An achievement celebrated by library staff and prize winners alike was moving from winning the candy from a "candies in the jar" and a few prizes to having numerous donations from local merchants and campus departments. Working from a list of previous and potential new donors, the committee divides the list in half and alternates years, contacting each half-list. Through the generosity of donors in recent years, several prizes are awarded every thirty minutes, beginning at 10:30 and wrapping up at 3:00 with the drawing for the grand prize of a Wal-Mart gift certificate. Since students do not have to be present to win, an important "wrap-up" duty of the prize committee is to contact the winners and make arrangements for their prizes to be claimed. Excel files are used to track the committee's work. One file is for donors, the other is for winners. Information for donors includes their names and contact information, an itemized list of what was given, and the date the dean's letters of appreciation were sent out. The winners' file includes their names & contact information, an itemized list of what each person won, dates of first and last contact reminders, and the date the prizes were claimed.

Reference Instruction Librarians' Participation

Reference Instruction librarians choose services to highlight at the instruction tables on the first floor. Over the years, presentations have covered library and information resources such as specific databases, electronic resources such as e-Journals and e-Books, online catalog instruction, Turnitin (a plagiarism check software), EndNote (a citation management software), LibGuides (subject-driven, mini databases that provide explanatory guidance and links to traditional and electronic information resources), and instructional services for undergraduate and graduate students. Other departments such as Interlibrary Loan, the Writing Center, Special Collections, and Archives showcase their unique services and collections.

How We Publicize to the World

The publicity committee begins their work at the end of Spring Semester by sending "save the date" announcements to the campus newspaper and other campus print venues. During the summer, the Extravaganza link on the library's website is updated with pictures from the previous year's event, including those taken of the top prize winners as they accept their prizes from the dean. From the beginning of Fall Semester in mid-August to the day of the event, publicity releases, table tents, posters, and flyers begin popping up all over campus.

Since 2008, distance learners have actively participated in an online version of Extravaganza. For the first year, the Distance Education librarian recruited a colleague and together, they devised a plan that engaged distance students through the creation of a meeting room in Adobe Connect, the use of the library's blog, the posting of videos and tutorials on YouTube, and by setting up an Extravaganza LibGuide which would point users to the videos, tutorials, and the distance learning LibGuide. One of the Extravaganza prizes, appropriately a FlipCam, was allocated to what was the "Online Extravaganza." Distance students signed up for the prize through the LibGuide. By doing this, the librarians could track "attendance" by cross-checking the registrant with a master list of distance students and also assure that the prize was won by a distance student. What was determined that first time was that the timing of the actual event, 10 a.m. – 3 p.m. Eastern Daylight Time, wasn't conducive to active participation and few people were available to log in to the Adobe Connect meeting. YouTube failed to upload some of the longer videos that the librarians shot, and they found it difficult to live-blog, shoot, edit, and post video, and run a chat, all at the same time. After assessing this first Online Extravaganza, changes were made that in the intervening years, have resulted in a steady increase in participation. The Online Extravaganza participation time has been extended by a couple of weeks, providing distance students with plenty of opportunities to interact with a wider variety of librarians. The signup time for prizes has also been extended and the librarians' chats about services and resources are taped in advanced, edited, and posted to YouTube.

Effects of Budget Cuts

In 2010, when the library was affected by university-mandated budget cuts and reductions in staff, Extravaganza activities were also affected. A few departments such as Interlibrary Loan and Government

Publications had provided manned tables with information during previous Extravaganzas but no longer had the employees to keep their department open and staff their table during the event. They created brochures about the departments and prominently displayed them on a table for visitors to pick up. Reference and Instruction also provided handouts on the services and resources their tables highlighted, but the budget cuts forced us to look at the value of the handouts. Based on the evidence of the quantities that ended up in trash cans, they were discontinued in favor of bookmarks that list the library's website, the department's contact information, and a few helpful URL's to get a research project started.

Conclusion

In 2001, the first "Welcome to the Library" fair was a two day, two-hour event planned by a three-person committee whose goal was to get the students inside the library to meet the staff and look at the resources available. Twelve years later, it has evolved into a one day, five-hour Extravaganza and is perceived by the fifteen member planning team to be a lighthearted, fun event that happens to have a serious underlying principle: to alleviate any anxiety a student might have about using a large university academic library. Yes, an event like Extravaganza is very time and labor intensive. Yes, it is expensive to produce considering rising food and entertainment costs, and the need to accommodate a growing student population. Although recent years have called for cost-cutting measures, such as fewer goodies in the gift bags and fewer handouts, the library employees are still able to create an event that students, faculty and staff look forward to every year. In fact, in 2012, the Extravaganza had over five thousand attendees. The entire focus of every library employee is on making the event a fun, entertaining and informative success for everyone who attends.

This event provides an opportunity for librarians and staff to introduce themselves to students and faculty. Conversely, it helps faculty put a face with a library liaison name and students interact with someone whose help they might later seek. The Extravaganza workers are inspired and encouraged by the students and faculty's enthusiastic reaction to the event. Although the event requires months of planning, the rewards are great and we have no plans to stop providing the students, faculty, and staff with the Library Extravaganza!

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LibGuides as a Marketing Tool

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Abstract

LibGuides are used successfully to gather resources for academic disciplines and individual classes. With LibGuides ability to gather social media resources onto one page the author chose to use this platform to launch a constantly updating newsletter.

The James C. Kirkpatrick Library uses a blog, facebook, foursquare, and a twitter account as tools to publicize events and resources. Each of the social media services reaches a different mix of users. Gathering output from each of them onto a LibGuide page creates a resource where users following one stream are exposed to the library's output on other streams. The ease of posting new content directly on to a LibGuide page creates an URL. This URL can then be used in the various social media with abbreviated information to bring interested users back to the more extensive article posted on the LibGuide.

Portable Display Kiosk and Signage Using the Raspberry Pi

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Abstract

Eben Upton created the credit card sized Raspberry Pi computer to stimulate teaching computer science in secondary schools. In less than one year over 1 million "RPi" computers have been shipped. This $35 dollar device runs versions of the Linux operating system which are stored on a standard SD memory card. The RPi includes a digital (HDMI) output that can be connected to most contemporary monitors. Older CRT's, including obsolete televisions, can also be connected via an RCA output port. Additional ports include USB, ethernet, and standard audio outputs. By installing and running freely available Linux based slideshow software, this tiny device can be attached to a monitor to create a portable "plug and go" kiosk for presentation purposes. Presentations can be changed by merely swapping out the SD memory card, and potentially even via wireless network connection.

Overview of the Raspberry Pi

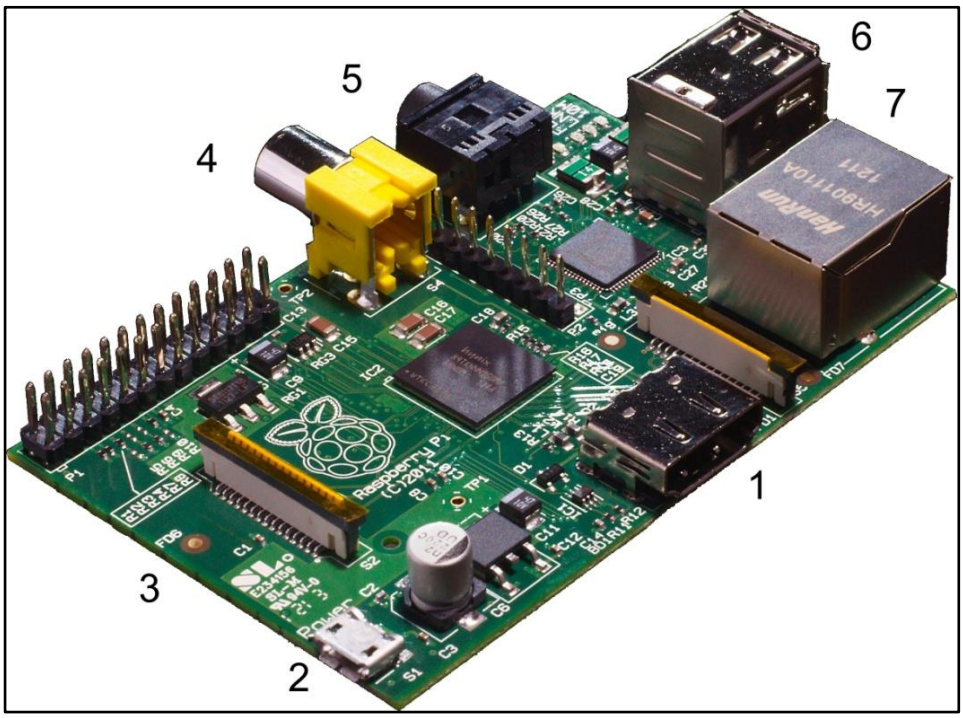
The Raspberry Pi (RPi) computer was created in the UK by the Raspberry Pi Foundation under the direction of Eben Upton. Though the impetus for its creation was to manufacture an inexpensive platform for promoting the study of computer science in schools, it has rapidly become adopted by a wider array of makers, hackers, users, and librarians. White Plains Public Library has explored the possibility of using RPi's as inexpensive OPAC terminals (Enis).

There are currently two versions of the Raspberry Pi. The Model A version has 256 Mb of onboard RAM, a single USB port, and no LAN port. The Model B version (used herein) has 512 Mb of RAM, dual USB ports, and a LAN port. The former requires less power than the latter in order to run.

The credit card sized computer generally utilizes inexpensive hardware commonly found in cell phones. All inputs and outputs are standard formats (e.g., HDMI) including power supplied via a microUSB port using a standard cell phone charger (see fig. 1). Using the Raspberry Pi, existing equipment, cables, monitors, etc. can be repurposed rather than purchased anew.

The Raspberry Pi Foundation hosts a robust web site at www.raspberrypi.org with full information, documentation, community forums, and FAQ's about the RPi. One of the first items in the main FAQ is "Where can I buy one?" The Raspberry Pi's referenced in this paper were Model B boards purchased from MCM Electronics, one of the major vendors in the United States. The Raspberry Pi Foundation caps the cost for a Model A board at $25, and the Model B board at $35 (though shipping and handling will add to your total).

Additionally, a growing number of works about the RPi are being published in the popular press covering the technology for novice to expert users (Richardson, Upton).



1. HDMI out
2. 5 volt via MicroUSB
3. SD card
4. RCA video out
5. Audio in/out
6. USB in
7. LAN

Fig. 1. Raspberry Pi Model-B Rev 1 (512 MB RAM).

Setting up the Pi

Installing the Operating System (Raspbian)

The Raspberry Pi operating system (OS) is stored on a standard SD memory card which is inserted into a slot on the bottom of the RPi board. At the Raspberry Pi web site, the "Downloads" section gives information about, and links to, downloads of various compatible OS's. The most commonly used OS is called "Raspbian" and is based on the Linux "wheezy" Debian distribution. Creating an SD card with an OS can be done using Windows or Macintosh computers.

A free program called Win32DiskImager was used for the kiosks referenced in this paper. To create the OS on the SD card first download the executable program Win32DiskImager. Next, download the desired OS (in this case, Raspbian) from the Raspberry Pi site. Finally, run Win32DiskImager specifying where the downloaded OS image resides, and the location of a blankly formatted SD card. Win32DiskImager will burn the Raspbian OS image to the SD card.

The SD card is then inserted in to the SD card slot in the Pi. Plug in a 5 volt cell phone charger with a microUSB port to the RPi, connect it to a monitor with either an HDMI or standard RCA video input, plug in a USB keyboard and mouse, and the system will do an initial boot up. During initial setup you should specify "Start desktop on boot." Once finished, you will have a fully functioning Linux computer with a graphical user interface (LXDE).

The RPi does not support the older VGA video connections. However, terminals with DVI connections can be used with an inexpensive HDMI to DVI adapter.

Connecting to the Internet

The RPi can connect to the Internet via ethernet cable plugged directly into your network. Also, with an appropriate wifi "dongle" (plug into a USB port at bootup) the Raspbian distribution includes a standard desktop wifi configuration tool which can be used to create a wireless connection to the Internet. Connecting to the Internet is required in order to install the software necessary to create a working RPi kiosk.

Installing Additional Software

The Advanced Packaging Tool (APT) is a standard linux software installation program which is included with the Raspbian OS. In order to use APT you must be connected to the Internet. The RPi's installed OS includes a linux terminal program called "LXTerminal." Open an LXTerminal window and type in the following commands in sequence (note: "sudo" allows the user to act as a superuser or root user necessary for installing new software):

```
sudo apt-get update
sudo apt-get upgrade
sudo apt-get install libreoffice
sudo apt-get install qiv (install in STANDALONE mode when prompted)
```

Running"sudo apt-get update" insures the latest software updates for your OS are installed. This step could take 5-20 minutes, or longer, to finish.

Running "sudo apt-get upgrade" will retrieve and install extra software needed to run the various kiosk programs. This step could take 5-20 minutes, or longer, to finish.

Running "sudo apt-get install libreoffice" retrieves and installs the open source MS Office clone software called "libreoffice." This step could take 5-20 minutes, or longer, to finish.

Running "sudo apt-get install qiv" retrieves and installs the qiv slideshow presenting software. This step should take less than 5 minutes to finish.

Modifying the Pi for Kiosk Mode

A text editor is used to modify existing Raspbian configuration files installed on the RPi. Under the "Other Software" choice on the desktop menu system, select the "Open Terminal as Root" option. This allows everything modified by the text editor to be saved as the root user. Once a root terminal session is open, type in "pico" (no quote marks) to start a standard "pico" text editor. You will next modify the following files as the root user to create a kiosk.

The first thing to do is to turn off screen blanking so that the kiosk session will run uninterrupted.

Edit this file: /etc/lightdm/lightdm.conf
Add this line: xserver-command=X –s 0 –dpms

The next thing to do is to modify the "autostart" file which tells the OS what to do when the system starts. This is where you will choose what software to automatically invoke for running a kiosk presentation.

Edit this file: /etc/xdg/lxsession/LXDE/autostart

Add this line: @qiv –fismd 5 /home/pi/slides/*.*
put images for slides in the "slides" directory

Or

Add this line: @soffice –show slideshow.odp
put the libreoffice slideshow in /home/pi directory – make sure it
advances automatcially and loops

For the former, the qiv program will automatically look for images in the /home/pi/slides directory, and cycle through and display each image with a 5 second duration. Changing the number from 5 to any other

number will change the duration in seconds of each slide displayed. You may need to create images for slides that are appropriate to the size and resolution of the monitor used in your kiosk.

For the latter, LibreOffice will look for a file called slideshow.odp in the /home/pi directory and play that. You will have to create a LibreOffice slideshow that is designed to loop infinitely. Using the LibreOffice presentation software, Impress, open the Slide Show menu > Slide Show Settings > Type=Auto, Time 0.00.

Conclusion

Why do this? Kiosks and kiosk software aren't rocket science. But, learning how to use the RPi should open up many possibilities beyond this paper. Experienced users could create automatically networked updates; touch screen kiosks; spur of the moment temporary signage for exhibits. Creating a simple display kiosk is a useful exercise, but is hopefully only the first step in exploring the myriad other uses for the intriguing Raspberry Pi computer.

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Playing Cards for Information Literacy: An Active Learning Experiment

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Abstract

Engaging students during one-shot library instruction sessions requires both creativity and effort. Even when the session is designed for a particular assignment, students' information needs may not be immediate enough to inspire active participation in class activities.

Multiple studies have demonstrated that active learning increases students' understanding and retention of information, and there is a great deal of literature on the implementation and effectiveness of specific techniques. Much of the recent literature, especially related to library instruction, has focused on technology (e.g. audience response systems, social media, interactive whiteboards, and multimedia presentations) as the primary vehicle for active learning initiatives.

The essential ingredients of active learning, however, are low-tech and free: a collaborative attitude, an accepting and encouraging atmosphere, and acknowledgement of epistemological and procedural diversity.

In order to engage students in active learning, I designed an experimental framework for my instruction sessions: a set of information literacy cards that resemble traditional playing cards and require the students to interact with the material (and each other).

Introduction

Design of a comprehensive student success model at South Dakota State University began in the fall of 2009, and its incremental implementation is expected to be completed in the fall of 2015. One aspect of this student success model is the First Year Seminar (FYS), which was fully implemented in the fall of 2012 (South Dakota State University).

These seminars are intended to help students adjust to campus life and bridge the gap between secondary and post-secondary education. Due to its connection with critical thinking and academic excellence, information literacy was included in the global outcomes for all FYSs. In the spring of 2012, three librarians from H.M. Briggs Library worked together to develop example session plans. Two of us met with the FYS instructors to present these ideas and offer our help in tailoring them to their course or developing other ideas they had.

The instructors of the University College FYS, UC 109, elected to collaborate with one of my colleagues at Briggs Library to design an information literacy activity for their course. The Information Services Librarians helped teach the sessions, 20 in the fall of 2012 and 18 in the spring of 2013.

Before teaching my sessions of UC 109 in the spring of 2013, I had an idea about a different way to present the lecture material and engage students: I developed a set of cards, each stating a different information need, and I asked students to demonstrate for the class how to find the needed information.

Review of Relevant Literature

Active Learning

> Learning is not a spectator sport. Students do not learn much just by sitting in classes listening to teachers, memorizing pre-packaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences, apply it to their daily lives. They must make what they learn part of themselves. (Chickering and Gamson 4)

Although active learning techniques have existed as long as humans have been teaching and learning, the theory of active learning developed in the 20th century as a reaction to some of the problems encountered in the modern classroom: students' lack of engagement, failure to build connections between new and existing knowledge, poor retention of information, and separation of assessment from learning.

The term "active learning" covers a wide variety of techniques and approaches to teaching, and though there are many different definitions, Bonwell and Eison's definition is a good starting place: "strategies promoting active learning [can] be defined as instructional activities involving students in doing things and thinking about what they are doing" (iii).

As more instructors add these techniques to their repertoire, related educational theories, such as constructivism, are refined, and publications on them multiply. Some works outline a range of active learning techniques and their use (Bonwell and Eison; Allen), but many more focus on specific techniques, such as the constructivist problem-based and discovery learning, peer learning, and game-based learning.

Constructivism, Problem-Based Learning, and Discovery Learning

Constructivism is an epistemological theory of education that postulates that knowledge is not simply communicated from instructor to student, but that students actively construct their own knowledge, using observations and experiences to build new knowledge on the foundation of their existing knowledge (Cooperstein and Kocevar-Weidinger).

Problem-based learning (PBL) and discovery learning are very similar in theory, since they are both based on constructivism, but their format and application differ somewhat.

PBL was developed for subject knowledge acquisition in the medical sciences and involves students working through the problem-solving process to arrive at a solution for a given scenario. Students develop critical thinking and problem-solving skills, in addition to learning the subject material. This type of active learning promotes deeper understanding of the subject and discipline, and it has proven to be better suited to medical education than rote memorization (Wood).

Since this method of teaching and learning is free-form, and students need time to explore and room to make mistakes, ways of applying the technique to one-shot library instruction sessions are not obvious. Nevertheless, several guides to adapting the technique to library instruction are available (Enger et al.; Macklin; B. Kenney). Librarians have also written about their experiences, both successful and unsuccessful, with PBL in library instruction (Cheney; Pelikan; Munro; Cook and Walsh).

Discovery learning also focuses on student exploration as the agent of learning, though the activities tend to be less structured than PBL and are not necessarily focused on solving a specific problem.

Though discovery learning is not as well represented in the literature as PBL, the opportunity to work with students on critical thinking and inquiry is appealing to librarians, and attempts have been made to adapt discovery learning to library instruction (Bicknell-Holmes and Hoffman; Cooperstein and Kocevar-Weidinger).

Peer Teaching / Learning

Peer teaching is another active learning technique, one that requires students to interact with and learn from each other. Since the emphasis of this approach is on personal interaction, applications of peer teaching may be either high-tech (Holderied) or low-tech (Thompson, Switky, and Gilinsky; Rubin and Hebert), and there are a multitude of ways to employ this technique.

The benefits to students vary with the exact activity developed. Thompson, Switky, and Gilinsky observed improvement in student engagement and oral communication skills, and Rubin and Hebert saw social and intellectual growth in their students. They also theorized their students gained a greater understanding of teaching and learning, which may result in them being more active and engaged in their future studies (Rubin and Hebert).

Although peer learning benefits students on its own, it is often combined with another active learning technique, such as PBL or discovery learning, to augment the benefits of each. In fact, every problem-based and discovery learning study included in this review contained or recommended some aspect of peer learning.

Game-Based Learning

Integrating game play into instruction is quickly growing in popularity. Although low-tech games, such as crossword puzzles (Massey, Brown, and Johnston) and Jeopardy (Leach and Sugarman; Walker; Bicknell-Holmes and Hoffman; Massey, Brown, and Johnston), have been used in active learning for some time, educational games are increasingly digital or online (Broussard; Markey et al.), and their creators are drawing on traditional video games for inspiration (Schiller).

Although technology in instructional games may prove necessary to keep the attention of millennials, technology has not proven to be an essential ingredient in other types of active learning: it is the changes in pedagogy associated with active learning that cause improved learning, not the introduction or use of technology itself (Holderied).

Inception and Design of Playing Cards

When I received our lesson plan for the spring 2013 sections of UC 109, which included both a lecture and hands-on section, I started thinking about ways I could engage and involve the students in the lecture. I had been reading about different approaches to active learning and was eager to experiment with them.

Student evaluations of our instructional sessions for introductory speech and English classes frequently indicate that they are very similar. Since the UC 109 instruction session was to cover several of the same topics, I was also looking for a way to make this session distinctive and memorable, as well as helping the students assimilate the new information.

I came up with the idea of designing a set of playing cards, each listing an information need similar to those they would face during their time at SDSU. Students would be asked to draw a card from the deck and demonstrate for the class what they would do in that situation.

After developing a set of topics to be addressed during the lecture, I ordered them by level of difficulty, beginning with the easiest, and matched them with one of the ranks found in a deck of cards (i.e. Ace, 2, 3, 4,…). I then wrote prompts for each level that addressed the corresponding lecture topic, a selection of which are included in Table 1.

Table 1
Lecture Topic, Rank, and Prompt of Selected Playing Cards

Lecture Topic	Rank	Prompt
Library Website	Ace	You need to find out when the Library is open.
		You want to reserve a group study room for next week.
Ask a Librarian	2	You can't find the book you need on the shelf.
Catalog Searching	3	You want to find a book about violence in the media.
		You need to consult the Oxford English Dictionary.
Finding and Searching Databases	4	You are taking a psychology class, and your instructor told you to search PsycINFO for articles.
		You need to find articles about the most recent State of the Union Address.
Using the Journals List	5	Your Instructor has recommended that you browse recent issues of the *Sioux Falls Argus Leader*.

		Your instructor told you to read an article: Lyons, C. (1985). The migration of the monarchs. *Conservationist*, 40*(2)*, 38-41.
Interlibrary Loan	6	You want to read the book *Girl With a Pearl Earring* by Tracy Chevalier. You want to read an article: The travelling monarch butterfly. (2006). *ChickaDEE*, 28*(6)*, 14-17.
Finding a Book on the Shelf	7	Careers in the Dairy Industry: Farming, Production and Food Science Careers Chasing Monarchs: Migrating with the Butterflies of Passage

Once I decided on the content of the cards, I designed a template for them in an open-source SVG editor called Inkscape. Because I wanted them to resemble traditional playing cards as much as possible, I made them the appropriate size (2.5" by 3.5"), assigned a suit to each card, and cropped an image from ARTstor to use on the reverse (paisley fabric). Examples of the card fronts and card back are included in Figure 1.

Fig. 1. Two examples of playing cards created for this activity (had paisley fabric design on the cards' reverse.

Implementation and Further Development

I taught instruction sessions for seven sections of this class during one week. Five of the six UC 109 instructors were represented in my assigned sections.

After introducing myself and the goals for the session, I walked around the room and asked students to draw a card from the deck. Before the first session, I prepared a card for each student, but during the course of the class, it became clear this was far too ambitious for a single fifty-minute session. I weeded and revised the deck for the next classes, and I continued doing so throughout the week until I only had eight cards for the final session. Since there were far more students than cards, I did ask for volunteers to pick a card in the later sessions; the instructors were helpful in encouraging volunteers.

Students were called to the front of the room based on the number and suit of the card they had drawn, asked to read the card to the class, and invited to demonstrate from the instructor computer what they would do if they were in that situation.

There are many reasons that students are unwilling to speak up or actively participate in class, including lack of preparation, lack of understanding, and fear of disapproval (Kenney and Banerjee). Although it may at first seem counter-intuitive, my method of putting students on-the-spot was designed to alleviate some of these fears. All of them were in the same position, unprepared and nervous, and they could all sympathize with each other. I also made it clear at the beginning and throughout the session that if they did not know something, their fellow students and I would help them figure it out: the process of finding the answer was more important than simply knowing the "right" answer.

Although I did not lecture to the class in the traditional sense, I facilitated the session by calling each card in a predetermined order, encouraged the class to help their peer when s/he had trouble, and asked follow-up questions to highlight alternate paths to the same destination and useful search features.

For example, the student drawing the card "You want to find a book about violence in the media" would search the catalog for those keywords, and I would ask how s/he would go about finding a very recent book or how s/he would narrow the search to books that can be checked out (i.e. those located in the circulating collection). Many of the students had seen these search limits demonstrated in their introductory English class, but reminding students of their existence and relating them to a specific task helped them realize and remember their usefulness. Those students that had not previously used the catalog were introduced not only to the existence of these specific search limits, but also to the idea that they should familiarize themselves with a system's interface and capabilities.

While working through the primary and follow-up questions, I purposefully asked about or pointed out the multiple ways of successfully accomplishing their goal: there is rarely a single "right" way to find information. There are several ways to find out when the library is open. There are several ways to find and consult the *Oxford English Dictionary*. There are even multiple ways users can modify a catalog search to locate the most recent books on a topic.

As second semester students at SDSU, virtually everyone in these sessions had used our library before and had some experience navigating our website, catalog, and databases. People often develop favorite methods as they work, and trying to teach anyone the one "right" way to do something, when they already know and like another way, is seldom successful. During these sessions, I approached those junctures as teachable moments, instead of instantly correcting students that ventured off the path I had planned. Embracing alternate processes and methods included students and their thoughts in the content. Consequently, each session was different from the others, though they all had similar content and the same collaborative atmosphere.

Reflection and Reaction

At the end of the session, students were asked to reflect on their experience and write about what they knew about the library before the session, what they learned, and what they still wanted to know. The UC 109 instructors collected these reflections, read and summarized them, and returned them to the librarian that taught their sections.

The instructors reacted favorably to my approach to the lecture, and though most students were also positive about the activity, there were some complaints. One student thought the session was disorganized, which is understandable, given the activity was not intended to be highly structured. Another thought my questions were too easy and it was patronizing; although this response would seem to indicate the level of difficulty should have been higher, the remainder of this student's reflection demonstrated a significant lack in understanding of the library, its organization, and function.

Since the content covered during this session was fairly similar to our introductory speech and English instruction sessions, it is not surprising that several students mentioned they had heard much of the

information before. Some of them, however, mentioned this fact in order to comment on this session being different from or better than previous sessions:

> I enjoyed this visit and learned a lot. I liked this library visit because it was a lot different in comparison to my other visits. [student reflection]
>
> I thought the presentation at the library went very well. It was a good idea to hand out cards and getting students involved rather than just talking to us and showing us all of the different features. It kept people engaged and paying attention. [student reflection]
>
> I have to be honest, I was not one bit excited about attending the library session for this class. I have done it a number of times already, and I feel like each session is exactly the same as the last. I understand that this information is helpful for new students, but it gets extremely old when one has to listen to it multiple times. Luckily, the session was not as bad as I thought it was going to be.
>
> Like I said I had attended these library sessions a number of times, so a large amount of the information Michelle [sic] Clark lectured on was information that I already knew. I did however enjoy that she engaged the class and had us participate in the examples of how to use different resources. I had never experienced that in a library session and I feel like it is a way of learning that could be helpful to new students to help them remember the different resources better. [student reflection]
>
> This was not my first trip there to learn about the library. I have taken courses in the past that did a similar class and book find. This experience was slightly contrasted previous visits. I feel like the librarians have made more of an effort to get the students more involved in the class in an attempt to help them learn more about the library and to have a little fun with the experience. [student reflection]

I was very pleased to see these student reactions included in their reflections on the session, because they were not specifically asked to write about my activity or the presentation of the material. Even those that were not entirely flattering are still encouraging, because the activity prompted those students to be interested, engaged, and critical.

There were a couple bumps in the activity, many of which related to the number and type of questions on the playing cards, and I worked these problems out as I refined the questions and process throughout the week. Overall, though, I think the sessions accomplished their goal: to orient students to the library and its resources.

Future Direction

My next step with the project, which is currently underway, is to develop a full deck of cards that can be used in any number of courses by aligning the topic areas and questions with the ACRL Information Literacy Competency Standards for Higher Education, instead of the goals and objectives of a particular class. Cards can then be selected from the full deck for use in a class based on which standards and objectives are appropriate for the instruction session.

I also plan to develop scenarios, similar to those found in the highly directed adaptations of PBL (B. Kenney; Munro) and discovery learning (Cooperstein and Kocevar-Weidinger), in order to provide a unifying framework for the questions and connect them more closely to students' situation and needs. This may also help focus the activity on the higher levels of Bloom's taxonomy, those related to analysis, synthesis, and creation, which may increase the efficacy of active learning (Allen).

When I designed and implemented this activity in UC 109, my assessment of its efficacy was limited to formative assessment, specifically student responses to the questions and their reactions to the discussion, which told me whether students understood the material. As I develop this activity further, I will be designing a more effective assessment instrument, one that will allow me to determine how the activity itself affects student learning.

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Libraries Without Walls: Extending Service Beyond the Physical Building

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Abstract

The library world is concerned about maintaining relevancy in an increasingly digital world. This presentation will demonstrate the various and inexpensive ways that you can reach out to your campus community. For the past year, Calvin T. Ryan Library has created a satellite office on the border of the campus. Due to the building's location, the student and faculty populations may feel distanced from the library and its services.

Collaborating with the Dean of the College of Business & Technology, a librarian has staffed the office for a few hours each week. Reference services, as well as information regarding tutoring and the writing center, (housed within the library), are available for both walk-ins and appointments.

In addition to the satellite office, the library has upped its marketing to a new high! The reference collection was moved to an alternate area and the main floor is open to students to visit, study, meet, etc. Library staff has partnered with a variety of groups, including Residence Life, Administration, Student Affairs, The Center for Teaching Excellence, The American Democracy Project, and area high schools.

Library staff will continue to explore more new ideas to bring and keep the library in the spotlight. Examples will show these ideas add very little, if any, pain to the budget!

Marketing the Library

It may seem like a new issue, however, throughout the past several decades librarians have been constantly barraged with the idea of maintaining relevancy in an increasingly technological society. This relevancy affects all different types of libraries and applies to faculty, students, staff, and community. Sometimes simply heightening visibility can begin the conversation. When the University of Nebraska at Kearney advertised for the "Government Documents Librarian" position back in 2010, the position of "Special Projects Librarian" was also attached. During the interview there was no set vision as to what this added position would entail. In time, however, marketing the library became one of the "special projects." Because the library didn't have a marketing budget, or at least not a set budget, it became necessary to get creative. So much information is "out there" regarding marketing libraries. Even simple Google searches will set libraries and librarians on a path to success. Several partnerships within my university have made it possible for this library to reach out to the campus community, increasing awareness and visibility.

Partnerships: Residence Life

One of the first steps we took was to get an idea of who we wanted to reach and what the message should accomplish. Informal conversations between the Director of Residence Life and the Dean of the Library resulted in the idea of advertising the library within the Residence Halls (see figs. 1 and 2). We decided to use "Louie the Loper" for our Residence Hall campaign. Louie is the school's mascot and, as such, is highly recognizable on campus. Louie is seen below standing in front of the library.

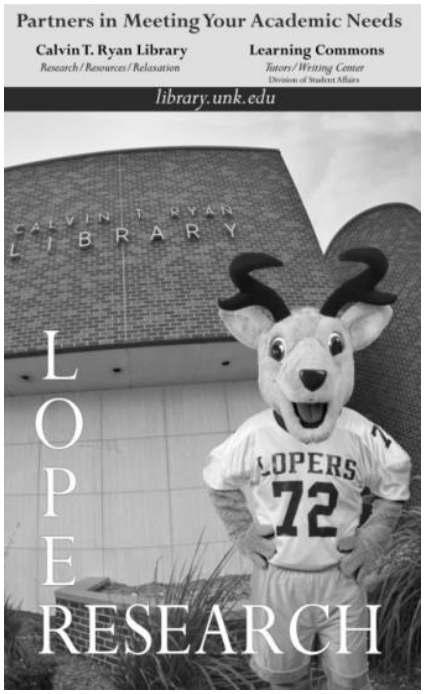

Fig. 1. Residence Hall Poster

Fig. 2. Residence Hall bookmark

The *ALA Store* sells the "READ Design Studio", which allows users to create their own *READ* posters. (American Library Association) At around $200 for the CD-ROM package, this was a good investment for the library. I will caution that this software isn't as seamless to use as it appears to be. It hasn't worked out to be a software program that just anyone can pick up and use. While there was a learning curve with the software, talented staff stepped up and showcased their skills!

Posters were displayed on each floor in each residence hall on campus and a bookmark was placed in each resident student's mailbox. This amounted to 56 posters and 2000 bookmarks. Posters and bookmarks were printed and cut in-house; the main cost being paper, ink cartridges and student work-study help.

At the same time, the academic buildings were targeted with another handout. This one was made available by ProQuest as part of its promotional package. (see fig. 3) Numerous others are available on the website and I will be tapping into more of these resources in the upcoming months!

Fig. 3 ProQuest promotional package handout

Partnerships: Administration

Not long after the posters were added to the Residence Halls, UNK Chancellor Doug Kristensen was invited to participate in a photography session. These photos (see figs. 4 and 5) would be incorporated into more READ posters to be unveiled during National Library Week. Publicity from UNK's student newspaper, *The Antelope,* helped mark the event. Posters hang in a variety of different buildings on the campus.

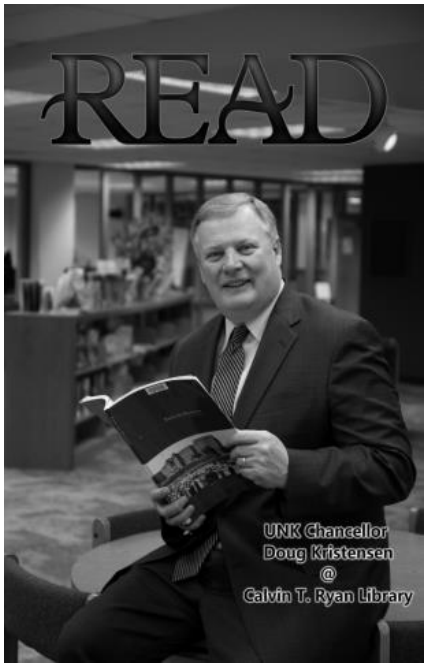

Fig. 4 Chancellor poster 1

Fig. 5 Chancellor poster 2

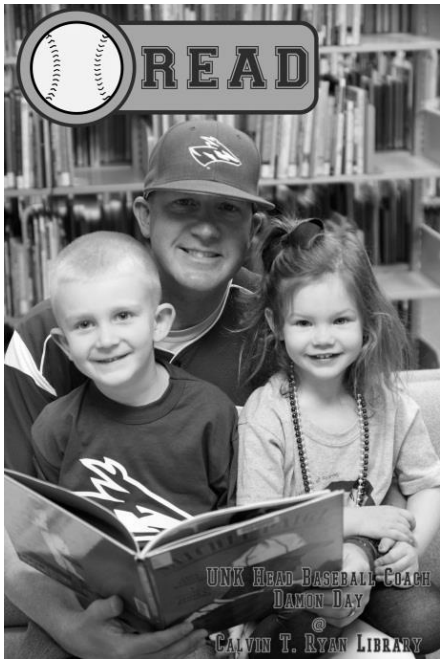

Fig. 6 UNK Baseball Coach Poster

Partnerships: Athletics

In spring 2013, UNK Baseball Coach Damon Day was approached with the idea of doing a READ poster for the library. He was beyond enthusiastic about the opportunity and asked if his children could be in the poster as well. The results show that it was a win/win situation. With each READ poster we do in the library, we make a commemorative 8 x 10 picture for the volunteer subject(s). In addition to the library, this poster hangs over in the Health, Physical Education and Recreation Building.

Partnerships: Office/Service Staff

What about office/service staff, i.e. secretaries, assistants, janitors, maintenance, etc.? Do they use the library? Do they know all the amazing materials we have, just waiting to go home with them? Because Teacher Education is one of the University of Nebraska-Kearney's priority programs, the library has a tremendous number of Pre-K – 12th grade juvenile literature, high school textbooks, manipulatives, and educational games, as well as DVDs and CDs! Staff Senate granted a short presentation highlighting the services and materials available to all staff. They encouraged the senators to go back to their departments and spread the word to their co-workers.

Partnerships: Departments

One of the bright spots that come from attending various conferences is the wealth of information that can be gained from others' experiences. In spring 2012, I attended the Nebraska Library Association College & University Section's spring meeting. Several librarians from the University of Nebraska-Lincoln had successfully taken reference services to various buildings around campus. This inspiring session has led to a library satellite office on the far side of campus.

The campus has been historically divided into the main campus and "West Campus". As buildings have been added, this gap has closed considerably, however there is still a divide. Many students over in the West Center building are business majors and spend the majority of their time away from the main campus.

The purpose of the satellite office is to close that gap. Dr. Tim Burkink, Dean, College of Business and Technology, has dedicated an office for the library's use. Dr. Janet Wilke, Dean of the Library, approved

the purchase of a laptop for the office. At this point, the library only staffs that office a few hours each week. We have not received a lot of questions yet; however, the Dean and the faculty in the West Center building have received us with open arms and they give referrals whenever possible.

Attendance at departmental meetings, when invited, have given me unique opportunities to address the departmental faculty as a group, discovering what they need and what they see their students need. The librarians want the students to use the library's resources so that the faculty can see a better product. To that end, the library faculty can assist with information literacy. It's not only important to be able to FIND the resources, but also to be able to evaluate and use the resources effectively.

Partnerships: Faculty

Embedded librarianship has become a buzz phrase in the past couple of years. According to Rebecca Hedreen at Southern Connecticut State University, the concept of embedded librarians originated with the Iraq war. Embedded journalists became the norm during that time. She states that an embedded journalist had better access to the stories in the same way that an embedded librarian can provide students with better access to the library's resources.

There is no one way to be an embedded librarian. It is a mutual decision between the librarian and the faculty member how they want that relationship to unfold. My personal experience has involved being a part of the class via Blackboard. The only questions I answered were ones directed toward the research papers. My philosophy is that I am not there to teach the class, but only to help with resources. Librarians can be more accessible to the students through Blackboard than anywhere else. There is a spot there where students can connect with me, or if they prefer privacy, they can contact me directly via e-mail.

Other librarians have become more involved in the class and actually participate as a co-instructor. They have also worked with faculty to collaborate and create research assignments that will utilize actual library resources. It is imperative the parameters of the teaching relationship be established prior to the class beginning. Both partners need to be comfortable with their level of authority and instruction responsibilities. Harper College Library offers several possibilities for embedded librarians. In addition to the normal research or library questions, students deal with access issues. It is helpful for a student to have a contact person within the library when such issues arise.

At the end of the day, the important thing is to BE THERE! However and wherever, let them find you!

Partnerships: Student Affairs

The Learning Commons was one of those things that came about by serendipity. The Deans of the Library and Student Affairs were seated next to each other at a meeting and started a conversation. From those beginnings, the Learning Commons was born. A good portion of the second floor of the library is a student-centered space and targets the needs of students through several facets: peer tutoring, language tables, supplemental instruction and the writing center. For more information on the learning commons concept, see: http://www.unk.edu/academics/AcademicSuccess/What_is_a_Learning_Commons_/>.

UNK librarians (Dr. Ron Wirtz and Jon Ritterbush), as well as Learning Commons staff, (Keri Pearson) have delivered many presentations highlighting this amazing service! The picture below illustrates the partnerships that were required to make this service a reality.

Conclusion

The big questions for me were **where** are the students and **how** can we access them? We want to be where they are, whether it is physically, online, in social media, or Blackboard. There are so many different ways that we, as librarians, can be accessible to our faculty, staff, students, and the community at large. It is quite possible we are anticipating different needs than our customers require. Ask questions. Sometimes those questions will need to be leading. Use the opportunity to conduct a reference interview regarding these needs. They may not always know if their wants or needs are attainable. Chances are we can find a way to make it work for them.

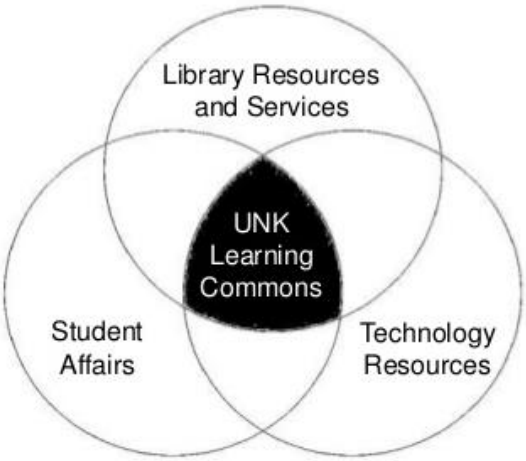

Fig. 7 Learning Commons model

Above all, just put yourself "out there." While my position has again morphed into something a little different, I still keep an eye open for new marketing ideas. That opportunity to be available is always at hand. No matter your role in your library, it is your job to sell your library to potential users. YOU sell the library! Not only within the building itself, but on campus, attending campus activities, and even throughout your interactions in the community.

"It is the personal encounters that hold value, whether they are face to face or virtual. Each encounter is an opportunity to share our expertise, our resources, and ourselves in a way that allows our customers to savor the experience and go away wanting more" (Sass 38).

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Using Event Tracking to Enhance Library Web Interfaces

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Abstract

Event tracking allows for more fine-grained tracking of clicks, searches, and other user-initiated actions than is available through typical web analytics like page view and visit statistics. This session describes how staff at the University of Kansas Libraries have used event tracking in Google Analytics to monitor the Libraries online presence broadly, including the use of specific features of the Libraries website and third-party online applications, including the website homepage, our online catalog, a databases A-Z list, and a discovery system. Considerations discussed include the technical skills necessary to implement event tracking, challenges in tracking events on hosted systems, and how we've used event tracking to inform our efforts to assess and improve our services.

Review of Literature

Libraries have long recognized the value provided by analyzing the use of their websites. As online services have grown in importance to libraries, this value has increased. Turner notes that as providing access points for e-content becomes a primary function for library websites, "it becomes more and more important for libraries to work hard work to maintain a website that provides effective access points and information about these electronic information resources" (262). A web analytics program can provide library staff charged with managing websites with powerful and insightful means for ensuring the effectiveness of their websites.

Black defines web analytics as "the objective tracking, collection, measurement, reporting, and analysis of quantitative Internet data to optimize Web sites" (1). Loftus identifies two primary functions of a successful web analytics program: "to illustrate the value of the Web site, and to provide practical intelligence to the site's managers and content owners to use in improvements to the site" (2). This session will focus on the latter goal, demonstrating how event tracking can be used as a flexible and convenient method for gathering such practical intelligence.

Traditional web analytics using server logs can provide a basic picture of how a library website is used, including measures such as visit timing and lengths, technology used, and popular content (Black). However Turner notes that measures such as the virtual website visits reported as part of the annual Association of College and Research Libraries survey, while useful, are crude and argues that libraries should borrow from the e-commerce world to create specific Key Performance Indicators (KPIs) for library websites that can be closely tied to defined organizational goals (263). Event tracking is well-suited to tracking such indicators.

The literature on web analytics and library websites consistently stresses that web analytics alone are an insufficient means of understanding how a website is used or evaluating its effectiveness and should be supplemented by methods such as user interviews, user surveys, and usability testing (Loftus 6). As Black summarizes: "The statistics are the trail left by the user, but they do not explain the motivations behind that behavior" (10). The experience of the University of Kansas Libraries has been that interplay between methods is two-way; web analytics can both illuminate issues to be further probed by methods such as usability testing and be used to evaluate the effectiveness of changes made as a result of user testing or interviews.

Event Tracking in Google Analytics

Google Analytics (http://www.google.com/analytics/) is a free web-based tool for tracking web analytics. After registering for a Google Account, website managers create a profile for the website they wish to

track. The tool provides a tracking code and a snippet of JavaScript code that must be added to each page of the website that should be tracked. Many popular Content Management Systems have features to simplify adding the tracking code. Google's Help documentation provides further details. The following discussion of event tracking assumes that a Google Analytics profile has been created and that the initializing tracking code has been added to all pages where events will be tracked.

Unlike web analytics methods that use server logs as data, Google Analytics creates data based on user interactions within the browser. Server logs will often undercount page views (defined as a user viewing a page in the browser) due to browser caching. When a user makes a repeat visit to a page, her browser will commonly use a locally saved (or "cached") copy of the page rather than requesting the page again from the server; because the server never receives a second request for the page, that interaction is not included in the server log. It is thus invisible to log-based analytics. Because Google Analytics uses JavaScript code in the browser to track page views when the browser loads the page, whether from the cache or from a server requests, it can yield more accurate counts.

Such in-browser tracking is not full-proof: errors generated by invalid HTML or other JavaScript code running on a page can prevent page views from being tracked. Browser add-ons designed to protect user privacy, such as the Ghostery add-on for Firefox (https://addons.mozilla.org/en-us/firefox/addon/ghostery/) can also prevent page views and events from being tracked. It is important for consumers of web analytics data to keep in mind that any method of web analytics will produce an approximation of user behavior, not a 100% accurate reporting.

The in-browser, JavaScript-based method used by Google Analytics provides opportunities for tracking more than simple page views. In this method, a page view is simply an event that occurs in the browser. The framework readily allows virtually any other "event" that a user initiates in the browser to be tracked as well. This ability is especially powerful in the post-Web 2.0 environment, where dynamic JavaScript widgets such as tabs and accordion menus and the dynamic loading of content via Asynchronous JavaScript and XML (AJAX) requests have been common. The widespread adoption of these practices means that users now do much more on a given page than simply follow links to a different page and thus reduces the explanatory power of tracking page views as a method for understanding user interactions with a website. In what follows, I will provide examples of such in-page events, provide the basic technical steps required to track them, and demonstrate how the University of Kansas Libraries have used the resulting to data to inform decisions about enhancing our web interfaces, including interfaces beyond our library website such as our catalog and discovery systems.

Example 1. Libraries Website Homepage

Basic page view and visit analytics tell us that our library website homepage is the most used of our libraries-provided online resources. To learn more about how users interact with the homepage, we began tracking a number of different events on the page.

Links

Anyone who has been in discussions about the content of a library website homepage knows that the links included on that page and the prominence of those links is a contentious topic. Using event tracking to provide data about which links are actually clicked can help inform decision-making. The simplest case for tracking a link click is to add an "onclick" handler to that link that tells Google Analytics to track the event.

The most common use of Google Analytics event tracking allows for three pieces of data to be tracked with the event: a category, an action, and a label. An example of the syntax of using an onclick handler to track a link click is:

Link 1

However, manually adding onlick handlers to each link is tedious. Further, we were interested not just in tracking events on the homepage in general, but also tracking which regions of the homepage were being used the most. Our homepage has sections for navigation, services, news, etc. and knowing more about

which links from what sections are being used helps us better understand what our users are coming to our homepage for.

The JavaScript library jQuery is an invaluable tool for simplifying event-tracking. While this does increase the level of technical skills needed to implement event-tracking to include basic experience with JavaScript and Cascading Stylesheets (CSS), it expands the potential uses considerably. Using jQuery's selector syntax to retrieve information about a given page element – such as the text or URL of a link, or all of the links in an element with a given id – allows for adding richer data to the events being tracked. For example, to track clicks on all of the links in within the "Help" block of our homepage (see fig. 1), we first note that the HTML div element that contains the help links has the id attribute "homeHelp".

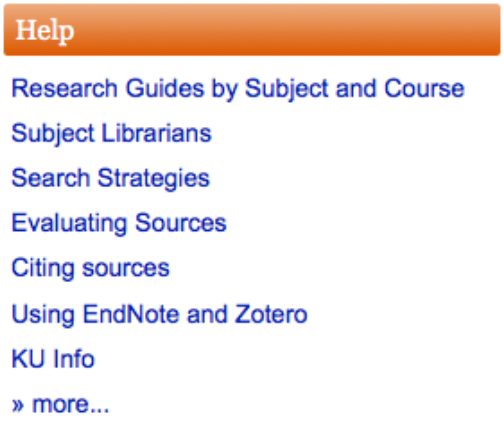

Fig. 1. Help block.

That allows us to create a jQuery selector to refer to all of the links in that section: ("#homeHelp a") and then to add an onclick handler to each of those links. We can further use the jQuery "this" idiom and the "text" function to retrieve the text of each link. That yields the following JavaScript to be run when the page loads:

```
$("#homeHelp a").click(function(){
_gaq.push(["_trackEvent","Home Block Link","Help",$(this).text()]);
});
```

This codes tracks clicks on every link in the "Help" section of the page, using the Google Analytics event category "Home Block Link", the action "Help", and the text of the link as the label. In the Google Analytics Reporting interface, we are thus able to generate a report like the example in fig. 2.

	Event Label	Total Events ↓	Total Events
		12,528 % of Total: 1.22% (1,027,258)	12,528 % of Total: 1.22% (1,027,258)
1.	Research Guides by Subject and Course	8,019	64.01%
2.	» more...	1,378	11.00%
3.	Subject Librarians	802	6.40%
4.	Citing sources	737	5.88%
5.	Search Strategies	538	4.29%
6.	Using EndNote and Zotero	527	4.21%
7.	Evaluating Sources	244	1.95%
8.	KU Info	153	1.22%

Fig. 2. Report using Google Analytics Reporting interface.

In this case, the event tracking data informed our decision about the relative placement of links in this list. The high usage of the "Research Guides by Subject and Course" link compared to the other links in the list was evidence that it might be best placed as the first link in the list.

We are further able to easily compare the aggregate link clicks across all of the home page regions we have defined and for which we have enabled similar tracking, as in fig 3.

	Event Action	Total Events	Total Events
		139,572 % of Total: 13.59% (1,027,258)	139,572 % of Total: 13.59% (1,027,258)
1.	Left Nav	98,583	70.63%
2.	Help	12,528	8.98%
3.	About	12,335	8.84%
4.	Services	7,766	5.56%
5.	Hours Today	6,105	4.37%
6.	Right Nav	2,255	1.62%

Fig. 3. Aggregate link clicks across all of the home page regions defined.

Similarly, where we provide A to Z title links for our databases, we track the 26 individual links as a group using an event category and action rather than individually; it's more useful to know how often the A-Z list is used than it is to know that "M" is a frequently used link (though that data is available too).

Additional JavaScript can be added to handle cases where the link uses an image, rather than text. Again, jQuery selectors are used to retrieve the necessary information for the event. But rather than retrieving the value for the event action using the jQuery "text" function, we first use the jQuery "children" function to determine if the anchor element contains any images. Then we use the "alt" attribute of image as the action value, as in this example code:

```
$("#section a").click(
 function(){
  // retrieve the text of the link
  var a = $(this).text();
  // does the link contain any images?
  if($(this).children("img").length > 0){
   // retrieve the alt attribute of the img (assume one)
   a = $(this).children("img").attr("alt");
  }
  _gaq.push(["_trackEvent","Home Block Link","Section", a])
 }
);
```

As we prepare for a homepage refresh and a move to a new CMS, the data provided by using event tracking to capture link clicks will be used to inform design decisions and to evaluate those decisions on the new site.

Tabs and other Widgets

Like many library websites, the University of Kansas Libraries homepage offers a set of tabs, each providing a different search option. Even tracking is used to track each time a tab is used and each time a search is launched. The tabs themselves simply alter which elements on the page are displayed; clicking a tab doesn't result in a new page view. Page views and visits alone don't provide any information about interactions with our tabs. Similarly, our home page displays daily hours for our two largest locations and offers daily hours about all of our locations when the user clicks a "More…" link, resulting in a drop-down element positioned above the page (see fig. 4).

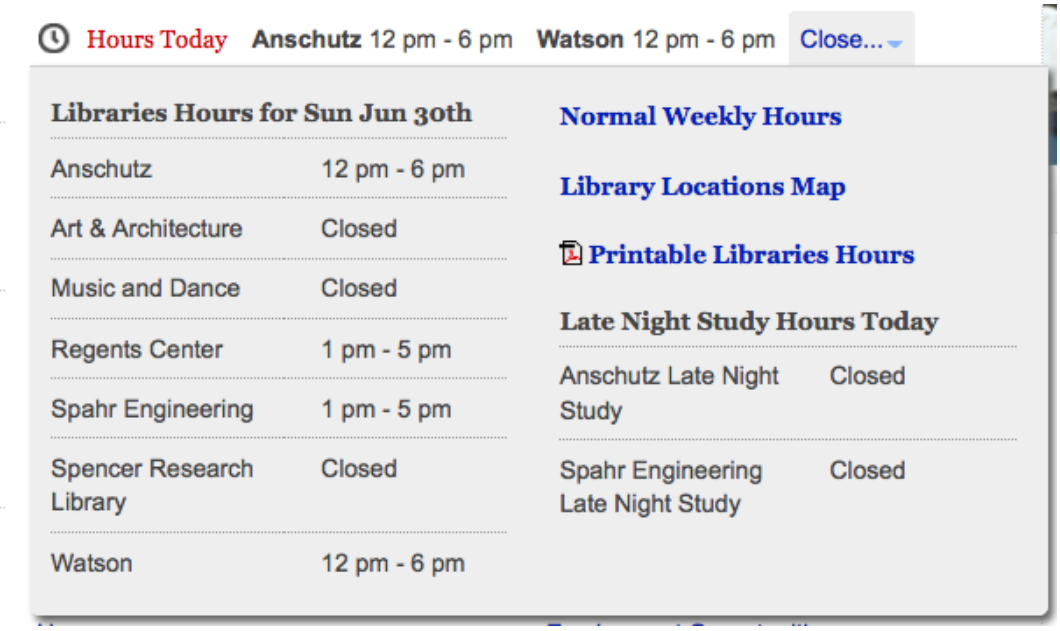

Fig. 4. Hours drop-down.

Using events to track uses of the tabs and the hours drop-down is essentially the same as tracking link clicks. All that's required is to add an onclick handler to the anchor elements that trigger a tab change or hours drop-down and add the necessary category, action, and/or label. In cases where a widget library such as jQuery UI or the Twitter Bootstrap framework is used to provide the widgets such as tabs, it's often possible to use functionality provided by the framework to trigger the event tracking and retrieve the necessary information for the event (e.g., Bootstrap's Tab widget includes "show" and "shown" events which can be used to define functions to track events).

After adding the daily hours drop down to our homepage, we were able to use the event tracking data to determine how frequently the "More" option was used to display hours for additional locations. Combined with looking at trends in the number of page views for the Libraries main weekly and term hours pages since the addition of the home page hours, the event analytics give us a better sense of what hours information our users find most useful in the context of the library home page, allowing us to further adjust our home page going forward.

The search forms within the tabs all direct users outside of our website, to our discovery layer, the online catalog, etc. We use Google Analytics on those sites too, so we do have page view and visit statistics available. But these searches are available from multiple entry points on different sites. It's simpler to isolate which of those page views originated from the homepage by using event tracking on the homepage itself.

In addition to tracking the number of searches initiated from each tab, we are able to use event tracking to capture the queries themselves. To retrieve the queries from the forms, we ensure that the home page HTML markup places all of our search forms within a container element with the id "searchTabs," that each form has a meaningful id attribute to distinguish the forms from one another, and that the text input boxes used for the search queries all have a class attribute of "searchbox." We then use "Library Search Tabs Search" as the event category, the ids of the search forms as the event label, and the value of the text entered into the search box (as retrieved by the jQuery "val" function) as the label, as in the following example code:

```
$("#searchTabs form").submit(function(){
 _gaq.push(["_trackEvent",
    "Library Search Tabs Search",
    // the id attribute of the form being submitted
    $(this).attr("id"),
    // the value of the field with the class searchbox (the query)
    $(this).find(".searchbox").val()])
});
```

Tracking the queries entered into the search forms in our various tabs provides useful data about user search behavior. The resulting data can show us the distribution of searches across our tabs (see fig. 5), the most used search queries across the tabs (see fig. 6), or a number of other reports along dimensions such as time. The data can be used to inform decisions about the number, order, and placement of search tabs, the kinds of help documentation that are applied, and how frequently or infrequently searched for resources might be promoted.

	Event Action	Total Events	Total Events
		184,154 % of Total: 17.93% (1,027,258)	184,154 % of Total: 17.93% (1,027,2
1.	searchForm	73,462	39.89%
2.	catalogsearch	67,108	36.44%
3.	articlesearch	29,342	15.93%
4.	ejournalsearch	14,068	7.64%

Fig. 5. Distribution of searches across tabs.

While the provided interface allows website managers to look at the event data in a number of different ways, Google Analytics allows data to be exported to formats such as Comma-Separated Values (CSV) or Excel to be further analyzed using other software packages. This can be particularly helpful when analyzing data such as search queries, which may need to be cleaned before being effectively analyzed. An Application Programming Interface (API) is also available, allowing programmatic access to event data for use in other applications or for further analytics (see Morton-Owens and Hanson for an example of using the Google Analytics API to populate a dashboard).

	Event Label	Total Events	Total Events
		182,822 % of Total: 17.80% (1,027,258)	182,822 % of Total: 17.80% (1,027,258)
1.	science	147	0.08%
2.	jstor	146	0.08%
3.	pubmed	143	0.08%
4.	journal of music therapy	96	0.05%
5.	new york times	96	0.05%
6.	nature	93	0.05%
7.	scifinder	92	0.05%
8.	web of science	80	0.04%
9.	proquest	79	0.04%

Fig. 6. The most used search queries across the tabs.

Example 2. Catalog and Discovery

As with our library website-proper, the University of Kansas Libraries employs event tracking on other web-based interfaces it provides to users. Adding web analytics to specialized third-party applications can be more difficult than on web pages under full local control. It often requires considerable access to application configuration and customization, in addition to the JavaScript skills required in the examples above. Many such applications provide their own set of analytics or statistics, which can be quite useful. Where possible, though, adding event tracking (and other basic analytics) to specialized library web interfaces can provide additional data designed to help answer questions specific to the organization.

For example, we have deployed event tracking in response to a basic question from our collection development team: "do users access electronic resources via their catalog records?" Gathering data to answer this question required several steps. First, our Voyager online catalog needed to have a Google Analytics profile with tracking enabled. We were able to achieve this by adding the necessary JavaScript to the online catalog via a configuration change, where we likewise included the jQuery JavaScript library. Second, the markup used by the online catalog was analyzed to identify jQuery selectors that could be used to retrieve the link elements for electronic resources. This was considerably more difficult than adding events to our website homepage. We have less control over the markup and could not, for example, add class and id attributes to page elements to make it easier to find the links we were concerned with. Because the markup on our catalog uses HTML tables to display field labels and values, we eventually created a method that depended on finding the correct table cells for the electronic resource link field label, then retrieving the link element from the following table cell. This is a brittle method: if the field label changes, the JavaScript needs to be updated or the events will stop being tracked. However, after installing this event tracking our collections development group can now receive regular reports on the use of electronic resources from catalog records and monitor those trends over time.

In 2012 we began providing the Primo discovery environment to our users. As we launched the new service we wanted to track the use of new features available in the environment, such as facets, both to determine the extent and nature of their use and to inform our on-going decisions about how to configure the features. Primo offers extensive reporting tools, but we found the event tracking with Google Analytics allowed us to create data tailored to our specific questions.

For example, the facets in Primo allow for a set number of facet values to appear as links the user can click to narrow the results. At the end of that list is a "More options" link that allows the user to select from a greater number of facet values in a pop-up list (see fig. 7).

Fig. 7. Facets.

We were interested in how often one of the "initial" facet values was selected versus the "More options" link. As with the online catalog, adding this event tracking required analyzing the underlying markup in Primo and creating jQuery selectors to retrieve the facet heading, facet value links, and more options link for each facet. This was achieved through a combination of parent/child element transversals and using the jQuery "hasClass" method to test elements for the presence of class attributes that Primo uses for different elements in the facet markup, as in this simplified example:

```
// for all the list items in every list with class EXLFacetsList
        $('.EXLFacetsList li').each(function(){
          var facetLi = $(this);
          // retrieve the facet label by walking the markup to find the
          // element that occurs just before the facet list
          var facet = facetLi.parent().prev().text();
          var type;
          // determine whether this is an initially presented facet value
          // or a "More options" link
          if (facetLi.hasClass('EXLFacet')){
           type = 'initial';
          }
          if (facetLi.hasClass('EXLFacetsDisplayMore')){
           type = 'showmore';
          }
          // track an event every time the link in the facet list
          // item is clicked
          facetLi.find('a').each(function(){
```

```
    $(this).click(function(){
     _gaq.push(['_trackEvent', 'Facet Click', facet, type]);
    });
   });
  });
```

The data from tracking facet clicks allows us to see which facets are used most often (see fig 8) and the relative use of initially presented facet values versus the more option link both for the facet sets as a whole or for a particularly selected facet (see fig 9).

	Event Action	Total Events	Total Events
		5,261 % of Total: 12.24% (42,990)	5,261 % of Total: 12.24% (42,990)
1.	Format	1,469	27.92%
2.	Topic	1,160	22.05%
3.	Show only	1,051	19.98%
4.	Date	667	12.68%
5.	Author/Creator	331	6.29%

Fig. 8. Report for data from tracking facet clicks.

	Event Label	Total Events	Total Events
		5,161 % of Total: 12.01% (42,990)	5,161 % of Total: 12.01% (42,990)
1.	initial	3,597	69.70%
2.	showmore	1,564	30.30%

Fig 9. Report for facet sets as a whole and for particularly selected facet.

This data has been used to inform decisions about the ordering of facets on the page to place the more frequently used facets at the top of the list. It has also revealed patterns in the use of initial facet values versus the "More options" link that vary depending on the facet, a finding that might be useful to consider when crafting instruction for our discovery tool.

Adding event tracking to page content generated dynamically through AJAX requests poses an additional challenge. Because the AJAX content does not exist at the time the page is loaded, but is instead often loaded to the document based on a user action, there is nothing to add an onclick or other handler to at that time. Instead, methods such as delegated events in jQuery must be used to ensure that events are tracked on AJAX-loaded content. In cases where a third-party application is already using the jQuery library for AJAX requests, but the version is an older one that does not support event delegation (as was the case for the first version of Primo we began using) the jQuery "ajaxSuccess" method offers an option for event tracking on content added by an AJAX call based on the URL of the request as returned by the AJAX options object. In the absence of either option, the underlying application code may need to be modified to enable event tracking. In that instance the values of the data provided by the event tracking must be weighed against the effort required to maintain the modified application.

Conclusion

Using Google Analytics to track events across the various online platforms offered by a library can provide data to organization efforts to assess website effectiveness. When employed across platforms, event tracking can offer a more nuanced description of user behavior than that found in traditional web analytics such as page views and visits. Adding event tracking requires some staff expertise in web technologies like JavaScript. While adding event tracking to third-party applications can be more difficult than adding event tracking to locally managed websites, custom event tracking on such applications can augment data already provided by those applications to better meet local needs.

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It's All Up in the Clouds

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Abstract

Our roadmap to the cloud started with WorldCat Local as our catalog/discovery system. Next we moved to OCLC's WorldShare Management Services (WMS), a cloud-based ILS system/platform including the License module and WorldCat Knowledge Base we use to manage our e-resources. At the same time, the cloud also moved into public services with the use of the Springshare platform for our reference, instruction, statistics and room reservation systems. Staff scheduling is also in the cloud with Whentowork. All of these cloud based technology changes have revolutionized the way librarians and staff do their routine jobs. The impact on our workflow has meant that communication with various stakeholders is vital. Managing the change process was the most underestimated aspect of the implementation process. Still on the horizon are our consortial borrowing system and patron/demand driven acquisitions, both to be in the cloud. Cloud technology is transforming the way we assist patrons. Instead of a cloud-free future, we are looking forward to a future in the cloud!

Introduction

"Cloud computing is on-demand access to virtualized IT resources that are housed outside of your own data center, shared by others, simple to use, paid for via subscription, and accessed over the Web"(Marks 27). Libraries around the world are taking advantage of cloud computing and Pepperdine is no exception. Pepperdine University Libraries started using cloud technology with Google docs in the late 2000s. Since then we have rapidly increased our use of either partial or full cloud computing technologies. Now in 2013, it is amazing how many cloud technologies we use in an average day and how our staff has adjusted to using this type of technology. This article provides an overview of how cloud technology has changed our library services and workflows.

Background

Pepperdine University is a medium-sized, private Christian university. Enrollment in fall 2012 was 7,319 students of which 2,012 were part time, resulting in an FTE of 5,978 students. Pepperdine has five campuses in Southern California, one campus in Washington, D.C. and six international campuses. Between 60-70 percent of undergraduate students attend one of our overseas programs during their time at Pepperdine (Hamilton). Many students have either all or partial distance learning in their programs of study. Currently around 340 students in the Graduate School of Education and Psychology (GSEP) program are partially or totally online. Almost 50 percent of students in the various MBA programs are partially or totally online.

Besides the partial or total distance learning programs, Pepperdine also has unique circumstances with the more traditional classes for both undergraduate and graduate students. Except for a small residential program in Malibu, graduate students are not residential students. Eighty percent work and they commute. Sometimes in order to complete all the required classes, the graduate students, and also the part-time undergraduate students, need to take classes at more remote locations fifty or more miles away from their usual campus. As for our undergraduate students in Malibu, only first year students are required to live on campus. According to a study conducted at the University of Iowa, students are unable or unwilling to travel more than 50 miles to get materials or assistance (Dew 121).

Information literacy is very important to us. Despite Pepperdine's unique circumstances, our goal is to send a librarian every year to every class, both graduate and undergraduate, to familiarize students with our electronic resources and services. We have librarians who are assigned as library liaisons to every

department and program. Our website is set up to accommodate the overseas and distance students with ebooks, LibGuides and chat reference. Through these means, even our overseas students and distance learning students can get reference assistance.

All of this is accomplished with a very small staff, which is one big reason cloud computing has been beneficial to us. Altogether the Pepperdine University Libraries have only 34 total full and part time staff, of which 16 are Librarians. We have approximately 35 student workers primarily during the fall and spring semesters. Our international campuses employ an additional five library student workers overseas; the London campus library is shared with and staffed by the Pepperdine University Law School.

The Cloud

The ‘‘cloud’’ in the term “cloud computing” is a metaphor for computing resources, hardware and software, that companies and users access without needing to know exactly where that hardware and software is physically located (Hugos 43). The cloud aims to cut costs and help users focus on their core business instead of being impeded by IT obstacles (Hamdaqa 78). Locally our definition of the cloud is library data hosted beyond the library walls, accessible via the web with no local server. With cloud computing you can work from a laptop anywhere with no more clients, servers or updates to manage.

Pepperdine Projects in the Clouds

Google Docs

Before 2008 the librarians at the main and graduate campus libraries collected all reference statistics on paper. One reference librarian was in charge of collecting all paper statistics, counting them, and adding them to an Excel spreadsheet (Naumann). In 2008 the reference librarians began to use Google Docs – but these were personal Google Docs accounts. With Google Docs, documents can be accessed and authorized users can make corrections anywhere the internet is available (Buck 8). All the reference statistics were collected and shared within the library. In 2010 Pepperdine University created an enterprise class university wide Google Docs account and by 2012 all Google apps were supported by the university. The librarians migrated all statistics to a new Pepperdine University Google Docs account. This was the start of our journey to the cloud.

WorldCat Local

Pepperdine University Libraries had been using the Ex Libris Voyager system as our Integrated Library System since 1999. In the fall of 2009 we successfully launched WorldCat Local as our library catalog public interface, providing our patrons with a web 2.0 experience. WorldCat Local’s new global search and retrieval function gives users access to well over 100 million resources worldwide, including books, journals, media, government publications, maps, digital collections and more. Mark Roosa, Dean of Pepperdine University Libraries, noted that:

WorldCat Local will provide students and faculty with new and exciting connections to the expanding world of knowledge resources. With its friendly user interface and improved interlibrary loan and expedited delivery service, WorldCat Local is an effective and innovative way for users to search, locate and obtain materials in all formats from libraries around the world. (Pepperdine)

Although WorldCat Local was our public catalog, our patrons needed to access the Voyager system to renew books, see pending orders, and view their account information. As a search interface, WorldCat Local got our local information such as shelving locations and circulation status from our Voyager system. Our library staff had to be familiar with both systems. To enable WorldCat Local to obtain the correct local information from Voyager, we had to update our holdings in the OCLC system and update our bibliographic records’ OCLC numbers in Voyager. Considerable duplication of labor in cataloging and acquisitions existed between Voyager and WorldCat. We started looking for other ways to upgrade our service, such as moving to a new circulation system created by OCLC.

WMS - WorldShare Management Services

In 2010, OCLC introduced their cloud-based integrated library system WMS (Web-scale Management Services, now called WorldShare Management Services). When we began implementation, an OCLC WMS team visited our libraries to check our workflows and discuss system functionalities with us. While utilizing the OCLC test site, we had weekly meetings with the WMS development team. Additionally we had opportunities to talk with other pilot libraries about the functionalities. OCLC shared their development plan with all the early adopters. The implementation processes became a group experience. Carl Grant's article indicated "WMS represents a true cloud-computing solution." and "it has the potential to benefit enormously from the 'common good' and collaboration that OCLC represents, and libraries should partake… in creating a path toward the future" (Grant).

By using WMS we don't need to maintain hardware and software as OCLC takes care of the whole system's hardware and software and manages all system upgrades. Usually OCLC upgraded the system around mid-night. We checked the new features and sent feedback to OCLC. OCLC provided pre-release and post-release online conferences where all WMS libraries learned the new features and shared comments. To upgrade a traditional Integrated Library Systems, libraries need to set up a schedule with their ILS vendors and campus IT team. Libraries need to consider whether their ILS servers meet the requirements of their new ILS release and may have to upgrade a server or purchase a new server, a potential added cost. During the system upgrade, libraries may have down time. After the system upgrade, systems librarians need to provide training to library staff. The traditional library system upgrade is a big project for each library, especially for systems librarians, and may take a lot of time and money. WMS changed systems librarians' responsibilities and roles. WMS systems librarians spend more time on analyzing operating practices, identifying problems and communicating developments with vendors. Unlike the traditional ILS, WMS databases are not open to their systems librarians. We are unable to write SQL queries to get some reports by ourselves. For example, we have to ask the WMS help desk to check a patron record's status including when it was loaded / created. The library system support workflow really depends on how much OCLC wants to open their system to the libraries. Using a traditional ILS, systems librarians should fix most problems by themselves. Now we have to ask the WMS help desk to solve these problems. OCLC needs to consider how many WMS help desk people they need if more libraries use WMS and how many WMS help desk people can access the WMS databases.

Another aspect of cloud-based systems is concentrating resources, applications and data to deliver benefits to library community through the internet. With WMS, we can search WorldCat, the largest online catalog, and create purchase orders. Upon receipt of the purchased items, barcodes are added to the selected records. Our local holdings records are created automatically. The traditional acquisition and copy catalog workflows merge together. We don't need to update our holding in WorldCat as we did with Voyager. According to the system design, WMS is built on a collaborative platform, allowing us to share data, applications and workflows with other WMS libraries. In the WMS acquisition module, we can create a vendor account and make the general information public so all the WMS libraries can share the vendor general information. At the same time all the WMS libraries can keep some vendor fields private.

WMS also completely changed the workflows in circulation. Now there is a real-time pull list to collect all hold items requested (Bryant 16). Usability is better with WMS, making it easier to train new staff and new student workers. Previously there would be annual downtime for system upgrades. Now quarterly upgrades may change circulation procedures depending on what is being implemented. All new feature upgrades need to be publicized to all circulation staff so that everyone is on the same page and you can temper the anxiety caused by change, complete a stakeholder analysis, and ensure that staff members are ready to take on new roles (Dula 9). The constant change does take some getting used to, but now circulation staff look forward to new features that help improve their workflow.

The biggest change in cataloging/acquisitions is that the local catalog as we know it simply no longer exists with WMS. All bibliographic information available to the patron (and catalogers and everyone else) is in WorldCat, not separated out, and not 'local.' This is a very different approach to cataloging from the traditional way (Richmond). Some local *holdings* info is specific to Pepperdine's collection

only, and you can add notes about Pepperdine's specific copy to the bibliographic record. The item record can be customized, but the bibliographic record is open for all to see (Mitchell).

Backend Managing of Electronic Resources

Prior to 2009 while using Voyager as our ILS, we used Serials Solutions 360 Search as our federated search, 360 Link as our link resolver and 360 Resource Manager as our e-resources management system for tracking and managing our subscriptions and holding data. Serials Solutions supplied us with three files each month: new records, updated records and dropped records. For new and updated records, we edited the records and bulk imported them into Voyager. The updated records matched on 035 and replaced existing records. For dropped titles, Serials Solutions would supply records with code "d" (for deleted) in position 5 of the leader. Getting these records out of Voyager involved several steps:

1. Bulk importing the deleted records file, matching on 035, to get the deletion codes into existing Voyager records;
2. Running a query to get a list of bibliographic records' ID numbers of records containing "d" in Leader/05 AND having the Serials Solutions hold location code in Voyager;
3. Using list of bibliographic records' IDs obtained in step 2 as an input file for Pmarcexport, to produce an interleaved file of bibliographic /holdings records;
4. Bulk importing the interleaved file from step 3 with options set to delete records.

In 2009, we began using OCLC WorldCat Link Manager (WCLM) to manage our e-resources. Although WCLM is an OCLC product, we had to update our serial holdings in WorldCat and WCLM separately and manually. The print serials' links took our patrons to our Voyager site.

E-books are an important part of our e-resources. Before we switched to WMS, our workflow was:

1. Create a location code in Voyager for the new collection
2. Set up a bulk import rule in Voyager administrator module
3. Download records from vendor site (vendors usually provide .mrc file)
4. Convert the .mrc file to .mrk file
5. Update 856$u field links and 856$z for OPAC display messages
6. Convert the .mrk file to .mrc file
7. Upload records into Voyager
8. Export the new bibliographic records we just added from Voyager
9. Send the records to OCLC batch load service to update Pepperdine holdings in WorldCat

Now we can find most electronic resources, including e-books, in WCLM, where we can select the whole collection or a single title to indicate ownership.

Library Staff/Student Worker Scheduling

Prior to 2011, library staff and student workers were scheduled using paper and through email. Before each semester circulation student workers emailed schedule preferences which were collected and plotted using paper and an excel spreadsheet. The completed schedule was then emailed to everyone. The reference librarians also constructed and emailed charts for staffing the reference desk. All this scheduling was very time consuming and would be complicated by constant changes. Thankfully in 2011 we switched to whentowork. Whentowork is an inexpensive cloud based scheduling system that you can change every day or every week if needed; changes can be made from anywhere with access to a computer and the internet. At first it was a little daunting to use because it is complex. Initially you have to add the employees, add managers, publish the schedules, etc. However, now several of us are very proficient and find the product really helps streamline our work process and makes us more efficient. It is really nice to be able to see who is actually working and not have to look through endless emails in an attempt to determine who should be working.

Springshare Products

An additional cloud product we have been using since the fall of 2010 is LibGuides by Springshare. Before LibGuides, our information literacy program consisted of in-person instruction sessions, wiki-based research guides and paper handouts. Now we supplement the instruction sessions with customized LibGuides for individual classes, which the student can refer to as much as they want and from anywhere (Roberts 70). LibGuides are easy to create and easy to change, so this tool has dramatically impacted the workflow for the instruction librarians.

With the success of LibGuides, we decided to give LibCal by Springshare a try for our room scheduling needs. We had been desperately searching for a more up-to-date way of managing booking of rooms. We printed out paper grids with the room information and had the students add their information. This system was inefficient at finals, and some students would always end up somehow not getting a room they booked. A lot of staff time was used but it was impossible to collect room use statistics. LibCal allows the students to book rooms online and gives us accurate room booking statistics. Following initial set up at the beginning of the semester, the system requires little maintenance and is extremely efficient.

We use LibAnalytics for collection of statistics including instruction sessions taught and reference and ready reference questions answered. Previously all librarians would track classes taught in an outlook calendar. Once a year these statistics would have to be collected and collated, a time consuming task. Now once the librarians add information to the system, a variety of statistics are easily and instantly accessible. Previously for two-week reference data collection periods, we would manually count all of the ready reference and reference questions and then compile the data for a sampling. Now librarians and staff put all information in LibAnalytics and we can instantly access all reference statistics.

Last year we decided to switch to LibAnswers to replace our previous chat service, Pidgin. Previously we would print out all chat transcripts and a reference librarian would hold on to them and compile them. Now LibAnswers collects all the statistics for us and we have added features such as easily accessible popular answers to our most asked reference and ready reference questions. While it takes time to get up to speed using all these various products, the learning curve is fairly easy and it is wonderful to have all the information easily accessible in one place.

Consortial Borrowing

We went green with ILLiad, an interlibrary loan system, in 2009. ILLiad was developed by Atlas Systems and is now distributed exclusively through OCLC (Atlas). The main difference between consortial borrowing and ILLiad is the rapid delivery of materials that occurs with consortial borrowing when a group of consortial libraries agree to share their resources. In 2013 we began to implement our consortial borrowing system called Camino, the resource sharing networking for the Statewide California Electronic Library Consortium (SCELC). SCELC has more than 100 academic libraries. Camino uses WorldCat Navigator another OCLC hosted service interoperating with circulation, resource sharing and delivery within a consortial library group. Navigator links catalog data and circulation activities in a more integrated, streamlined system. Local, consortial and interlibrary loan information is shared across connected user and librarian interfaces, automating the discovery-to-delivery process in a way that is more intuitive for users and less time consuming for librarians. (OCLC WorldCat). OCLC created three different share levels at the WorldCat discovery platform: local, group and global. Patrons can send requests to their local library branches via local ILS, consortial group via Navigator and all other libraries via the interlibrary loan system. The requests sent to the consortial group will be managed by Navigator Request Engine (NRE). NRE interacts with different ILS systems and sends requests to the most appropriate library. When we receive the requested items in NRE, NRE automatically takes actions in our WMS using NCIP protocol so the requests will be added to our patron accounts. Our staff can stay within the NRE staff site to request, check in, check out, renew and cancel items. The integration features allow us to move our patrons' requests from the WorldCat discovery platform to NRE and from NRE to our WMS seamlessly. In the near future, if no library has the requested item available, NRE will transfer the request to our local ILL system. Our staff won't need to manually transfer a request from WMS to the ILL system.

All of this will take place in the circulation department, rather than ILL. We have never had a consortial arrangement before, so this will be brand new to us. We have already been trained on the process and we are already communicating with the staff that will be impacted by the change and creating a link between Camino and our strategic plans and goals (Cervone 97). We will promote Camino to the staff and set up clear guidelines to avoid anxiety because of the change in workflow.

Demand-Driven Acquisitions (DDA)

Pepperdine University Libraries acquired NetLibrary books in a 2001 consortial deal and has subscribed to ebrary since 2003. With these deals we had significant labor costs, because catalogers would have to load the records to our Voyager system. Even now with WMS, catalogers have to add 50-100 titles a month from ebrary to the catalog and manually delete records for books that have been dropped. All of that work for our patrons who would use about 5 percent of the ebrary collection (Jacobsen). There are still thousands of invalid ebrary records left, and we are now removing them as a summer 2013 project. In the meantime, if a patron clicks on a valid ebrary record, it will say this item is not available.

Ebrary was recently acquired by Proquest who also purchased our current cloud demand/patron driven acquisitions system, EBL (Ebook Library). We wanted to offer demand/patron driven acquisitions but had to wait for a system that would work seamlessly with WMS. EBL and OCLC have a joint venture ("EBL leads the Way"). Our DDA limits are no fiction, no Wiley ebooks (because of several consortial deals), no more than five years old and a limit of $150 a book but no subject limit so our patrons can pick whatever book interests them. Even with all of these limitations we now offer 140,000 titles of the 300,000 potential EBL titles. EBL works with OCLC to load the items into the WorldCat knowledge base. After four short term loans, we purchase the title and the item moves from the potential title file to the purchased title file in the WorldCat knowledge base. It is completely unmediated with no staff looking at the items before they are purchased. This process is completely seamless for our patrons who don't see the difference between a short term loan and a purchase. Everything is done behind the scenes, so there are no labor costs. Acquisitions, catalogers and the selectors do not have to do anything.

Conclusion

When we use the cloud computing to provide services to our users, we are compensated for sharing our resources and capabilities. In this article, we have presented the different cloud platforms we use and how the new cloud technology affects our routines. As Furst and Cable state, "because change has become a fixture in many organizations, understanding the sources of employee resistance is particularly important to managers faced with the daunting task of facilitating change efforts" (459).

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Libraries and Licenses: Best Practices, Pitfalls and Trends

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Abstract

Managing electronic resources is not an easy task in today's libraries – it is a multi-step process. From working with pushy vendors to dealing with demanding faculty members, identifying and meeting the needs of users through licensing agreements can add up to a lot of work and headache.

Understanding the intricacies of licensing procedures starts with awareness of the electronic resource management lifecycle and the five licensing steps required for each agreement. Following these procedures provides a foundation of knowledge that can help simplify the often-complex world of licensing. Identifying common pitfalls and best practices can further demystify library licensing.

Introduction

To the uninitiated, library licensing processes can seem complex and overwhelming. Everyone from behind-the-scenes professionals to diverse end users are impacted by the terms of a license, as these agreements can determine how a resource can be used, on both institutional and individual levels.

When effectively managed, the license process allows for unfettered access to resources. However, the evolving landscape and complex language used in today's contracts can make successful administration a daunting challenge. Fortunately, the licensing process can be simplified with the foundation of knowledge provided by familiarity with the electronic resource management lifecycle, licensing stages and by identifying common pitfalls and best practices.

Electronic Resource Management Lifecycle

Almost all electronic resources used by libraries today require licenses. These contractual agreements determine how and by whom resources are accessed, what type of technical support will be provided, how usage statistics are prepared, renewal costs and much more. Librarians working with licenses will benefit from having a clear understanding of the electronic resource management (ERM) lifecycle.

The ERM lifecycle has five distinct stages: Discovery and Investigation, Negotiation and Acquisition, Activation and Implementation, Support and Tracking, and Evaluation and Renewal. Licenses influence each of these stages; it is therefore a good idea to consider the entire ERM lifecycle when reviewing and revising a license.

Licensing Stages

The Association of Research Libraries has broken the licensing process into five stages, which provide a helpful blueprint for any librarian to follow when working with licenses (Cogner 123). The five stages are: Offer, Mutuality, Acceptance, Consideration and Enforcement.

Offer

The Offer stage takes place after a library has informed a vendor of the intent to purchase a product or subscription, prompting the vendor to supply a license for review. In most cases, the license supplied is a standard, boilerplate form, not customized for the purchasing institution.

It is important to understand that intent to purchase and confirmation to purchase are not the same things. If one were buying a car, the offer stage would occur after the customer had decided on a model, but before he drives off the lot. There is still much to discuss before the dealer hands over the keys. When

working with electronic resources, it is never a good idea to agree to purchase something until the license terms are fully negotiated.

Mutuality

The second stage, Mutuality, involves discussing conditions of the license with the vendor. Librarians should remember that the price, terms and conditions that are negotiated in this stage impact a multitude of items both immediately and down the line. Talking points during the mutuality stage might include ease of access, current and future budgets, patron privacy and more. It is therefore wise to take time to review the license carefully and ask for clarification if something is not clear. Additionally, library staff members responsible for license review and negotiation need to keep in mind that just because a vendor has or does not have something in the license does not mean it cannot be changed. Remember that licenses are not set in stone, and there is often wiggle room to create an agreement that benefits both parties. Librarians should always negotiate for the best terms possible and should be wary of agreeing to terms that conflict with state laws, contradict library policies or create additional burden for staff members.

Acceptance and Consideration

Acceptance takes place when negotiations have ended and the parties involved have agreed to the final terms of the license. Contracts are signed at this stage and orders are officially placed.

The fourth stage, Consideration, occurs when payment is issued for goods and services, and access is established.

Enforcement

During Enforcement, the final stage, both parties monitor to ensure the terms of the license are adhered to and, if necessary, action is taken to correct non-compliance. Non-compliance could be something major like unauthorized users accessing and sharing data, or as simple as a vendor's website being down for more time than simple maintenance. Either of these circumstances could constitute a breach of contract.

Pitfalls and Best Practices

Each of the licensing stages presents its own pitfalls and challenges that can be avoided and overcome by following proven best practices.

Offer

As mentioned previously, the offer stage begins when the library receives an initial license from the vendor. This stage might seem like a simple exchange of information. In actuality, it is extremely important, as the offer provides the person responsible for reviewing the license an opportunity to prepare for negotiations.

With this in mind, a common pitfall in this stage is not having sufficient information about a product or subscription. Counter this by having a clear idea of how a product will be used, a ballpark figure of its cost, what your institution requires and what your users want in a product. Having this information can save time during the review process and provide a blueprint for negotiation of terms. Polling librarians, faculty and students about preferred features, having access to the latest budget numbers and using a license review checklist or model license are great ways to ensure staff and negotiators have all the requisite tools available.

Not reading the license thoroughly is another pitfall that can occur in the Offer stage. It is important to remember that while many licenses share common language, subtle differences in language can lead to headaches down the road. This is especially true when dealing with issues related to interlibrary lending and resource sharing. It is therefore a good idea to read the agreement a few times and be sure to ask clarifying questions when things are not clear. Being thorough now can help libraries avoid extremely restrictive requirements.

Mutuality

The negotiation that takes place in the Mutuality stage is the key to ensuring the library receives favorable terms and conditions in an agreement. The most common pitfall at this stage is foregoing negotiations and accepting a license "as is." Occasionally, a license may appear with amazing terms and conditions, but this is the exception rather than the rule. It is paramount that license reviewers are comfortable asking for the terms and conditions the library wants and needs. Whether it is a lower price, better access terms or a change in governing law, it will not happen unless both parties form an agreement during this stage.

Using or leaving vague or confusing language in a license is another common pitfall to avoid. Remember that a license is legally binding document and the less room you can leave for interpretation, the better. Make sure language from the vendor is clear and that any revisions made by the library are equally as clear. Clauses dealing with interlibrary lending and copyright law are worth close attention to ensure that the institution can comply with the license requirements.

Acceptance

By the Acceptance stage, all involved parties should be happy with the agreement. This does not mean the process is over, though, and license reviewers need to make sure that they do not become complacent or lose track of where a license is in the workflow.

For example, it is common to exchange several versions of a license as involved parties make revisions. Keeping track of the latest version and, more importantly, ensuring that the final version is the one that gets signed is essential. Using project management software or a spreadsheet to track license versions is an effective way to counter this pitfall.

Another pitfall that can occur at this stage is a lapse of access to the resource. The licensing process can take longer than anticipated, and there could be gaps in coverage dates while agreements are waiting for signatures. The easiest way to ensure this does not happen is to start the license review process early. However, in cases where this is not feasible, it is a good idea to ask for an extended trial or time to implement new products while waiting for contract signatures.

Consideration

The final licensing stage involves exchanging goods and services for payment. As such, pitfalls at this stage typically involve financial transactions.

Paying too soon can be an issue when negotiations are not complete. Because payment without a signature on a document is tantamount to acceptance, it is therefore imperative to have a fully executed copy of any agreement on file before making payment.

Overlooking vendor payments can also be a setback. This is especially true if another department handles the payment process. It is a good idea to keep track of where an invoice is in the overall workflow to ensure timely payment. Late payments can strain vendor relationships and make it difficult to negotiate favorable terms on future purchases or renewals.

Enforcement

The licensing process is never complete. It can be easy to forget about an agreement once it has been signed, payment has been made and access established. Monitoring resource usage to ensure all parties are following terms of the agreement is important though to correct any possible breaches. Using a project management system or other workflow tool to schedule periodic checks can confirm that a resource is performing as expected and ensure both parties are fulfilling terms of the agreement.

When violations of terms occur, it is important to address issues quickly to prevent penalties and to preserve vendor relationships. Librarians should not hesitate to contact vendors when they discover breach of an agreement by either party. Vendor breaches can be advantageous for libraries. For example, if a planned upgrade is not working or there has been an unreasonable amount of downtime for maintenance, these issues can be leveraged during future negotiations for discounts or other benefits.

Trends

Electronic resources are ever evolving. It is important that librarians tasked with licensing agreements stay abreast of industry trends. Some current trends offer the promise of making the reviewing and negotiation processes easier for those responsible for library licenses; others present unique opportunities for libraries to collaborate with vendors and individual scholars to increase access to materials.

Shared Electronic Resource Understanding (SERU) and standardization present an opportunity for libraries to streamline review and agreement processes. SERU, a collaborative effort between publishers, vendors and libraries, is an effort to completely bypass the typical licensing process altogether. Parties agree to abide by a statement of mutual understanding and set of basic responsibilities concerning purchased electronic resources.

Standardization is most familiar to librarians in terms of statistical data. Adoption of COUNTER and SUSHI standards by vendors in reporting of data was driven in part by librarians who sought to "understand better how the information they buy from a variety of sources is being used" (projectcounter.org). This same approach to standardization can be applied to common clauses found in most agreements -- for example, interlibrary lending conditions -- to ensure terms are easily relayed to and understood by library staff and users.

Advances in technology and changing attitudes towards resource acquisition and sharing are also affecting library licenses. Mobile devices provide an increasingly popular way to access information resources. Library vendors, acknowledging this, have begun to provide mobile interfaces and more will likely follow suit. It is important for library license reviewers to evaluate agreements for clauses that add additional restrictions to users accessing information from a mobile interface.

Patron driven and pay-per-view acquisition models are also influencing licensing procedures by requiring parties to state how transactions will occur, describe access points and define lending rules. Scholarly sharing amongst academic community members is also changing, as traditional heavy users of library resources become less dependent on librarians to locate and share information. It is important that licenses address non-library mediated sharing in agreements as a way to both educate users and protect libraries from the actions of those who may be non-compliant with license terms.

Conclusion

The library licensing process is an ingrained part of the behind-the-scenes tasks involved with providing access to electronic resources. The licensure of electronic resources can be streamlined by following guidelines identified within the five stages and avoiding pitfalls with best practices.

From the initial agreement to enforcing contractual terms, each step in the electronic resource licensure process creates a method that allows end users to experience tangential access to a world of information.

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Discovery Tools: Where Do We Go From Here?

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Abstract

Web-scale discovery services are definitely a "hot item" in college and research libraries. There have been many accounts in recent years of the success and failures of choosing a discovery system. Still under investigation, however, is what to do after the product has been implemented. Discovery products are game-changing tools that affect every corner of the library, but the real work for reference and instruction librarians begins after the implementation process is complete. This presentation will discuss discovery tools in the context of information literacy instruction. The presenters will provide an overview of relevant teaching and learning theories and information literacy standards that can set the groundwork for teaching with discovery tools. This information will be parlayed into practical approaches for instructing users on the applications of discovery tools as the presenters share data collected from a national survey of librarians' experiences teaching discovery tools. The presenters will poll attendees on their own teaching techniques, comparing these results to those from the survey. Finally, the presenters will share their recommendations of best practices for teaching with discovery tools and posit questions for future discussions.

Motivating Student Employees: What Circulation Workers Want From Their Supervisors

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Abstract

What kind of management do students want from supervisors? Utilizing survey answers regarding supervision and motivation of student employees working in circulation departments in public universities in Missouri, this paper will address how supervisors can establish better motivational skills and working relations with their student employees.

Students working in academic circulation departments function as both insiders and outsiders in the field of library science, and yet remain absolutely essential to the running and functioning of libraries. How can library professionals and supervisors use this understanding to affect student employees' motivation and work ethic?

Utilizing student survey answers and the author's own experience (as both a current supervisor and former undergraduate student employee) to address this question, the author argues for trying to establish a better connection between supervisors and their student employees. The author covers a breakdown of the questions and responses regarding supervisor communication, discipline, and ideals, and how all these feed into motivating student employees.

Introduction

Student employees provide a basic and vital function in many circulation departments in Missouri academic libraries. These students work on the 'front lines', interacting with and serving the patrons, as well as working behind the scenes processing materials such as Interlibrary Loan and MOBIUS (Missouri's library consortium). Without students in these basic positions, academic libraries could not afford to offer the same breadth and width of services to their patrons.

Despite the importance of student employees, there exists a profound lack of quantitative evidence of the professional inclinations of students who work in them. For example, how do students view themselves while working in a library setting, what do they think of their supervisors, and how can these viewpoints help supervisors better understand and manage their student workers and employees?

To remedy this, the author created a survey of questions regarding student demography, opinions of professionalism, motivation and supervision and circulated it among participating Missouri academic circulation departments in the spring of 2013. The following analysis is geared towards students' opinions and inclinations as applied toward motivation and supervision.

Methodology

The methodology for this research was a mixed method online survey, consisting of anonymous quantitative and qualitative multiple choice questions answered by students working in circulation departments in academic libraries throughout Missouri. The survey was distributed through an online survey builder, Qualatrics, with a link to the survey sent to each circulation supervisor. The survey was completed by any students who chose to take the survey when provided with the link. The survey was open for two weeks in April 2013. The author requested from each circulation department the total number of student employees participating in the research. However, not every circulation department chose to include a total. Therefore, the author estimates that the total number of students who had an opportunity to take the survey to be around sixty, judging by the size of the school library departments participating and the departments that did report their number of students. Of those, twenty-six began the online survey in some form and eighteen of these completed the survey. In every question below where a

total number is not evident, eighteen should be treated as the total. No incentive was offered to the students to complete the survey. Circulation contacts were offered the chance to see the raw data in addition to that presented in this paper.

Results

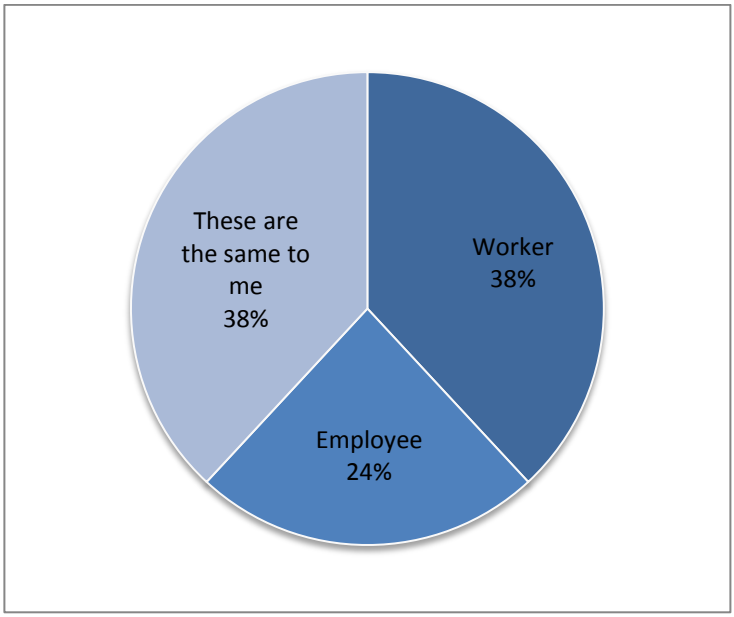

Fig. 1. Question 1: “Would you describe yourself more accurately as a 'student worker' or 'employee', and why?”

The responses to question one (see fig. 1) caused the most schism out of all the questions among the survey responders, with an even split between “worker” or “employee” and 24 percent indicating the terms mean the same thing. Part of the issue may have been a lack of definition given for either “employee” or “worker.” A follow up question was asked for those answering either “employee” or “worker” to justify their choice. Some answers for “employee” were as follows:

> “I feel like I do quality work for the university, and I think there is a negative connotation or at least a belittlement when being called a Student worker”
>
> “Though we are students who work, I feel students are a very important part of the library staff.”
>
> “because I feel like I am not treated the same way as the other workers”

The answers for those selecting “worker” were as follows:

> “Because of the limited amount of hours I work.”
>
> “I am a student first then an[sic] worker/employee.”
>
> “Employees get benefits. I don't.”

Students largely view the issue as one of compensation. If one is an “employee” one should receive benefits of some kind that a “worker” does not receive, and in not receiving these students feel their status is either more correctly categorized as a “worker” or that in the absence of benefits from their intuition neither category matters.

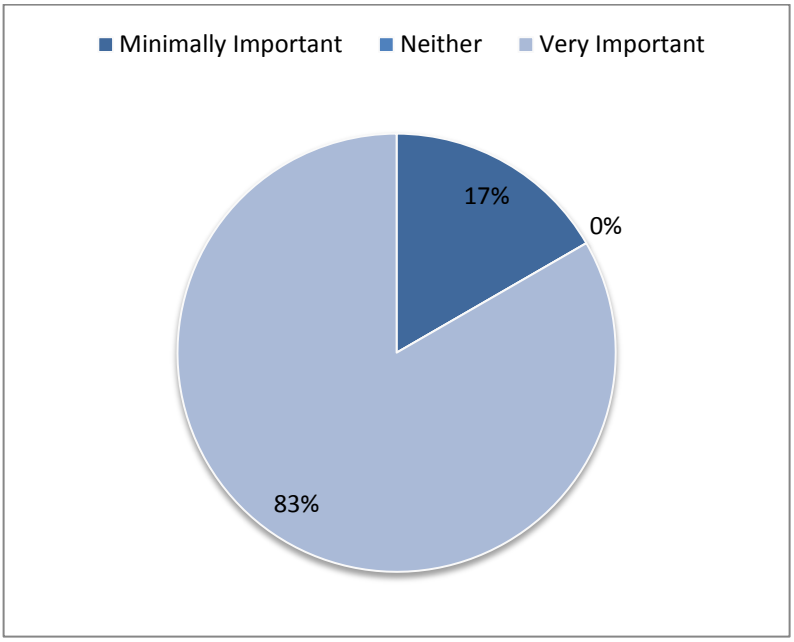

Fig. 2. Question 2: "To what degree of importance do you view your job in the running of the library?"

Students overwhelmingly feel their job has a status of "very important" in the running of the library. Seventeen percent selected that their job is neither minimally or very important, but most strikingly none selected the "minimally important" option. Therefore, most students view the function of their work as having some importance to the running of their institution and a strong majority feels their role is a very important one.

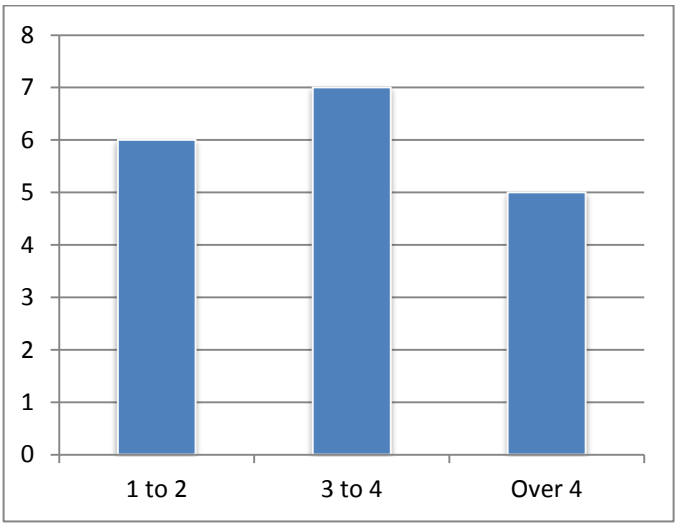

Fig. 3. Question 3: "How Many Direct or Indirect Supervisors Do You Interact With?"

While at least a third of the students responding only answer or interact with one or two supervisors, two thirds have at least three or more supervisors from whom they take direction. Having many supervisors can mean interacting with different styles of management and personalities. If a clear hierarchy exists in a circulation department, the large number of supervisors probably won't cause friction or confusion, however, this possibility still exists.

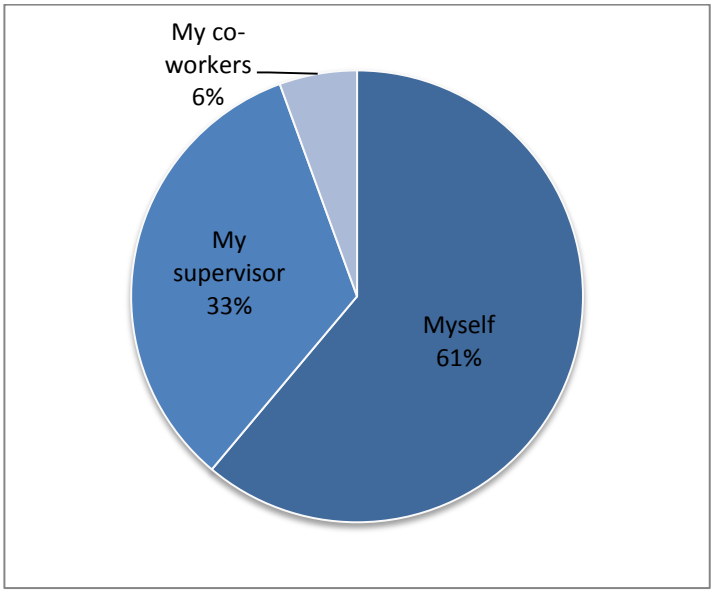

Fig. 4. Question 4: "Who motivates you to do your best work in your job?"

The response to this question largely ties into the high self-esteem in question 2. Students who feel they are highly important to the library institution also are the ones indicating the most motivation in their job. This does not mean supervisors are not providing proper motivation to students who motivate themselves, however, just that they are not the primary source of drive for sixty percent of those who responded. At least a third received the most motivation to do their job from their supervisor.

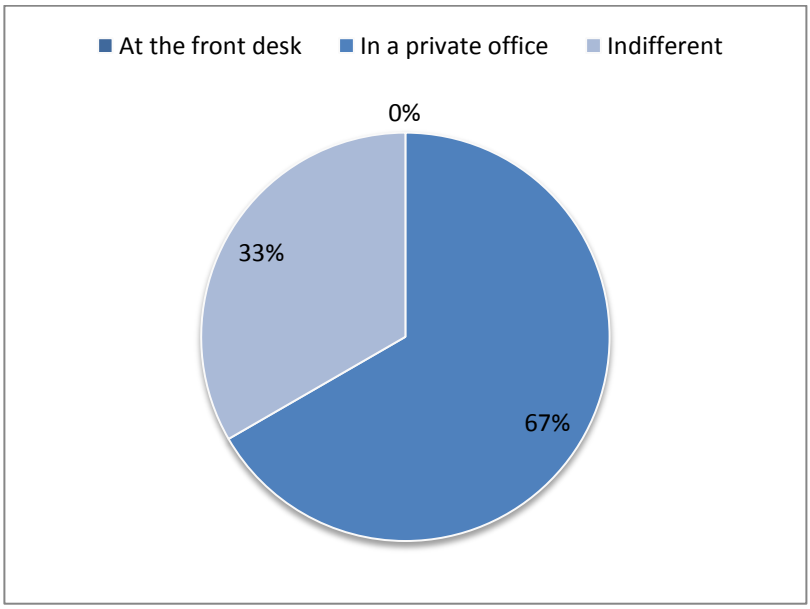

Fig. 5. Question 5: "Where should a supervisor discuss a student employee's mistake with them?"

Of those responding, two thirds preferred any discussion of a mistake to take place in a private space while two thirds were indifferent to where the discussion took place. No students preferred to have the discussion take place at the front desk of their work place. Part of the implication of discussing a student's mistake with them at the desk evokes a sense of unprofessionalism – the discussion is not behind closed doors, can be heard by other student workers and supervisors in the department and by patrons for whom the student must provide service.

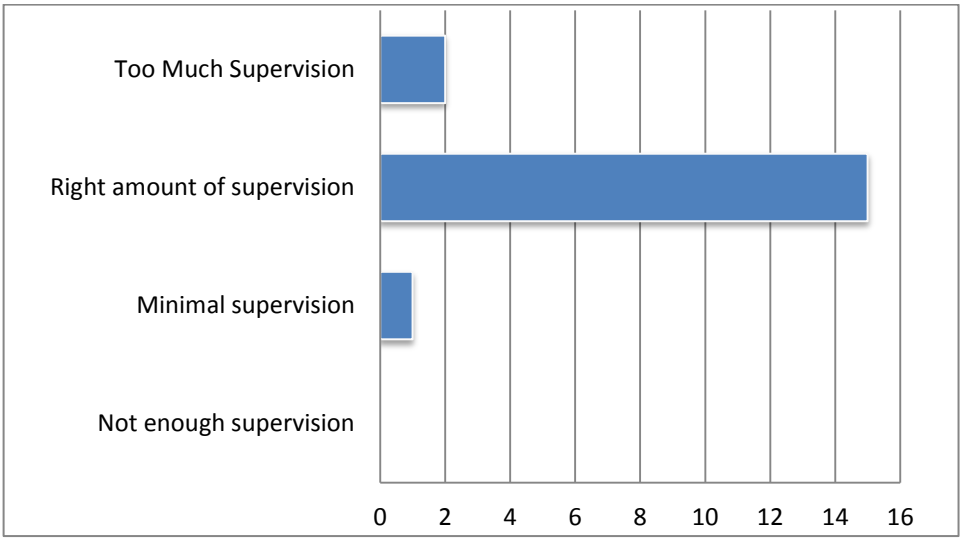

Fig. 6. Question 6: "Which of the following descriptions best describes your current direct supervisor most accurately?"

This question yields some comforting information for circulation supervisors in that the majority of students viewed their supervisor as providing a "right amount" of supervision and management in their jobs. What the right amount is might vary from student to student; however, a large majority appears satisfied by how library professionals or staff members are treating their student workers.

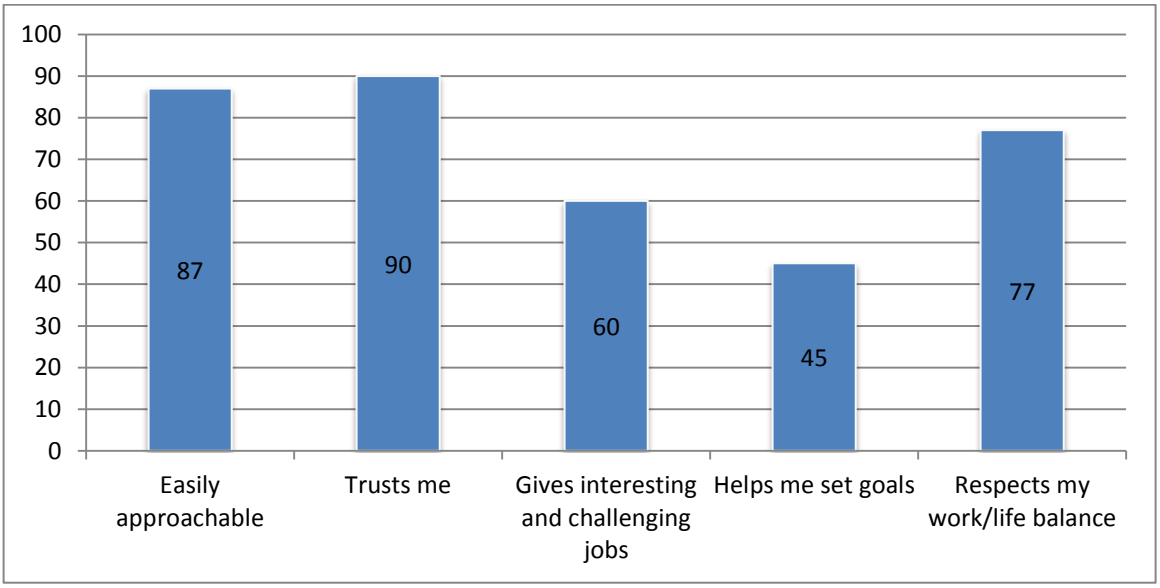

Fig. 7. Question 7: "My supervisor is…"

Survey responders were asked to scale between 0 and 100 how they would rate each quality in their supervisors and the results above are the averages for each category. The highest results are more personality based. Supervisors are deemed approachable, trusting, and respectful of the students' needs in balancing their job and studies. These aim more at the indirect nature of supervision. The more direct categories, setting goals in the job and making the job "challenging" and/or "interesting," were viewed as less effective supervision. These two categories might vary greatly depending on what jobs the student answering is responsible for in their library institution and how many opportunities exist within that institution for a supervisor to provide "challenges" or "interesting jobs."

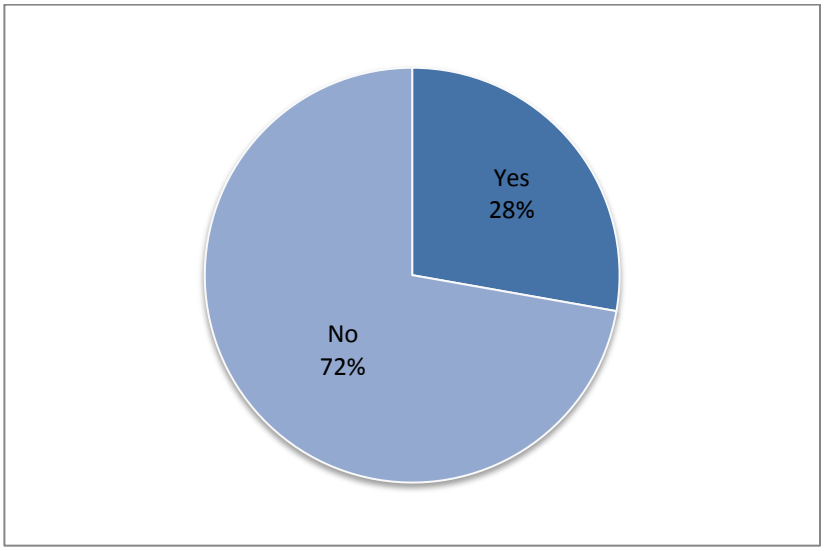

Fig. 8. Question 8: "Would you like to see a different management style in your workplace, and if so, why?"

For the most part students were satisfied with the management style they saw from their supervisors and in their workplace. A little over a fourth wanted some kind of difference in the style and those that answered "yes" were asked to expand on their answer:

Direct quotes from student workers:

> "Have less chains of authority and I would like to only report to one or two at the most, not five."
>
> "Instilling a better working ethic in the employees by clearly defining jobs that are required in this position and better handling of an issue when an employee is not completing their work as they agreed to do when they took on this job."
>
> "Leadership is lacking from the top down."
>
> "My immediate supervisor is fine but the Director is new and does not know what she is doing."
>
> "Because my supervisor has a negative attitude towards everyone who works in the library and makes the work environment tense and awkward."

The overall trend in the answers has to do with both hierarchy and leadership. Partly, whatever hierarchical set up exists in the library is not properly responding to the needs of the student. This does not necessarily mean the hierarchy is too big or unwieldy – simply that how it is set up is ineffective and should be re-examined. Clearer definition of student roles and expectations for what supervisors want from students in their jobs seems to be wanted. As well, negativity is never viewed favorably. If a supervisor (or even a fellow student worker) has a poor work ethic or attitude, students are quick to identify it and dislike it as an impediment to doing their job.

Question 9: "Please name the three most important characteristics you think a supervisor for your job should have…"

This question relates to an earlier series posed, where the responders were asked to describe characteristics of professionalism, and if they thought student workers/employees should be treated as professionals. The answer to the latter was a resounding 81% indicating 'Yes.' When asked to provide three characteristics of professionalism the answers were wide ranging. They related to these general categories:

> Knowledge ("They can tactfully intervene to give an explanation of the process in question, and help others learn to do their jobs correctly, on their own")

Appearance ("Watching out that the image of the institution is not harmed by one's behavior")

Honesty ("Being trusted to do your job even when there isn't a boss around to tell you what to do")

Courtesy ("Always treating the patrons/customers with respect and courtesy even if they don't respond in the same way")

Responsibility ("Holding yourself accountable")

Composure ("Behaving calmly during stressful situations").

In regards to what characteristics supervisors should have, students reiterated many of the same kinds of general categories they ascribed to professional behavior. Words like "kind," "respectful," "knowledgeable," "approachable," "competent," and "honest" were frequent responses. Students are simultaneously identifying very broad and encompassing traits of professionalism, expressing a desire to meet the expectations of that definition of professionalism, and expecting the same of their supervisors. They are in some sense seeing themselves on a similar ethical and professional plane as those who are managing and supervising them in their work.

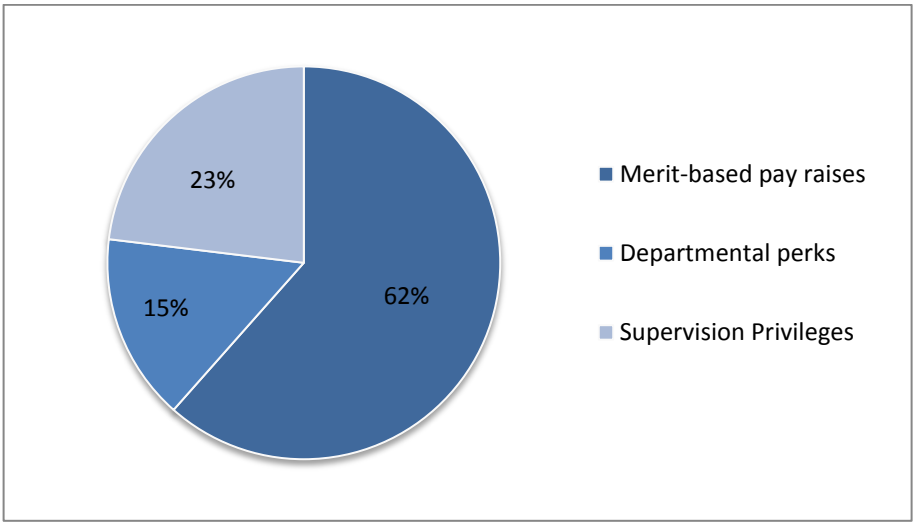

Fig. 9. Question 10: "What, if anything, would encourage you to excel at your job?"

By and large students are in their jobs for financial reasons, either as wage workers or for scholarship fulfillment. It comes as no surprise then that the most perferred incentive for increased work performance is a merit-based pay raise system of some kind, preferred heavily over work place perks or supervision privileges. Students are satifised with their position in their work place and with whatever degree of freedom they are given in that work place but want a better investment from the institution in the work they do for that institution.

Conclusion

The results of this survey paint a picture of student circulation workers seeing themselves as important to the functioning of their library institution. They also showcase a certain awareness and transcendence from their positions as student workers – high but reasonable professional expectations are expressed in relation to how supervisors perform and embody them. Not meeting these expectations will typically lead to a negative impact on student workers.

A large part of this is tied to how students see themselves fitting into the hierarchy of the library system itself. Few student workers – only five percent - want to continue working in libraries after graduation. The motivation for most who are working in libraries is financial or scholarship-related. Students, in this respect, do not see themselves as beginning professionals in a library career path but rather as freelance

agents who still respect the integrity of the institution. Because of this they maintain a sort of insider/outsider status – a duality of being a part of a library's hierarchy and yet removed from it due to their student status. They expect to be considered and treated as professionals in a work place environment without the intention of continuing in the profession after an already decided time period. They also expect supervisors to behave with the same professional standards to which students hold themselves. This reciprocation of professionalism and respect is highly important for maintaining good relations and easy motivational avenues between students and supervisors.

By and large students are satisfied with their supervisors and how they perform. Some attention might be given to how supervisors define student employee job roles and accountability related to mutual professional expectations. Depending on the flexibility and health of an institution's budget, some attention might also be given to merit-based pay raises as a means of motivating student employee performance in the workplace.

Implementing an Open Source Room Reservation System

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Abstract

Miami University's study rooms are used so heavily that they account for 3,600 checkouts per month (6 percent of all loans). Until recently, these rooms were available only through the use of an offline reservation system. After surveying options including the integrated library system's bookings module, commercially available software, and a variety of open source products, the library selected an open source package, phpScheduleIT. During implementation, the library resolved one key issue, and continues to grapple with several others. The project has been successful, with favorable feedback from students (and the Associated Student Government) and increased checkouts.

Introduction

The Miami University Libraries began offering reservable study rooms following a renovation to its central facility, King Library, approximately 15 years ago. These facilities proved popular, and the number of study rooms available has expanded to 26 rooms in King Library, 13 in the newly opened Business, Engineering Science and Technology (BEST) Library, and 3 in the Wertz Art and Architecture Library. Use of these rooms has been sufficiently heavy that the most-circulated items in the Libraries are study room keys, rather than books.

Until 2011, rooms could be reserved only in person, with reservations recorded on a white board behind the circulation desk. The requirement to reserve rooms in person generated dissatisfaction with many students. Although reservations could be made up to 2 weeks in advance, few reservations were made in advance because students tended not to come to the library more than a day or two in advance of their desired meeting time. In 2011, the Libraries decided to examine the possibility of providing an online reservation system.

Background: Other Experiences

Not surprisingly, a review of both professional literature and listserv postings indicates that many academic have faced similar circumstances, which have led to experimentation with the use of online reservation systems. While some integrated library systems offer booking systems, they have tended to be unpopular due to limited customization and inability to accommodate existing guidelines for the usage of study rooms. One study deemed the product from their integrated library systems "cumbersome and awkward" (Doherty and White, 142). In another instance, a library consciously adopted an open source system that interfaced with its integrated library system rather than using the booking module already available with its integrated library system (Schofield).

Some libraries have resorted to commercial products such as Dean Evans and Associates' EMS Enterprise (Sallans, Soule, and Gibbons 5) or UReserve (Pober). Limitations in the ability to customize commercial products to accommodate library policies sometimes appears as a complaint with these products. For example, one study expresses concerns with being unable to mask identifying information from the public display of the room schedule (Pober).

Other case studies report adoption of open source products. Virginia Commonwealth University adopted the open source product OpenRoom (Doherty and White 143), and Ball State University adopted this tool after a brief experience with another product (Faust, Hafner, and Seaton). Listserv traffic reveals additional open source tools, with LibCal and LibHours (Wisniewski), and phpSchedulIT (Weber). Portland State University has developed LibRooms software using php and MySQL (Mealey).

The most significant problem encountered with implementation of solutions involves difficulty in configuring software to work with LDAP authentication, so that the product can support existing logins and passwords for their faculty and staff (Faust, Hafner, and Seaton). Ball State University reported that it also encountered difficulties with delayed displays of search results and an inability to create customized displays for other campus entities using the study room system (Faust, Hafner, and Seaton). Although not mentioned explicitly in many articles, the availability of software without purchase or service fees is acknowledged in online discussions as a benefit of open source products (Schofield).

Studies concur in reporting positive feedback from students and increased usage of their study rooms (Faust, Hafner, and Seaton; Doherty and White 145; Sallans, Soule, and Gilbert 5). While case studies may note challenges or frustrations, the overall impact of reservation systems have already been described as positive.

Expectations and Product Selection

Informed by this background information, staff from the Access Services and Emerging Technologies departments and circulation staff from other branch libraries at Miami University met to examine options for online reservations, including the bookings module of the Libraries' integrated library system (Innovative interface), commercial solutions, and open source solutions. This group determined that ideally, and online room reservation system should be able to:

- **Support maximum and minimum loan periods** – To ensure equitable access, the Libraries limit reservations to two hours per day during Spring and Fall semesters. As a part of the planning process, Access Services staff also decided to limit the number of reservations per week to further ensure equitable access. To simplify the process of room usage, 30 minutes was established as the minimum amount of time for which a reservation could be made.
- **Allow exceptions to the rules** – During intersessions and summer school, demand for the rooms is lower than during the academic year. During these times, we wished for circulation staff to have the ability to extend loan times beyond the minimum of 2 hours per day.
- **Work with differing sets of hours in the Libraries** – The central library is 24/7 during the school year, but branch facilities close earlier (at 10:00 p.m. or midnight) and re-open at 7:00 a.m. An ideal interface should be able to easily support these varying sets of hours.
- **Support use of the students' unique ID and password** – Since other library services use LDAP to eliminate the need for additional logins and passwords, an ideal room reservation system should be able to do so, as well.
- **Email reminders of the reservation** – Since the offline reservation system rarely attracted reservations more than one day in advance, there were concerns that those reserving rooms ahead of time might forget their reservation. Email reminders about upcoming reservations was viewed as a way to mitigate against this problem.
- **Ability for end users to cancel the reservation** – Those who realize that they will not need a room should be able to cancel the reservation without mediation from library personnel.

Limitations to the bookings module of the Libraries' integrated library system promptly removed it from consideration. Library staff working on this project examined both open source and commercial products, and the Libraries' experience with using open source products for other library services pre-disposed us to an open source solution. Ultimately, after focusing on a small group of open source products, we selected phpScheduleIT, an open source web-based reservation and scheduling system. This software allows users to sign in and then place reservations on any kind of resource. phpScheduleIT supports authentication through LDAP, multiple schedules are supported with unique resources, management of blackout times, and varying levels of permissions for users (meaning that staff can have permissions to over-ride policies).

Implementation

The Libraries' phpScheduleIt setup was configured by an Emerging Technologies Librarian in concert with a staff member from a circulation point who was completing a library science degree at the time of implementation. The system was set up so that students, faculty, and staff users may log in to the system to see the times that rooms are already reserved, and may reserve a room up to two weeks in advance for a minimum of 30 minutes and a maximum of one hour. Library staff were assigned additional permissions, which allow them to view names of the individual reserving the room and override the maximum length of the reservation, either in the event that there is low demand for study rooms, or in the event that a room is out of service for repairs of some kind. One staff person at each of the three libraries which houses study rooms is responsible for blacking out times when their libraries are closed two weeks in advance.

Challenges

The most significant difficulty with the online reservation system after the initial installation was that it did not default to the current date on the staff login. This resulted in considerable confusion. This problem resulted in circulation staff frequently looking at the schedule for the wrong day when verifying patron reservation and checking out keys. However, when the library was open during limited hours for a holiday, issues came to a head. At the time the library opened, a large group of people appeared to pick up their keys; weekend staff were unaware that information for the following Thursday, rather than the current day, was being displayed, and chaos ensued. This situation was resolved when the library school student working on the project identified and installed a patch that changed the default settings so that the room reservation system defaults to displaying reservations from the current date.

Some smaller, additional challenges have remained. These include:

- **Need for staff intervention -** Another non-technical issue associated with phpScheduleIt was the need to assist students, faculty and staff in navigating through the interface to make a reservation. During preliminary discussions, it had been suggested that the Information Desk could provide assistance, since it was equipped with 2-way computer monitors. However, during implementation, this task devolved onto Access Services staff. To address user needs, a computer was added to the patron side of the circulation desk to provide a place for staff to assist students who were new to the software, and has been retained to provide students with easy access to the reservation system. Although current students have learned the system, each Fall (and to a lesser extent, each Spring), a new batch of students require assistance in learning the system. Although we had hoped that students would appreciate the ability to book study rooms from any Internet accessible computer, many students continue to reserve rooms only from the computer at the circulation desk.
- **Forgotten logoffs** - Students sometimes forget to log off at the end of their session. If the next user isn't savvy enough to notice that someone else's name is displaying in the upper right corner, they sometimes inadvertently and unknowingly make a reservation in somebody else's name.
- **Blocked reservations (exceeding the time limit)**– Although students are required to assent to a set of use guidelines when logging into the system, they do not always read or understand them. They may be confused when their attempted reservation request was rejected because it exceeds the maximum or minimum time limits for the day or for the week.
- **Blocked reservations (interface features)** -- Another source of confusion is that phpScheduleIT disallows reservations made in the past. This has the laudable purpose of preventing students from accidentally reserving a room in the past. However, since phpScheduleIT is very literal about the "past," it will reject a reservation for a study room from 9:00 to 11:00 that was made at 9:02, because in its literal way of thinking, this reservation would begin 2 minutes in the past. This issue is the issue that requires the greatest amount of intervention by the circulation staff at the library's service points.

Because use of our integrated library system allows for inventory control and billing, we continue to use it to check out keys. A necessary complication is that this approach requires staff to look at two different

windows, one to determine the time and location of the reservation, and another to check the key out. It also means that when staff authorize an exception to policy and allow a checkout longer than two hours, they must manually alter the due date in the ILS to reflect the changed deadline for returning the key. Having to rely on the ILS and a software compounds the existing problem of having to switch between multiple services (ILS, phpScheduleIT, Interlibrary loan software [ILLiad], and our statistics recording service [LibStat]). In each case, we believe that we have the best available products for the services we provide – but it would be convenient if a single, truly integrated library system could handle all of these responsibilities well.

The project benefitted from having one of the people who worked with the phpScheduleIT setup who regularly worked at the circulation desk. His familiarity with circulation workflow helped him to be attuned to how the product settings impacted work at the circulation desks, and, as noted above, motivated him to seek out a solution for one of our most challenging issues with phpScheduleIT.

Current Usage and Benefits

At the time of writing, Miami's phpScheduleIT system has now been used for 2 academic years. During the last academic year, it handled 36,555 reservations, and as demand has grown for study rooms, the Libraries added four new rooms in Spring 2013. Study room checkout makes up an increasing proportion of our circulation. As a percentage of total checkouts, study room key checkout grew from 8.2% in fiscal year 2011/12 to 10% in fiscal year 2012/13. The reservation system has proved popular with the student body. Miami's Associated Student Government has passed a resolution thanking the Libraries for implementing this system, (Levy 2). Individual students have suggested that other campus entities should consider adopting this system for reserving other facilities. Although no other entities have expressed interest in such a system on our campus, other Universities have had interest in extending this system beyond the library system (Faust, Hafner, and Seaton).

Special thanks to Jason Paul Michel (User Experience Librarian, Miami University) and Luke Aeschelmann (now Circulation and Technology Librarian, Barton College) for their work on this system.

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Google Chrome: Using Apps to Streamline Workflow

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Abstract

Library materials are increasingly moving to an electronic environment and thus librarians must also adapt their work strategies to meet this change. It is often easy to overlook the importance of choosing the correct browser to fit our work needs. One small academic library reviewed different browsers for viability and adopted Google Chrome as its primary browser for circulation, reference and interlibrary loan management. One factor in this decision included the ability to "log in" to the browser, enabling several staff members to have the same bookmark bar and download history, regardless of work station location. Another element was the ability to easily download and utilize applications and extensions available only through Chrome. This paper demonstrates the browser Google Chrome as a work efficiency tool and discusses how to evaluate and adapt individual apps for library workflows. It will also show how to find various freely available apps and browser extensions, and demonstrate using specific examples how these apps can work individually and together to create an optimal collaborative environment.

Introduction

At Rockhurst University Library (RUL) (www.rockhurst.edu/library), a small private university library, the Research, Learning and Assessment Services department is a very busy place. Its main areas include circulation, interlibrary loan, instruction, reference and assessment. The department is staffed with 2 full-time and 4 part-time employees, plus over 30 student assistants who work during the academic semesters. Library staff members share much of the workload, especially in the areas of circulation, interlibrary loan and reference, all of which require collaboration and coordination of workflows between co-workers. While some duties still involve the manipulation of physical objects (i.e., checking out physical books to patrons), the majority of recordkeeping and training documentation has moved online. The interlibrary loan workload is almost completely done electronically, and even reference transactions are moving online, evidenced by a 46 percent increase in web-chat transactions from the previous year. The library has a centralized ILS (integrated library system), but it does not have a similar centralized system for all of the other tasks and functions that are required in Research, Learning and Assessment Services. For the past two years, the Research, Learning and Assessment Services department has been using Chrome (www.google.com/chrome/browser/) as its primary browser to help streamline those functions.

Rationale for Using Chrome

The Google Chrome web browser was first publicly released in 2008 (Needleman). Along with Internet Explorer and Firefox, Chrome is one of the most popular web browsers today. Chrome's mission is to be fast, simple, and stable ("Company Overview"). These are all optimal things to look for in a browser, but what makes Chrome a workhorse for RUL is its functionality as well as the information and processes that reside in the cloud ("Chrome Browser").

Chrome was built to be the fastest browser on the market, from the first click at start-up to the end results. It is not surprising then that Chrome is known for its speed, both for application performance and JavaScript processing (Shankland). These two processes were independently verified by multiple websites to be the swiftest among the major browsers when it was released in 2008 (Purdy). Web pages load fast, something that all researchers and reference librarians can appreciate.

Chrome also has a simple look, clean and efficient, with a tab-based organization system at the top of the screen. Chrome was the first browser to incorporate the Omnibox, which makes the address bar omni-functional (Neds-Fox 16). This means that a user can type a URL or enter a search term in the address bar

and the browser will determine which is which and autosuggest urls. This eliminates the need to open up a new tab for a search engine, making browsing faster and more efficient.

Google Chrome uses sandboxing to add multiple layers of security to prevent phishing (fake websites trying to gather personal information) and malware (malicious programs) from attacking a user's computer. Sandboxing helps prevent malware from installing itself on a computer. The sandbox adds an additional layer of protection against malicious web pages that try to leave programs on a computer, monitor web activities, or steal private information from the user's hard drive ("Explore the Chrome Browser"). This also makes whole-browser crashes rare. In the event of an issue, a crash is usually isolated within a tab and does not take down the whole browser window, leaving all of the other tabs up and running.

One Login for Many Users

By using a Google account to sign in after opening Chrome, library employees can sync their bookmarks and other settings to any computer, or any device with Chrome installed. Chrome sends and receives data through a Google Account, which in turn updates all signed-in instances of Chrome ("Internet Browser Comparisons"). Prior to adapting Chrome, the Research, Learning and Assessment Services department would lose pinned bookmarks with every computer upgrade. Part-time staff members share a main computer at the reference desk, and any off-desk work would result in lost productivity as employees searched for websites and necessary links. Chrome lets staff synchronize their bookmarks and setting across all devices with the browser installed, saving time and effort. Staff pin most used bookmarks to the bar at the top of the browser window. The Research, Learning and Assessment Services department has a single user account that allows all users to access the same bookmarks that are pinned to a bookmarks bar across the top of the browser window (fig. 1).

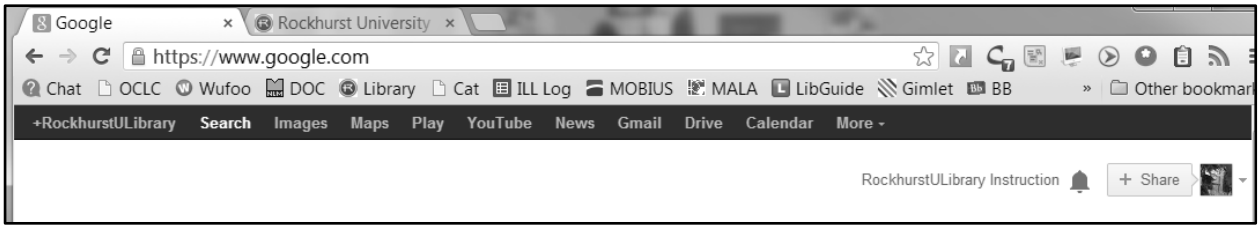

Fig. 1. Example of bookmarks pinned across a bar when logged in.

This sign in function also makes it possible library employees to access the browser extensions available. Browser extensions are visible at the top right-hand corner of the browser window, and are different than bookmarks in that an extension is an installed program within the browser window that is integrated into a browser application and provides additional functionality (fig. 2). Internet Explorer, Firefox and Chrome all have browser extensions, however, in the cases of Internet Explorer and Firefox, a user is limited to a single location or forced to download browser extensions onto multiple machines and logins. These other browser extensions also do not have the variety of functionality that Chrome demonstrates.

Fig. 2. Browser extensions in Google Chrome.

Chrome works with many Google and non-Google products. Users only need to login once to work with multiple programs. Users can share documents, presentations, websites without attaching and emailing. Products such as GoogleTalk (similar to Skype), Blogger, Sites, YouTube, are all easily linked and accessible.

No Software Installation

Chrome does not require any additional software, and can be accessed from any web-compatible device (i.e. computer, smart phone, tablet, etc). The lack of software streamlines the Research, Learning and Assessment Services department's workflow as there is no need to contact the IT department or someone with administrative rights to download new software, or having to go through multiple updates of existing software. Chrome updates automatically to the newest version, which allows users to gradually adjust to new features, as well as not having to worry about browser compliance. This can also be a negative, as the apps and extensions that are available through third parties may not be aware of upgrades, or not able to keep up their development and become obsolete.

Google is Free (or is it?)

Budgets are always tight, and even when they are not, it pays to be fiscally prudent. With Chrome, a user does not have to pay licensing, or any fees. This makes it very desirable and easy to convince administration to try. But anything that does not have upfront cost means that there may be hidden costs, which are discussed below.

Areas of Concern

The Rockhurst University Library has not completely transitioned to the online Chrome environment, forsaking all other desktop use. Staff consider Chrome and extensions a supplement to the Microsoft Office Suite (office.microsoft.com) that is currently installed campus-wide and used by all Rockhurst University faculty and staff. In addition to the C Drive on work computers, the university provides shared and private storage drives. Although these drives fill up quickly, and sometimes staff need more functionality, they are administered by the Rockhurst IT department, not a third party, and are not hosted in a potentially unsecure environment. RUL takes security and privacy issues into consideration when it comes time to decide how and what information to store in the cloud where Chrome houses its data.

Security: How Secure is the Cloud?

Cloud computing is a great convenience, but there are some concerns when data is accessed and stored remotely, especially in the areas of reliability and security. In July of 2012, the cloud storage and synchronization service Dropbox (www.dropbox.com) revealed that hackers had gotten access to a small percentage of users' accounts and accessed their files (Goldsborough 68). As all libraries, RUL takes privacy and patron confidentiality very seriously. Because of possible security concerns, The Research, Learning and Assessment Services department takes care to not put any identifiable patron information, or other potentially sensitive information through any cloud-based Chrome application, including Google Docs and Google Spreadsheet.

Reliability can also be a factor with cloud services. Extreme weather, an unexpected influx of users, and hacking attacks can cause service disruptions. There have been several instances of this within the past year across various services. The popular cloud video streaming service Netflix (www.netflix.com) went down on Christmas Eve of 2012, with users unable to watch film clips, movies, and TV shows. A similar incident happened, at about the same time, with Amazon's video streaming service, Amazon Prime (www.amazon.com/prime). And Google's cloud email service, Gmail (www.gmail.com) went down in December for several hours at the beginning of a work week (Hachman). Preparing for, or compensating for, these possible vulnerabilities is an important consideration when working with apps and extensions that are cloud based.

Privacy: The User is Not the Client

Google's data-collection practices are notorious, and there is no indication that Chrome's practices are any different. One case in point is the controversy that Google's privacy policy has created. On March 1, 2012, Google began creating a single profile for each user by combining the data it collects about that user from its various websites and services, along with simplifying and condensing its privacy policy (Information Management Journal 7). Privacy watchdogs are concerned that the new policy also changes the way Google can appropriate users' information. After years of offering users information about the

world, Google is now focused on capturing the minutiae of the daily lives of its users (Beer 28). In fact, Google's new privacy policy states that Google can use information shared on one service in other Google services (Information Management Journal 7). Given the number of services Google offers, there are some real concerns about online privacy.

The more Google knows about its users, the more valuable its service to advertisers. According to John Simpson, who leads Consumer Watchdog's Inside Google, a project that focuses on the company's dominance over the Internet, "We are not Google's customers. We're Google's product. We use their services that are now all combined, creating a digital dossier on us that becomes the real product offered to advertisers" (Beer 30).

Other Considerations

Google also has the right to discontinue any service at will, like the recent demise of the Google Reader, a service that aggregated syndicated web content such as news headlines, blogs, podcasts, and video blogs in one location for easy viewing. When a product fails to become popular, or drops in popularity, it can be dropped at will. Likewise, if a product becomes too popular, it will most likely be put on a fee-based structure. This is the challenge of using free technology; as the old adage states, "You get what you pay for." Apps that the RUL rely on may become discontinued or unsupported at any time. However, when used carefully and with these considerations in mind, the benefits of productivity and time saved outweigh the drawbacks.

Apps and Extensions

Using Chrome, RUL utilizes the following extensions in order to streamline its workflow. Most of the following apps require a Google Account (accounts.google.com) that allows a user to access Google services. It is possible to use Google Chrome, the web browser, without having a Google Account, but a user must set one up in order to access Google services. The setup is straightforward; the user provides an email address and password combination. This email address can be any email address, but it is a good idea to go ahead and associate a Gmail account with the Google account and then add any other email accounts later.

Fig. 3. Chrome Web Store tile.

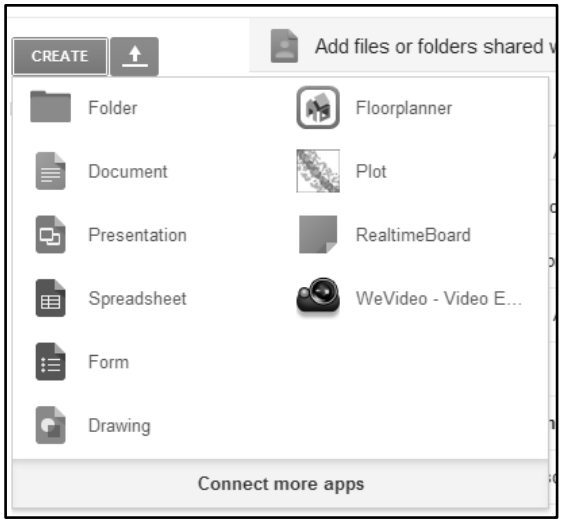

Fig. 4. Types of office products available through Google.

Once users have a Google account and download the Chrome browser (available at http://google-chrome.todownload.com), they are ready to go to the Chrome Web Store and find apps and extensions. The name Chrome Web Store is a little misleading, as nothing can be purchased at the store, and no money is exchanged. It is more of a place to download apps and extensions that are free or have a free trial. The Chrome Web Store can be found on opening or second tab of the Chrome home page as a tile (fig. 3). Users can search apps by browsing or using the subject organization on the left-hand side of the page.

Discussing Google applications (apps) can be confusing, as Google refers to their Web applications as "apps," but also have Google Apps ("Apps" with a capital a) that is a specific fee-based suite of hosted services that business, schools and other organizations can administer using Google's servers and their own domain. This paper will be discussing the Google apps, the free web-based

applications offered via the Google Chrome store.

Cloud computing, a networked computer system that harnesses the resources of several servers to complete tasks and store data, is one of the largest trends in the computing industry. The Chrome Web browser introduced a new way to think about browsing the web using cloud computing. Browsers such as Firefox have extensions and themes, but Chrome introduced Web apps. Web apps are basically websites that run within Chrome's browser, and usually don't require any downloads. One example is Google Docs. It runs within the browser, does not require any downloads, and has its own user interface. An extension, on the other hand uses downloaded components to modify your browser. Chrome does have extensions as well. For instance, an extension may add the ability to save items to an Amazon.com wish list. When the extension is installed, that feature is available on every single website visited, not just at Amazon.com. Below are a few examples of the extensions and apps that are frequently used at RUL.

Google Docs/Google Spreadsheets

The Google "Office Suite" (docs.google.com) features the ability for several staff members to work on the same document simultaneously, allowing them to collaborate in real time, whether in person or remotely (fig. 4). It is used extensively at the library for note taking at staff and department meetings. Staff members are able to directly access the agenda and write commentary on their particular area of contribution. Staff members regularly share assignments and documents without having to worry about working on the most updated version. Documents and editing privileges can be easily shared with others by entering an email address or sending a link to the document. The document creator can also decide if the document is locked from editing as well.

Google Drive

Google Docs, Spreadsheets, and Forms are all located in Google Drive (drive.google.com) (fig. 5). At this time, to use any of Google's Office Suite, you must have a Google Drive, which is free, although if a user needs more space, it can be purchased.

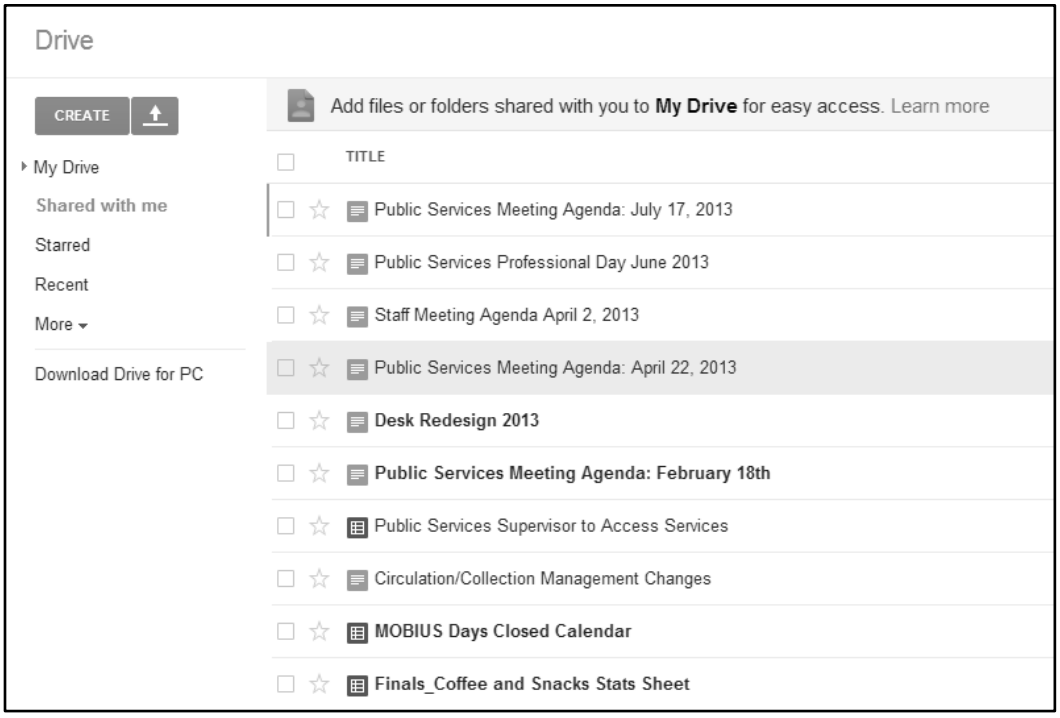

Fig. 5. Google Drive.

Papercuts

Papercuts (www.chromeshark.com) is a Chrome browser extension that allows you to add data to any web-based form via hot keys or copy and paste (fig. 6). Information is stored and organized in the browser window, which makes adding and editing messages simple. The Rockhurst University Library uses it to send standard messages through the administrative end of our circulation and interlibrary loan forms.

Browser Clipboard

Another browser extension that enables the user to copy and paste multiple items across the web is the Browser Clipboard (chome.google.com). The "clipboard" is adjustable and can be hidden or moved anywhere across the screen. It also has the ability to pin and unpin items, and to drag-and-drop data into forms (fig. 7). Library employees use this in multiple ways, including checking and placing interlibrary loan requests, and with reference transactions by assisting patrons with records of searching.

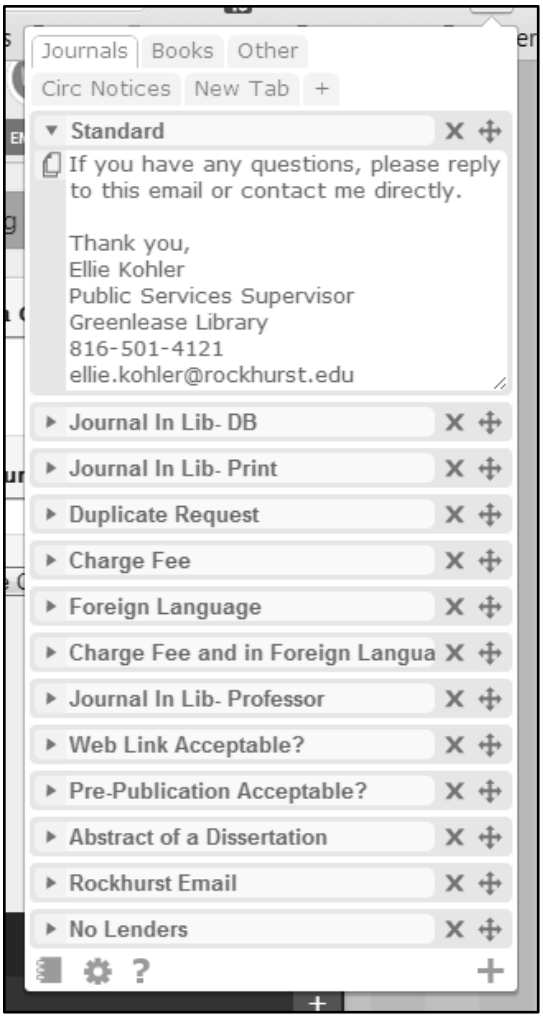

Fig. 6. Papercuts with different prewritten messages.

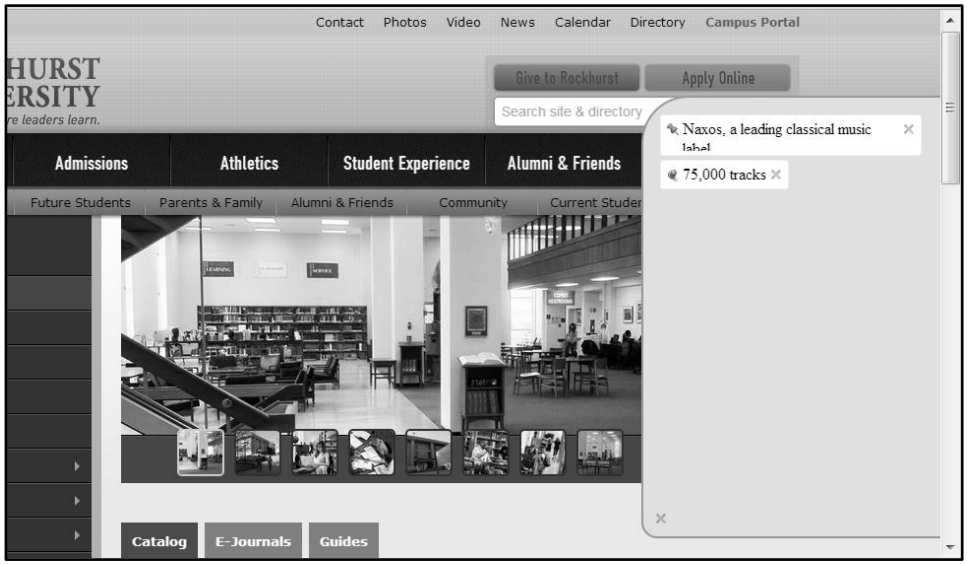

Fig. 7. Browser Clipboard in use.

Floorplanner

This app allows the user to sketch existing floor plans or to create new ones. While a little time-consuming to create, once a floor plan is made it can be emailed as an attachment, linked to online or printed. The Floorplanner (floorplanner.com) creator has flat two dimensional sketches and a 3D virtual tour option as well (fig 8). The RUL often has events on the main floor, and the Research, Learning and Assessment Services department has found it beneficial to have a floor plan of where tables and chairs can be returned. It has also been beneficial with the Access Services redesign project that is currently underway.

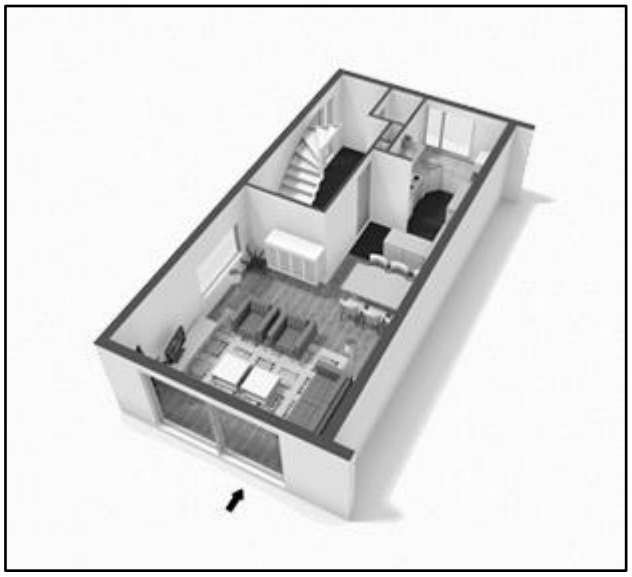

Fig. 8. Floorplanner can be used to create 3D floor plan

IE Tab

Sometimes Chrome does not have all the functionality necessary, especially with used in conjunction with Microsoft Products. Microsoft would prefer that its web browser, Internet Explorer (IE), is the browser of choice. Some functions cannot be fully supported unless IE is used, such as online access to Outlook email. IE Tab (ietab.net) is a handy little browser extension that lets Chrome have all the functionality of the IE web browser within its tab by using the IE rendering engine directly within Chrome (fig. 9). Clicking the IE Tab icon will begin running IE within the tab.

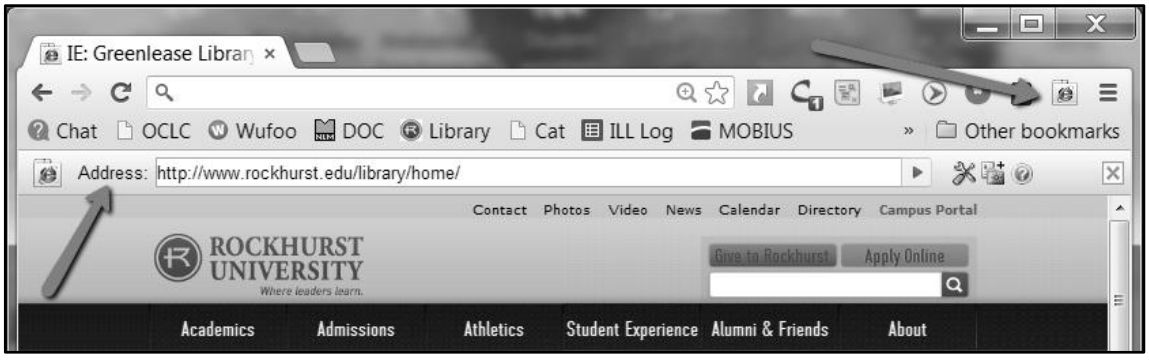

Fig. 7. IE Tab in use.

Other Apps and Extensions

There are many more apps and extensions, and below are a few that could be useful to libraries, but are not currently used by RUL. These are all currently available in the Chrome Web Store, and company urls have been provided.

- Vyew (www.vyew.com): a free collaborative workspace, similar to Go-To-Meeting
- PresentME (present.me): record and share presentations
- Scribble Maps (scribblemaps.com): create and share custom Google maps with individualized "scribbles" and more
- eXo Cloud (cloud-workspaces.com): free social intranet for your library
- Autodesk 123D Catch (http://www.123dapp.com): create 3D models from your photographs
- Symphonical (www.symphonical.com): organization software
- Clue (clueapp.com): website usability testing that uses a game to test what people remember from a website
- WeVideo (www.wevideo.com): online video editor
- Realtime Board (realtimeboard.com): Whiteboard for visual collaboration to discuss design, brainstorm, mindmaps, etc
- Tiki-toki (www.tiki-toki.com): Interactive timelines that are shareable on the web.

Evaluation of New Products

The easiest way to evaluate a new app is to look at its feedback. All apps and extensions in the Chrome Web Store are on a rating system, from one to five stars, and also have the option of user feedback. From past experience, the feedback given is instructive and generally accurate. It is also beneficial to check to see if the company that is producing the app has a website and view whether the website is extensive or bare-bones. This will give an indication of how well-established the company is and whether it will be able to support its products in the future.

The next step is to download the app and test it out. Does the app save time or waste time? Is it easy to use? Is it eliminating steps or adding to the workload? Some apps are for services that offer a free trial or a limited free version, while other apps are completely free. This information will be available in the Chrome Web Store. Reading each description ensures that a user does not encounter any unpleasant surprises. If an app or extension is not working for the library, it is easy to uninstall it from Chrome by right-clicking on the object and choosing the uninstall/delete option.

Conclusion

Google Chrome has been a useful tool for RUL. Not only a browser window, it is also used every day to work through the online processes at the library. The staff members in the Research, Learning and Assessment Services department agree that these apps and extensions have made their work easier to manage. Library employees always have to be aware of security and privacy concerns, however, and carefully decide what kinds of data will be used in the cloud. There are so many apps and extensions available that it is easy to get overwhelmed, or to want to download them all. RUL has found that the best approach is to know what apps are out there, but be selective and choose only a few carefully evaluated apps at the point of need to avoid wasting time or duplicating efforts.

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Kansas City Local Library Exchange: How We Developed a Low-Cost, High Payback Professional Development Program

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Abstract

Due to budgetary constraints, it has become more difficult than ever for library staff to take advantage of workshops, conferences, seminars, and other professional development activities that may come their way. But, what if there was a way for your staff to be involved in local professional development activities on a peer-to-peer level, at minimal cost to your library? Through a collaborative effort between several library organizations in the Kansas City metro area, the Kansas City Local Library Exchange has developed such a program. It is a very low-cost program that provides opportunities for not only degreed librarians, but paraprofessional and other library staff to interact with colleagues in other area libraries, whether academic, public, special, or school.

The Kansas City Local Library Exchange program is designed to offer professional development opportunities to library staff by:

- Providing a way for a staff person to spend a day learning about a process, a program, or an operation at another library, and sharing and applying what they learned during the visit back at their home library.
- Providing networking opportunities between colleagues.
- Providing opportunities for cooperation and collaboration not only between individuals, but between libraries as a whole in the greater Kansas City area.

The program launched on March 1, 2013. This presentation will cover what it took for the KCLLE work group to successfully launch the program, what we think we did well, what we might have done differently, and what effect the program has had on the Kansas City library community in the first few months after the launch. More program information is available at https://sites.google.com/site/kclocallibraryexchange/home.

Flipping Your Library Instruction

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Abstract

Students need critical thinking and information literacy skills more than ever. Unfortunately, our time and opportunities are often limited to a single 50 minute session per semester. Keeping these sessions interesting for you and your students are difficult enough without trying to jam a semester's worth of information into one class period. Learn how to use the flipped classroom method to optimize time with the students while giving needed attention to hands-on-learning. This method of teaching can enhance and inspire library instruction sessions and maximize outreach to students at their point of need. Important resources to integrate instruction with your institution's LMS will be explored, as well as, current best practices with tips and tricks. The session will be framed as a demonstration of a flipped classroom to give real life meaning to the concept.

Marketing Students + Library = Student-Centered Promotion for the Library

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Abstract

For the past several years there has been a noticeable decline in reference desk use by students at Criss Library on the University of Nebraska Omaha campus. Reference desk statistics have shown a steady decline and the decline is due to several factors: an increase in library instruction; increased use of digital resources; lack of time for students; and students unaware of research assistance offered by librarians. Two librarians from Criss Library researched the use of reference desk service by students, asking students why they do or do not use the service. The data from the research was used by a business marketing class as a service learning project. The class developed a marketing plan for the promotion of reference services in order to increase student use. The presentation discusses the findings from the research, the collaboration established with the business marketing class and promotion materials created.

Overwhelmed by Large-scale Library Digitization Projects?

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Abstract

With the development of institutional repositories at many academic libraries, library staff are looking at additional ways to provide access to the academic output of their institutions--in particular the theses and dissertations by their graduate and PhD students. Traditionally, libraries received a bound copy of the student's work upon graduation. Today, libraries increasingly only accept digitally formatted theses and dissertations to preserve and make available via the online institutional repository. Looking back at the printed theses and dissertations, Indiana State University (ISU) library staff reviewed the options of digitizing the print-only items with an eye towards providing online access to the entire collection. Deciding on digitizing the collection in house, ISU staff will share the methodologies used, workflows developed, and experiences learned in conducting the program over a period of one year.

Introduction

In the digital age, the role of librarians has been changing and evolving to provide access to library holdings regardless whether they are in an electronic or analog format. Increasingly, many libraries are starting to digitize and facilitate access to their local and unique collections. Retrospective theses and dissertations (RTDs), the student's primary academic work, were found to be the top most priority of digitization in terms of types of materials (Rafiq and Ameen 37). Managing large-scale digitization of RTDs poses a challenge to librarians.

This article introduces a digitization project of RTDs at Cunningham Memorial Library of Indiana State University (ISU). The purpose of this project is to digitize all theses and dissertations only available in print and to integrate them into the ISU online institutional repository (IR). Deciding on digitizing in-house as opposed to outsourcing, ISU library staff share the methodologies used, the digitization and integration workflow developed, the scanning equipment and software used, file formats selected for scanned materials, and standards implemented.

Also, this paper shares the outcome of the project thus far, for example, the number of theses and dissertations scanned and online, the analysis of cost per title, and the improved preservation measures for the library collection. The case study provides guidance for librarians who plan to start large-scale digitization projects.

Literature Review

The widespread use of Internet has greatly changed the way of exchange and discovery for a wide variety of information. Due to the improvement of scanners and OCR (optical character recognition) technologies including digital cameras and the increased need for providing electronic resources to library patrons, libraries have been embarking on various digitization projects. Digitization is a process in which materials are converted into electronic formats. Digitization projects produce digital surrogates of analog items such as books, journals, microfilms, and videotapes.

Library digitization has become part of the work of librarians (Fabunmi, Paris and Fabunmi 23). Inspired by digitization projects such as the Library of Congress National Digital Library Program and supported with available resources, as early as 2001, one third of academic libraries and a quarter of public libraries were involved in digitization of library resources (Liu 338). Improving access and preservation of materials are the main reasons that libraries undertake digitization projects (Lopatin 273).

Mass and large scale digitization gained widespread media attention with the launch of Google Book Search in 2004, Open Content Alliance in early 2005, and Microsoft Book Digitization Initiative in 2006. There are numerous technological, legal and managerial issues that must be considered in large-scale and mass digitization projects (Coyle). Operating large-scale digitization projects consists of budgeting, staffing, setting up workflow, determining technical specifications, resolving legal issues, creating metadata, storing, delivering and preserving digital contents, and more (Lopatin 274).

As libraries increasingly work to highlight their unique collections, many library digitization projects focus on special collections. One of a university's special collections is RTDs that are typically available in analog formats. Over the years, there are articles reviewing the digitization projects of RTDs. Some offered a broader view of the projects and discussed general issues and challenges, while others focused on one or more aspects of the projects (e.g., metadata creation and integration).

Implementing a digitization project of RTDs is rather complicated, as many essential points must be taken into account throughout the management cycle. Clement, Shorey and Dotson together presented a comprehensive overview of the key questions to answer before committing to a digitization project. The key questions include: why digitize, what to digitize, from what source to digitize, where to digitize, how can you capture and convert files, how do you document metadata, what are your access options, how do you deliver and display, what does it cost, how do you manage rights issues, how do you manage quality control, etc. (Clement, Shorey and Dotson). The key questions paint a big picture of commencing and managing a digitization project, outlining the concerns, options, and procedures from initial planning to project assessment.

Alemneh and Phillips answered some of the aforementioned questions in their poster. They introduced three access levels to their digitized RTDs (i.e., public, university community and university campus). One diagram clearly illustrated pre and post scanning workflow along with the collaboration among different library units such as Preservation units and Digital Project units. Particularly, the poster revisited some primary issues, such as outsourcing vs. in-house, standards and best practices, discovery and delivery options, rights management and preservation issues. Of particular importance to the poster is that the authors advocated adding value-added services to make digitized RTDs more visible, accessible, usable, interoperable and persistent (Alemneh and Phillips).

One of the biggest challenges for libraries all around the world that wrestle with digitizing RTDs is funding. Starting a digitization project is not inexpensive; especially if the aim of the project is to scan a full run of analog theses and dissertations. Digitization projects are normally funded through either internal funds (e.g., special project funds) or external funds (e.g., grant). Due to the lack of funds, appropriate facilities, and skilled manpower, Ibrahim Usman Alhaji concluded there was no digitization of past question papers, theses and dissertations after surveying 30 Nigerian university libraries (Alhaji 1).

Even with available funds, where to digitize RTDs (in-house vs. outsourcing) is still one unavoidable debate because it directly relates to the project cost and workflow. Piorun and Palmer weighed outsourcing versus insourcing in terms of digitizing 300 dissertations, deciding on insourcing due to the concerns of gaining experience and having tighter quality control. They briefly described their digitization and submission processes to ingest digitized copies into their IR, as well as the equipment and software used. Then the authors concluded their in-house digitization was cost-competitive compared with outside vendors (Piorun and Palmer). The study is one of the few providing an in-depth examination on an in-house RTDs digitization project.

The most difficult task of running a RTDs digitization project is perhaps dealing with the copyright issue, because requesting copyright from former students is very time consuming and labor intensive. Shorey shared how they dealt with dissertations deemed in copyright and out of copyright. In particular, their digitization project "treats dissertations authored before Jan. 1, 1978, as published works subject to the pre-1978 law requirements of notice and renewal (Shorey)." Of significance to this presentation is the creation of a workflow, which includes gathering copyright author information, contacting authors, requesting permission, and establishing an opt-out procedure in the IR. To address private information that may be contained in RTDs, the Simon Fraser University library adopted a practice of removing

personal, private and confidential information from the digitized items (Song S75). As the copyright of RTDs rests solely with the authors before they pass into public domain, Shreeves and Teper described how they asserted control over historic dissertations for open access via agreement with ProQuest and upon receipt of copyright holders' permissions.

Choosing file formats for scanned theses and dissertations is critical for access and long-term preservation. There is a delicate line between ease of production and access and ease of future migration/retention (Teper and Kraemer 69). A few case studies mentioned that they decided to use the searchable PDF or the PDF/A format for access purposes and the TIFF format as the master copies (Platt). However, some institutions do not "keep TIFF files in light of the potential cost of archiving (Song S76)." Library of Congress compiles a rich set of resources with respect to digital formats (Library of Congress) and the National Archives and Records Administration developed a group of digitization guidelines for scanned documents (National Archives and Records Administration), both of which are valuable for libraries to consider and evaluate the file formats for their digitization projects.

Improving access and promoting use of RTDs are the convincing rationale of initiating the project in most institutions. With the purposes of promoting open access and broader scholarly communication, Shreeves and Teper discussed how they centralized access to locally produced intellectual content from a multitude of locations, platforms, and formats (Shreeves and Teper 533). Song explicitly pointed out that the top purpose of their digitization project was to promote open access (Song S73). He also illustrated the RTDs metadata mapping between Dublin Core in their IR and MARC in their cataloging system. Furthermore, Song briefly addressed the four venues to promote the open access of these digitized materials: the university catalog, other union catalogs, DSpace database, and general Internet search engines.

Metadata creation of digitized RTDs involves capturing additional information (e.g., committee members) specific to the collections. ETD-MS, the Interoperability Metadata Standard for Electronic Theses and Dissertations (ETDs), developed by Networked Digital Library of Theses and Dissertations has been widely used (Networked Digital Library of Theses and Dissertations). The Health Sciences and Human Services Library staff examined the problems they faced in assigning accurate metadata (e.g., author's name does not appear in the volume list, binding errors) for 3,035 theses and the revision of metadata assignment to ensure accuracy. Particularly, the authors came up with a scanning error checklist, which is very useful for assessing the scanning quality (Pinkas, Schnur and Wolff). Ribaric shared how to automatically populate an IR with digitized RTDs and metadata from the Internet Archive .

Project Background

In many academic libraries, the submission and management of theses and dissertations has been moving to a solely digital workflow. Since 2010, ISU accepted only ETDs from graduating students. With ETDs being archived at ISU's IR, which runs on DSpace, library staff looked at ways to centralize access to all university theses and dissertations so users can search for and read through current ETDs in the same location as a thesis or dissertation published before 2010. To increase access, staff investigated digitization options to have electronic copies of all RTDs available through the IR.

Supported with the library's special project funds, the RTDs digitization project started back in June 2012 within the Special Collections department. The overall goals sound simple, that is, a complete digital copy of each thesis and dissertation that economically uses resources for digitization and distribution, provides text searching capability, and is relatively easy to download. Due to the other digitization projects taking place in the department, the project already had most of the equipment in place. In addition to desktop workstations for the two part-time student workers, the project used the following hardware and software: BookDrive Mini with two Canon EOS 5Ds, Photoshop CS 2, and Adobe Acrobat X Pro. For oversized pages or foldouts, the department has the full-sized BookDrive Pro and Plustek OpticBook A300 to image the pages. While using the Capture software bundled with the BookDrives, staff did not use the Editor software to process the images.

Choosing appropriate file formats for delivery and preservation is of concern to the project staff. Preservation of digital objects must utilize appropriate software, hardware, and ongoing review and

maintenance of the digital objects to achieve long-term use and access. Although best practices prefer that an uncompressed image file of each page is preserved in addition to the access file, project staff concluded we would not have the necessary resources to maintain uncompressed images of every page for all theses and dissertations (Library of Congress 2013). Much like Song described for the digitization project at Simon Fraser University, ISU's original print theses and dissertations will still be kept as official copies especially since keeping TIFF images of each page would require a large amount of resources (S76). Therefore, staff entrusted preservation fixity and long-term use characteristics to the PDF/A format as described within ISO standard 19005-1.

As detailed by other ETD projects, working with author copyright is one of the more thorny issues. Former ISU graduates did not have an agreement for their works' reproduction and distribution, although ISU's current ETD authors must agree to publish their works as part of the graduation process. Contacting the authors of RTDs only available in print would be a time consuming and costly activity. Therefore, the project staff decided to publish digitized theses and dissertations on the IR with an opt-out statement listed alongside the object. As the project approaches theses and dissertations created after 1977, there will be a renewed discussion regarding how to best make them available while respecting the author's copyright.

Similarly with an author's confidential information, some theses and dissertations have private information printed within that could be a risk if the documents were published. The project staff created a process that handles requests to redact portions of the page(s). While no requests have come in regarding the digitized items, staff is confident that the process will address concerns with any digitized theses or dissertations.

Technical Specifications for Final Product

Recreating a print thesis or dissertation in an electronic format needs to accurately reproduce all the content from the original but also provide for ease of access and use. More precisely, the entirety of the original item should be in a single file, be as small a file size as possible, and provide full text searching capability with OCR.

Since current theses and dissertations are only accepted in PDF format, project staff favored using the same format to deliver RTDs. While the modern PDF format is well accepted as a standard for distributing documents today, staff looked into using PDF/A to mimic the functionalities of regular PDFs and to make use of PDF/A's preservation characteristics as a published ISO standard. PDF/A has three versions and each version provides some extra functionality over the previous, which means that the first version holds the most stringent requirements as to which functionalities can be present. Within each version of PDF/A, there are subsets to indicate additional adherence to further standards. PDF/A 1a requires text to be tagged, structured into chapters or sections, and mandated use of Unicode text. PDF/A 1b does not have these requirements to create a compliant PDF/A document. Due to the amount of time it would take to tag and format sections for each RTD, the project staff settled on using PDF/A 1b to focus on digitizing more theses and dissertations ("Improved PDF/A-1b. 5").

Not all PDFs are created equally. To some degree, all images converted to PDF are compressed in the process. Experimentation took place to evaluate how well Adobe Acrobat compresses various types of files while keeping high enough resolution for OCR purposes. There are two variables at work determining how well files merge together: image file type and color depth.

Adobe Acrobat accepts a variety of image formats to create a PDF. The BookDrive Mini's overhead cameras output JPG files of the original item. After cropping, pixel dimensions would typically have 3,200 pixels on the long edge of the page to work with, which would generate the acceptable 300 dpi requirement most scanning projects mandate. Since keeping an original of each image in an uncompressed format was not feasible, project staff would only be retaining the PDF/A as the preservation master copy and for use as an access copy. Since staff did not need to work only with TIFF files, staff tested JPG, TIFF, and PNG to see which would most effectively meet the requirements of being easily downloaded with OCR text.

The second major variable is color depth. While it would be preferable to preserve full color information about each page, the project aims to preserve and transmit the information of the content rather than display the original thesis or dissertation as an artifact. There are three methods to dealing with color depth. The first relies on keeping the original full color images as is. However, using full color typically requires the largest amount of disk space and the addition of color would add little value to the vast majority of pages containing only typed text. The next alternative is to use 8-bit grayscale for pages containing text and black and white images and full color for pages with any color elements. This is referred to as "color selective, grayscale remaining" in the table below. The last method uses each color depth for a specific purpose. Full color images are still only used for content that contains color elements, grayscale is used for pages with black and white pictures, and 1-bit monochrome for pages with only text. This last method is referred to as "color selective, grayscale selective, monochrome remaining" in the following table.

The table below shows the comparison of 138 pages saved to the three file formats with each color depth method when converted to PDF. For comparison, the original source files from the cameras before cropping measured 566 megabytes.

	JPG	TIFF	PNG
All color PDF	264MB	144 MB	65 MB
Color selective, grayscale remaining	219MB	91.4 MB	72.8 MB
Color selective, grayscale selective, monochrome remaining	can't save monochrome JPG	5.6 MB	4.8 MB

Fig. 1. PDF Size Based on File Format and Color Depth.

The experimental test indicated that using PNG files with the "color selective, grayscale selective, monochrome remaining" method creates the smallest PDF file that could still be read by OCR. After the document is scanned by OCR, the file is saved as a PDF/A as our preservation master copy and a second copy for access on the IR.

Workflow

The following diagrams describe the procedures from imaging a print thesis or dissertation, processing the images, converting images to PDF/A, to publishing at the ISU IR.

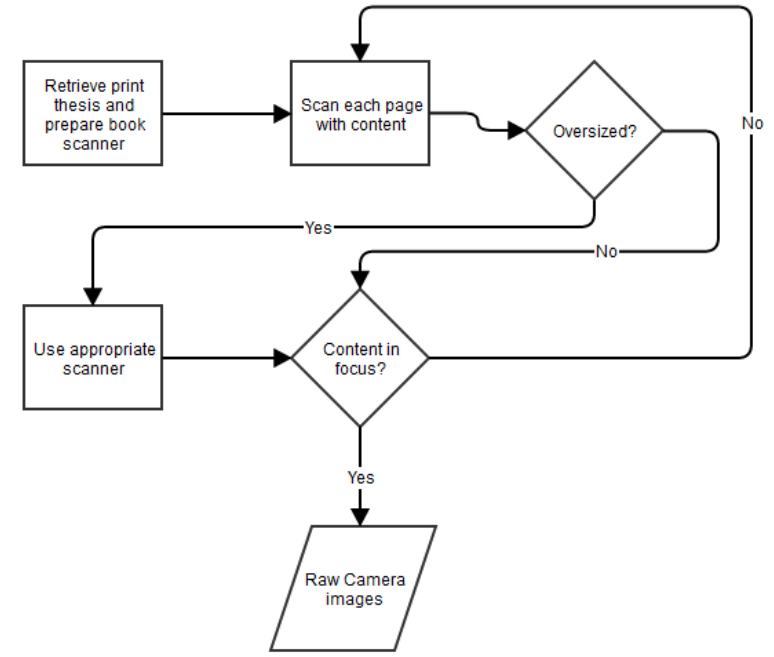

Fig. 2. Imaging original theses or dissertations.

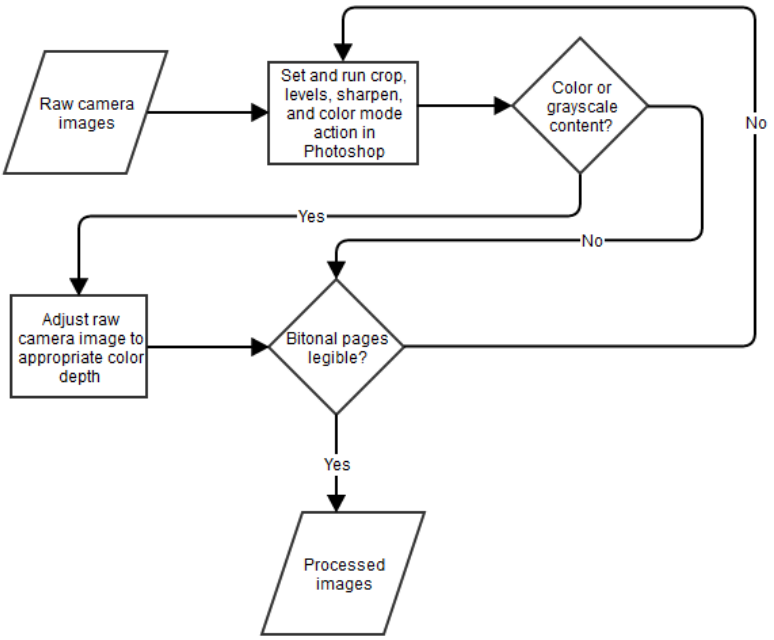

Fig. 3 Processing Image Files

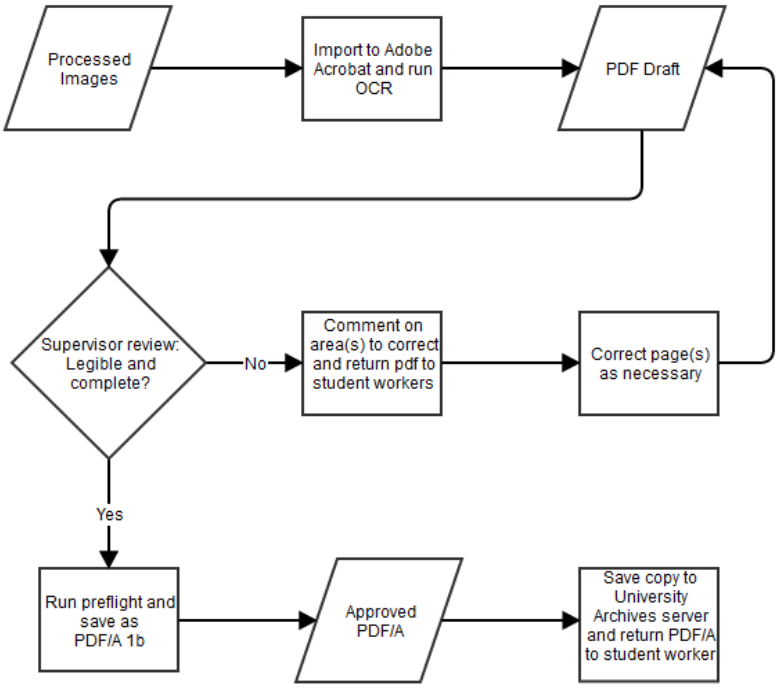

Fig. 4. Converting to PDF/A

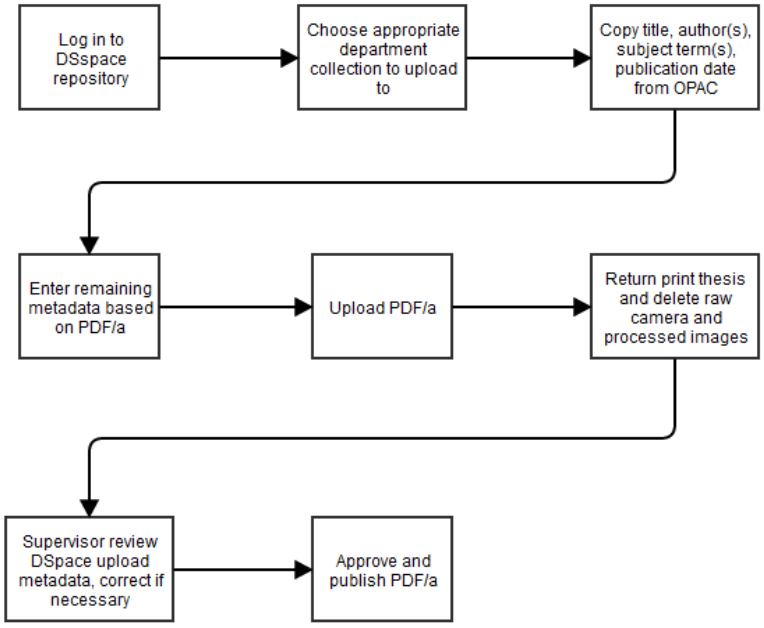

Fig. 5. Publishing on ISU IR

Lessons Learned

With the goal of exchanging experiences, the following describes the challenges faced over the course of the project and the resulting solutions developed. Foremost, getting clear and legible pages was an ongoing task especially when relying on monochrome color depth to save space. While a grayscale page accurately shows faint or faded text, a straight conversion to monochrome may show a white sheet since the text is not dark enough to convert to black pixels. Typically, the student workers would build in level adjustments and an un-sharp mask to the processing action in Photoshop. This step needs to take place while the image is still grayscale or color since level adjustments do not work on a monochrome image.

The goal with these adjustments is to ensure that the text is dark enough to be turned into black pixels while leaving the blank areas of the page bright enough to turn into white pixels. With practice and demonstrated examples, student workers quickly took on this task.

Since the project required a high degree of accuracy, supervision is necessary. Any digitization project should have a second pair of eyes to review the work especially when the monochrome pages could have text that has faded into illegibility on the first scan of the document may have inadvertently skipped a page. One of the project's supervisors reviewed each page for legibility of the text and page order to ensure the entire document was properly imaged. During the review process, the supervisor also checked for correct usage of color and grayscale images.

When initially organizing the ETDs on the IR, newly submitted ETDs were organized by department. For the RTDs, project staff quickly found that many of the theses or dissertations either did not list a department or, if it did list a department, it listed a department that no longer exists. While there was some discussion as to how to treat a department with a changed name, merger with another department, or no longer existing, simplicity prevailed. Considering most users would not browse for the old department name while searching for the thesis or dissertation, project staff settled on a catchall organization scheme. All theses and dissertations that do not precisely match a currently named department are placed inside a "Department Not Named" subheading within the ETD collection.

While adding the RTDs, it is necessary that the original MARC record be updated by adding an 856 field in order for the link to be reflected in the OPAC, thus giving anyone using the catalog quick access to the ETD's full text. However, this process has not been undertaken as of yet because of a staff shortage in Technical Services.

Much like other library projects, continued funding is an ongoing issue. While the temptation exists to simply outsource the entire project to vendors, the project workflows show that it can be more cost effective to perform a project in house. However, the timeline to complete the project may be much longer than what a vendor could be capable of doing. Library staff may want to consider whether more expensive outsourcing with a quick turnaround would be easier to commit to than a less expensive project requiring less time to complete.

Outcomes

Starting the project one year ago, there are, as of June 2013, over 800 titles digitized and available on the IR. The most recent statistics with two part-time students working on the project are as follows:

Volumes finished (digitize, process, upload, transcribe metadata): 848
Average student time to complete each volume: 1.3 hours
Average supervisor time per volume: 5-10 minutes

Total Disk Space: 4.6 GB
Average file size: 5.5 MB

Average volume size: 96 pages

Approximate cost to digitize, describe, and upload thesis with quality controls: $15-18

Preservation: Two electronic copies of RTD saved to local servers. A LOCKSS network replicates one copy to a distributed preservation environment through MetaArchive Cooperative.

As described above, the project is cost effective although it does require some larger one-time costs at the beginning in order to begin.

Conclusion

Many libraries have initiated digitization projects to promote the usage of their local and unique collections such as RTDs. Operating a large-scale digitization project is considerably complex. It involves funding issues, technical standards, quality control, format selection, and workflow development. It also

deals with metadata creation, delivery in a repository platform, long-term preservation, as well as relevant rights management. Implementing a large-scale digitization project, indeed, can be an overwhelming and daunting task. The ISU digitization project team of RTDs experienced some issues and endeavored to implement best practices during the process. To date, these practices have proved workable, efficient, and cost effective.

This project provides access to RTDs for campus and ISU distance education students and other patrons via interlibrary loan and on the IR. It tremendously facilitates the access to the RTDs collection by allowing end users to search for and use these scholarly works in a timely manner as the metadata of these records are indexed in several search engines and digital repository registries. Furthermore, newly digitized theses and dissertations are in the same preservation environment with current ETDs. These additional strategies include routine server backup, digital format conversion and eventual migration, and distributed LOCKSS-based preservation through the MetaArchive Cooperative. Overall, the project return on investment is worthwhile.

In addition, this project sets a good example for library staff that plan to digitize other in-house special collections. The factors considered and issues addressed in the case study can be applied to other similar digitization projects. Disseminating RTDs rapidly populates the ISU IR and meanwhile serves as an excellent recruitment strategy for the growth of the online digital repository (Piorun and Palmer 223). Digitization projects assist libraries to transform local collections from analog to electronic format and, therefore, better serve library patrons in terms of information searching, access and retrieval. Moreover, the increased availability of ISU RTDs facilitates campus learning, teaching, research, and raises ISU's profile and scholarly impact.

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Disruptive Thinking about Disruptive Innovation

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Abstract

How does an academic library prepare for a future filled with new technologies, unexpected trends and new information ecologies? Will we be successful providing our same services relying on a process of incremental change with ever improving technologies? Will the library's role be replaced by an unexpected disruptive innovation coming from outside or inside our institutions? Will our parent institutions simply decide they don't need us anymore? In The Search for Survival: Lessons from Disruptive Technologies, Henry C. Lucas wrote that correctly answering the questions "What business are we in" is a first, essential step for an organization in identifying and dealing with disruptive innovation that can undermine their entire business model.

One technique for identifying and managing disruptive innovation is by doing disruptive innovation ourselves. By engaging in disruptive thinking we can transform our organizations intentionally rather than waiting for an external disruption to impact us. According to Luke Williams in Disrupt: Think the Unthinkable to Spark Transformation in Your Business, the goal of disruptive thinking is to break up patterns of thought, shift perspectives and catalyze new ways of thinking in order to become the disruptive innovator. Can we learn to embrace, rather than fear, disruptive innovation and use it as a technique to transform our processes and insure our future?

We explore the first stages of disruptive thinking strategies and attempt to apply them to academic libraries.

Introduction

The viability of libraries has been questioned at numerous points in time and the most recent due to the technologies creating the Internet and the sharing of information electronically. Why is a library needed when everything is on the Internet? Of course those posing that question are not aware of what is actually accessible via the Internet and how to find it. Now that being said, are library administrators, librarians and library staff preparing for their 'new' place either in their public, corporate or academic communities? Just because libraries serve the greater good does not make them irreplaceable.

Innovation and invention has caused many companies and industries to evolve and in some cases die out over the last 100+ years but the technology boom of the last few decades has caused even greater change. Ponder the rippling impact of the personal computer, Internet and cell phones/smart phones.

Many organizations, regardless of their for-profit or not-for-profit status, have some way of measuring their success. In Figure 1, Example A shows an organization's service requests have over time gone down with one simple exception. There are numerous scenarios and explanations but overall, this organization would be strongly encouraged to stop offering that service and find something more productive to do with their time. Example B is a common trend in academic libraries – the decrease in the number of books being checked out. Should they stop offering books and find something more productive to do? A simple explanation is the shift in book formats from paper to electronic (online or digital). Unfortunately many would accept that response and not consider any further action or reaction to the shift in business. But where is the proof that e-book usage is trending up? Technology has changed the format of how undergraduates 'might' receive information but how are libraries being innovative to assure their place in the students' acquisition of knowledge regardless of formats?

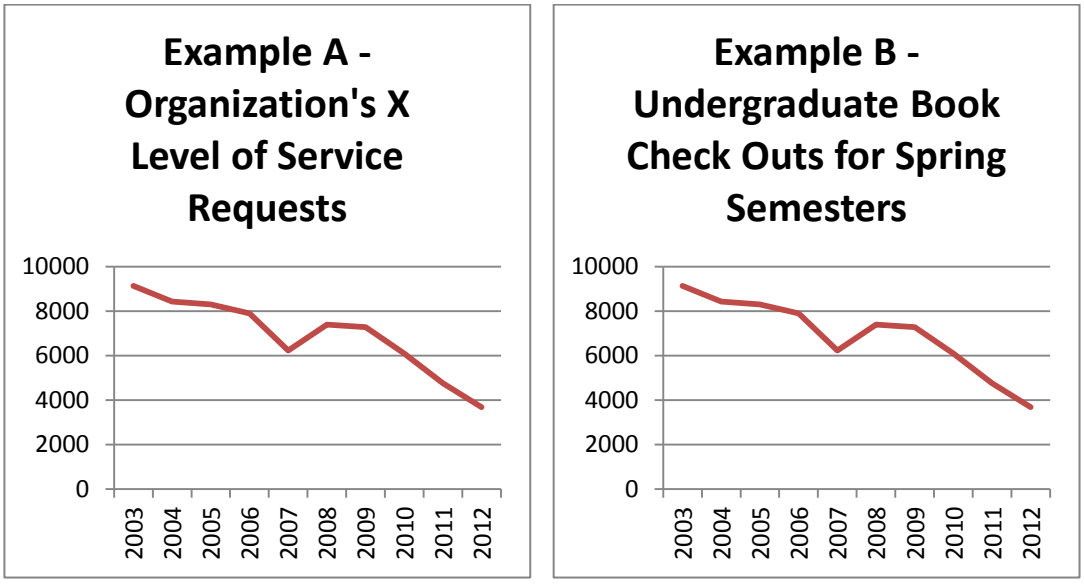

Fig. 1. Example Trend Lines

Books are not the only products impacted in this way. Henry Lucas in The Struggle for Survival devotes chapters to individual companies or entire industries that have been impacted by disruptive innovation, ranging from Kodak to Blockbuster to newspapers, education, recorded music and Middle-Eastern dictators. Lucas identifies a number of general lessons to take from these different companies and industries:

- An organization needs to understand what business they are in
- Organizations can't rely on historically successful business to last forever
- Current market dominance does not guarantee future success
- Well-recognized names and brands do not mean much to Internet users
- Organizations should spend a lot of time assessing future technologies
- Organizations should evaluate the potential impact of new technologies on their business (11)

What Business Are We In?

Kodak considered their business to be taking pictures instead of capturing and sharing images (Lucas 28). Blockbusters consider their business to be DVD rentals not providing video content (Lucas 58). The recorded music industry considered their business to be creating recorded music and selling the music in set packages (Lucas 105-106). When Napster came along with music downloads, the recorded music industry fought and lost the long-term battle. Instead of embracing the downloads, they lost control of the medium, of the production process and of the distribution process (Lucas 109, 116-117)

All of these organizations and industries were historically successful and the organizations dominated in their industries but those successes still weren't enough to save them from the disruptive innovation of other companies. They needed to look for new technologies and to understand how the technologies pioneered by other companies would impact them.

What business are academic libraries in? There is no one answer nor is there a right or wrong answer. The strategic goals of the academic institution help shape each library's answer. One person might think the library is in the business of providing books, while another may think it is providing resources and yet another may think it is providing instruction on how to find and use information. The bigger issue is not looking so narrowly for your niche that you miss out on current opportunities. Libraries should not use an historic rational for justifying their current status.

Disruptive Innovation

The concept of disruptive innovation might sound like an easy enough term to deduce from the words themselves. But the term is in fact self-contradictory. One tends to bring emotional connotations to these words. Conducting a simple a Google image search on each term (disrupt and innovate) is a convenient way to visualize these emotional connotations (see fig. 2).

Fig. 2. Google Images for "Disrupt" (on the left) and "Innovation" (on the right)
Source: Google Images. Web. June 29, 2013.

Disrupt is rather dark; it can seem scary, confrontational and destructive. Innovation is bright, cheery and provides a feeling of process and moving forward. So what happens when the terms are put together (see fig 3)?

The term disruptive innovation returns a plentiful assortment of graphs and charts. The emotion has been removed for the most part and it leaves a rational and cognitive approach to evaluating the term. In this rational, cognitive approach, let's dig deeper.

Disruptive innovation is a theory of organizational behavior that comes out of the realm of business. Based originally in the work of Clayton Christensen, the concept has been elaborated on by many thinkers. Though the theory has its start in business, it is still important and relevant for those in libraries to see the value of this concept in terms of libraries. It applies to related fields of education and higher education as well.

Disruptive innovation as a theory explains why mature, established businesses suddenly find their market undermined by competitors pursing radically different ways of doing business. Think about the corner bookstore, dusty and beloved, suddenly giving way to Borders and Barnes & Noble, who then in turn, crumble before Amazon. Disruptive innovation is quite simply, an innovation which is often technological, but not necessarily a technological innovation that disrupts an established market. Sometimes the disruption to the market is dramatic and swift and other times it can be slow and inexorable.

Three principles of Disruptive Innovation are:

1. Overshooting creates conditions for disruption
2. Disruption comes from breaking the rules
3. Business model innovation often powers disruption
   (Anthony, Johnson, Sinfield, and Altman 6-8).

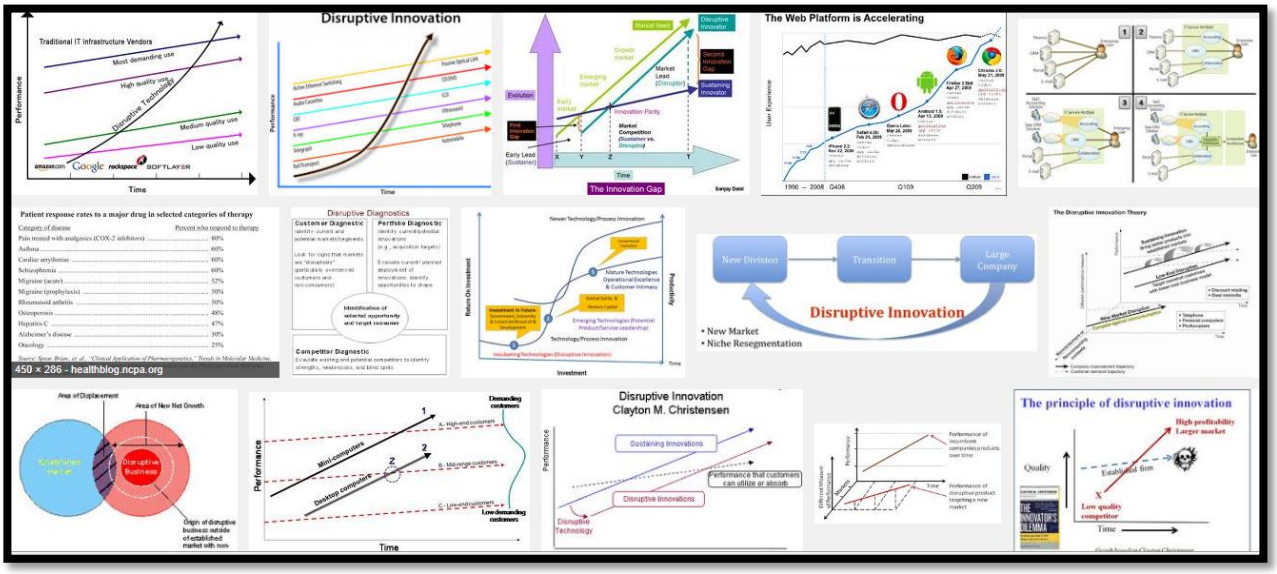

Fig. 3. Google Images of "Disruptive Innovation"
Source: Google Images. Web. June 29, 2013

Disruptive Innovation Can Come from 'Good Enough'

Christensen's study of mature business disrupted by innovation revealed that disruptive innovations do no enter at the top of the market. Actually the products and services being introduced are usually inferior to the products and services offered. An example would be self-publishing e-books. They come in at the bottom of the market and target consumers who are either 'overshot consumers' or those who are just plain 'non-consumers'. Also the disruptive innovations are NOT typically something that is 'better' but simply 'good enough' (Christensen; Anthony, Johnson, Sinfield, and Altman 6). With traditional publishing, editors determine if books are worthy for being published and with that scrutiny can quickly eliminate works that a certain population might find interesting. With self-published books, the editing and layout process might not be as rigorous thus lowering the professional look but for the author that is 'good enough' and for those purchasing the book at a lesser price it is also 'good enough'. Again, 'good enough' for the overshot consumer and non-consumers. Another example is regarding alternatives to Microsoft Office, a pretty universally accepted product that costs a couple hundred of dollars. Google Docs is a free version of similar productivity software as Open Office but Google Docs aimed at the low end of the market where the issues associated with the free product were 'good enough' while Open Office requires downloading software which is more comparable to Microsoft Office but more complicated to access than Google Docs. Open Office aimed for the top end of the market and failed. The top end of the market would purchase Microsoft Office and those needing and wanting a free option were more accepting of the 'good enough' option of Google Docs which was faster and easier to use.

A library example is related to database searching appeal for Google and EBSCOhost. Who are the databases like EBSCOhost designed to appeal to and who makes up EBSCO's consumer base? Libraries and librarians. They are the top end users. They know and understand how the sophisticated database works and how to read the elaborate search results. However, the product's main users 'should' be the students who are not the top end users. They do not understand how to use the databases to full capacity or understand the search results and so many students turn to Google for their research. It is easy for them to understand and use and is simply 'good enough'.

Disruptive Innovation May Require Breaking Some Rules

The rules that need to be broken are the narrow mindsets that leaders and administrators squeeze themselves into. Just because something has always been done a certain way does not mean it has to or should continue that way. An example of breaking the rules is when Procter & Gamble realized that mop purchases should not be onetime purchases, an industry assumption, and introduced the Swiffer, a type of

mop with a disposable cleaning cloth. Another was when Nintendo decided to take the video game world to a more interactive level. Nintendo create the Wii games which require the player to do more movement than ever before but with games that were familiar (Anthony, Johnson, Sinfield, and Altman 8).

A library example of a long standing rule that has been broken is the idea that libraries have to be a quiet place for students and patrons to study. With the business world's increased demand that students know how to work in teams and be collaborative, academic libraries have begun to shift and create spaces that are appropriate for students to meet and work on team projects which are not quiet activities. Another traditional library rule is the idea of no food or drink allowed in the library. More and more academic libraries have started allowing food and drink and some libraries even have cafes located inside of them. If Barnes & Noble find success in allowing people to not only read their non-purchased books AND drink coffee and eat pastries, then maybe libraries have some things to learn about people's behaviors as well.

Disruptive Innovation Includes Reconsider the Business Model

Typical business models include creating the best product or service for least cost and charging an appropriate price. From there, a business might opt to focus on certain aspect of the product or service such as its price, quality, accessibility or availability (Anthony, Johnson, Sinfield, and Altman 10). A top end customer may be willing to spend a great deal for a product that is of a high quality while a low end customer is not willing to pay that amount but is willing to pay less for a product that is of a lesser quality because the product is 'good enough'. If an organization can provide a product or service that is cheaper, more accessible, and faster to turn, then customers especially those that are not typically customers or are overshot customers will be more likely to make the purchase. An example of a 'good enough' product would be prepaid cellular phones. Some of the early prepaid phones were very basic so a customer would have the convenience of a cellular phone without the large outlay of funds for the device and a service plan. The product and its service were 'good enough'. As cellular phones keep evolving with smart phone technologies, the prepaid phones are also evolving but still within that category of 'good enough'.

Disruptive Thinking

The idea of being innovative regardless of the innovation's disruptive nature can be misunderstood. Making incremental changes is not being innovative. To be innovative requires being a 'game-changer' (Williams). Innovation is thinking outside the box. Disruptive thinking is "a way of thinking that turns consumer expectations upside down and takes an industry into its next generation" (3).

As William explains in his book, Disrupt, the place that one would imagine disruptive thinking techniques would be taught – business schools – is not the place where it is currently taught. It is actually a concept being used in design schools. He explains the 5 Stages of Disruptive Thinking and how the stages help leaders to bring about disruptive innovation. The 5 Stages are:

1. Create a disruptive hypothesis
2. Define a disruptive market opportunity
3. Generate several disruptive ideas
4. Shape them into a single disruptive solution
5. Make a disruptive pitch that will persuade others to support it (7)

Disruptive Hypothesis

"A disruptive hypothesis is an intentionally unreasonable statement that gets your thinking flowing in a different direction" which is a contrast from a traditional hypothesis which is an educated guess (Williams 18). The idea is to have one consider the "what if" (18). Now creating a disruptive hypothesis or even developing some 'what if' ideas is not typically that simple for people because one doesn't usually go broad or bold enough. To assist with this process Williams gives numerous steps within the first stage: (1) Identify what the clichés are for the organization and/or the industry (20). The clichés could be about products, interaction or even pricing (25-26). (2) Once clichés have been identified, invert them, deny them and scale them (34-35). An example Williams explained was the sock industry. The cliché is socks are sold in matching pairs. To invert and deny that cliché – socks are not sold in pairs AND socks are not

sold as matches. To scale the same cliché would be to say that socks are either sold individually or in multiples not just pairs. Little Miss Matched ran with the idea that socks did not need to match or be sold in pairs and that a market for this miss-matched fashion did exist for young girls (32).

Library cliché examples:

A. Food or drinks not allowed in libraries.
B. Librarian assistance is free to users.
C. Libraries are quiet study places.
D. Libraries are repositories of information.

Invert the cliché examples:

A. Food and drink allowed in libraries
B. Librarian assistance is not free to users.
C. Libraries are not quiet study places
D. Libraries are not repositories of information.

Deny the cliché examples:

A. Libraries install cafes or vending machines to financially benefit from patrons' needs to have food and beverages while they use the library facility and/or services
B. Libraries charge users for the expert research services of librarians and no longer offer free reference desk services.
C. Libraries no longer restrict noise in the building.
D. Libraries are academic labs that assist in the creation of information and knowledge.

Scale the cliché examples:

A. Libraries install major campus food operations or take library services to the food service locations
B. Libraries charge $5 per librarian/patron consultation for the first 5 visits then all remaining consultations are free
C. Libraries encourage and welcome campus special events such as speaks, bands and so on.
D. Librarians are assigned to each student on campus as a personal consultant to assist in their research needs.

Once the clichés are identified, inverted, denied, and scaled, the next step is to see if there are opportunities for the ideas in the market place.

Disruptive Market Opportunities

Before one can begin generating thorough disruptive ideas or innovations, one needs to conduct some market research and determine what opportunities are available in the market (Williams 39). This research can be done on a low budget in a few days. The idea is to be aware of the customers and the products/services being used. How and where are people interacting with the products/services? What is the level of customer loyalty? What level of customer service is offered? Is there a specific target audience by age, gender, and so on? It is crucial to be aware of all aspects of a customer's experience and observe what is really happening versus what leaders think or prefer to be happening. Note that the "provocative 'what if' questions [from stage one] prepare you to recognize things you didn't notice before and put research observations together in new ways" (Williams 65).

When the research stage is complete, one should be able to take the disruptive hypothesis and the observations and complete the following sentence filling in the blanks taking the insights to opportunities (Williams 65).

> There is an opportunity to provide [WHO] with [WHAT ADVANTAGE] that [FILLS WHAT GAP].

The library example: What if…we assigned every student a librarian to assist the student with research assistance.

> There is an opportunity to provide [undergraduate students] with [expert research assistance and instruction] that [improves the students' academic experience and research knowledge].

This is not the end of this approach but the start of more conversations about ideas to move an organization and potentially an industry into a new era.

Conclusions

This is not where the process stops but where the focus of the paper ends:

> Hypotheses feed observations.
> Observations feed insights.
> Insights feed opportunities.
> Opportunities feed ideas. (Williams 84).

If one understands that an organization or industry cannot stand on its past successes and hope for a great future without being proactive and looking for innovations, then they are open to the disruptive innovation process. Technology has had a great impact on many, if not all industries, and it is vital for ongoing success to look for new approaches. Using disruptive thinking strategies to identify disruptive innovations is one potential path.

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Tips + Taps: Integrating Apps into the Research Process

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Abstract

We always hear how libraries need to meet the users where they are. Mobile technologies and apps highlight our research into meeting this goal. But how do you create a library workshop on using apps for research and collaboration at an academic library? What apps should you focus on? What types of mobile technology should you consider? Identifying apps can be an easy process through the assistance of online reviews, but these cannot tell you what your users want and need. This paper outlines how we created a workshop on integrating apps into the research process and highlights useful apps and provides recommendations for workshops at your own library. After conducting an initial review of apps, three categories were identified: productivity, collaboration and research. We surveyed faculty, staff and students to identify their user needs. A variety of instruction sessions were offered, including workshops for faculty and students, and in-house sessions for library staff. Each session provided an opportunity for assessment, offering insight into recommendations for future workshops.

Introduction

With just a quick walk-through the library and around campus it is evident students enjoy using mobile technologies like smartphones and tablets for their information needs. It is no longer a novelty to have a student drop by the reference desk and flash a phone or tablet with a web page, document or library OPAC pulled up needing assistance. In Fall 2012, after purchasing an iPhone and an iPad, we tasked ourselves with learning how to navigate the possibilities of the Apple technologies. This path eventually lead to developing a workshop focused on apps that assist with the research process. The workshop was developed for our user base at the Arlington Campus of George Mason University – graduate social science students.

The choice to pursue developing an app-focused workshop also stemmed from recent research identifying tablets, apps, on-the go information searching, and increased collaboration as key technological trends. The 2012 *Horizon Report* identified mobile apps and tablets as a near-term trend – likely to be integrated into higher education within 12 months. The report highlighted that "people want easy and timely access not only to the information on the network, but also to tools, resources, and up-to-the-moment analysis and commentary"(Johnson, Adams, and Cummins 4). Other key trends identified include the ability to access information, including personal files, at anytime, on any device, and being able to collaborate virtually (Johnson, Adams, and Cummins 4). In a 2011 survey, the Pew Internet Project found that 35% of adult American's own a smartphone and that 25% of all smartphone owners use their devices for online browsing (Smith 2, 14). Since Apple opened its App Store in July 2008 over 50 billion apps have been downloaded ("Apple Reveals Details of 50 Billionth App Store Download"). The Google Play store, open since October 2008, has seen over 48 billion apps downloaded (Arthur and editor). These figures far surpass original estimations, as predictions in 2012 foresaw app downloads reaching the 44 billion mark in 2016 (Johnson, Adams, and Cummins 10).

The initial process of identifying apps for consideration included looking at which vendors provide apps for their databases, reading through blogs and technology magazines for reviews, and identifying whether frequently used web-tools had an app option (ie dictionary.com, Mindmeister, etc). It quickly became evident that this method of evaluation was not an effective route for development of the workshop. We determined a survey should be launched to identify the needs of the students and faculty, and specific criteria needed to be developed for evaluating apps.

Survey

At the start of the spring semester an eleven-question survey was launched to identify whether students and faculty were interested in an app-focused workshop and the types of apps they wanted to know more about. The survey was developed using the Forms function of Google Drive (formerly Google Docs). Google Forms allows respondents to remain anonymous, has no limit on the number of questions, places responses into an easy to read spreadsheet, and can be quickly graphed. The survey was active for one month and publicized through flyers and bookmarks with QR codes distributed throughout the library building. Emails containing the survey link were sent out to department listservs and placed on library social media accounts. Students attending other drop-in library workshops were also encouraged to visit the survey.

The aim of the survey was to determine the technology usage of students and faculty; we also wanted to know how they gain information about library services. Survey questions were focused on determining the most popular social media services, the types of technology used (smartphones, tablets, e-readers and computers by platform), where students and faculty go for information, knowledge of library drop-in workshops, interest in an app-focused workshop, and the types of apps of interest.

Findings

The survey received 53 responses, 32 graduate students, 9 doctoral students, 4 faculty, 4 staff, and 4 administrators. Respondents were based primarily at the Arlington Campus (45), 6 in Fairfax and 2 at the Prince William Campus. Our greatest interest was in the faculty, staff and students based at the Arlington Campus.

We discovered that Facebook is the most popular social media tool (48), followed by Twitter (29), and blogs (23). Of the types of devices used by respondents, PC laptops were most popular (32), quickly followed by iOS devices iPhone (31) and iPad (23), and then Apple laptops (19), PC desktops (15), Apple desktops (11), Droid smartphones (12), Kindle Fire (3), Droid tablets (2), Blackberry smartphones (2) and Nook HD (2). Although the PEW Internet Project found Android to be "the most popular smartphone platform, followed by iPhone and Blackberry devices," our survey findings of heavy Apple platform preference were not surprising (Smith 3). Apple products overall are heavily used with the students and faculty on our campus based on our observations of users.

When it came to knowledge of drop-in workshops, where to locate the workshop schedule and attendance at previous workshops, we found in all three areas about 50% of respondents had knowledge and had previously attended a workshop. We also discovered that 68% of respondents were interested in attending an app-focused workshop and were particularly interested in productivity (Evernote, Mindmeister, etc) and research apps (Springer, Ebsco, etc).

Based on these results we decided to focus the workshop on productivity and research iOS apps useful for social science research. It was also important to alter our method of marketing workshops.

Selection

When it comes to apps, the possibilities are nearly endless. From September 2012 to March 2013 we tested over 60 different apps to determine the most useful and relevant apps to include in our workshop. At the beginning apps were broken into three categories productivity, research and sharing. We determined that these categories were too broad to narrow our app pool to our top ten favorites for demonstration during the workshop. We re-identified categories to fit within the student research process – finding, reading and writing. If the app could not assist with finding information, reading or writing, it would not be included.

After identifying new categories it was necessary to cull the pool of apps collected by testing them against more rigorous "rules". Research has shown that "patrons with app experience have higher expectations when it comes to app features" ("The State of Mobile in Libraries 2012 - The Digital Shift"). To maintain the interest of workshop attendees it was imperative to select full-featured apps that would help them complete the research process successfully.

Criteria

After working through all the features and limitations of the apps initially selected for evaluation we had a strong understanding of what we considered quality features – what made an app stand out from similar apps. Based on this, we identified eight criteria to measure apps against: ease of use, shareability, practicality, functionality, included features, synchronization, reviews and cost. These criteria were then built into questions for application.

1. What is the *ease of use*?
2. How easy is it to *share* the content?
3. How *practical* is the application? Will it help achieve your purpose?
4. What is the *functionality*?
5. What are the *included features*? Will they help achieve your purpose?
6. Does the app *synchronize* with other apps?
7. How has the app been rated in *reviews*?
8. How much does it *cost*? Are there similar apps that cost less?

Apps can be compared against each other using these questions. For example, we wanted to locate a "Read Later" app. We identified three for consideration: Readability, Pocket, and Instapaper. Readability and Pocket both work with another app, Flipboard, to pull in content. Both are very easy to use in terms of adding content, emailing it and sharing it with others. Pocket and Readability are also web-tools, so you can add content while on your computer. However, Pocket pulled ahead of Readability in features – you can increase font size, change the brightness of the background as well as the color tone of the background. Pocket allows for videos and images to be saved in addition to articles. Pocket can also sync with Twitter (so you can save Tweets) and with Evernote. It became our ultimate free "Read Later" app. The reviews of Pocket were then compared against the reviews of Instapaper. Pocket had better reviews than Instapaper, making it the "Read Later" app demonstrated in the workshop.

The Final Cut – Top Eleven Apps

1. The *Dictionary.com* app allows learners to check definitions of words and can also act as a thesaurus making it a great tool to help locate new keywords for research.
2. The *Social Science Research Network (iSSRN)* can now be searched on the go through this app. SSRN provides access to freely available scholarly social science research.
3. *Springer* is a database available for all Mason faculty, staff and students. This app allows themto search for articles and books on the go. To access material they should create a username/password by going through the library database first. PDFs can be saved to GoodReader or BlueFire Reader.
4. *Flipboard* is a social news magazine. It allows researchers to combine news, video, and social media and other feeds into one interface that they can "flip through" and catch up on whatever interests them. Connects to Read Later apps and allows learners to share items of interest via their preferred social media outlets.
5. *Pocket* is a Read Later app that can be connected to Flipboard and Evernote. Learners can save webpages, news articles, images and videos to Pocket so they can view/read them later. Saved material can be archived and organized.
6. *Bluefire Reader* stores PDFs and eBooks. All library eBooks can be downloaded to Bluefire Reader for offline use - once the check-out period expires the book will no longer be accessible. It is possible to make notes and highlight sections of PDFs stored in this app.
7. *GoodReader* stores documents, images, and PDFs. Documents can be shared with others and it is easy to highlight, write notes, circle and draw-on PDFs, making it a handy app for taking notes. GoodReader is not a free app, but is worth the small cost if one read lots of PDFs.
8. *Evernote* helps organize information, i.e., images, audio, store webpages and articles. All information can be organized into different folders and notebooks.

9. *CloudOn* acts as an aggregate for the cloud drives: Dropbox, Box, Google Drive and Sky Drive. Access documents stored on these different drives as well as make new documents using Word, Excel and PowerPoint.
10. *Mindmeister* is a brainstorming/idea mapping tool. Users can add images and web links to maps and share them with others for collaboration.
11. *SlideShark* works with PowerPoint, allowing uploading of created presentations, which can then be presented/viewed using iPad, iPhone or iPod. Slide notes appear on the device, but when presented for others are not visible. A timer is also provided for the user.

Assessment

Assessment of the workshop was conducted in three parts, looking at the survey, the workshop itself, and re-examining the process of selecting apps for demonstration. By reflecting on each part of the development process, new ideas have been created to improve the process and generate new workshops.

Survey Assessment

After examining the responses to the survey questions and the number of respondents, several areas were identified for improving the quality of the survey and increasing participation. The timing of the survey is one aspect that could be altered in order to get more respondents. The survey was sent out in January, near the start of the Spring semester, and only kept active for one month. It is likely that many students and faculty were too busy with the start of the semester to take the survey. By having the survey later on in the semester, after having a chance to settle in, more students and faculty might be interested in participating. The decision to use Google Forms for the survey proved to be a good choice. Reviewing responses, tracking the number of respondents, and creating graphs and charts to visualize results was simple and we will continue to use that platform for the next survey. After reading some of the responses, we determined it was necessary to add a few more demographic-specific questions in order to gain a more accurate picture of technology use on the campus. Some of the questions were found to be too broad, resulting in answers that did not assist our information needs. To improve the survey, the questions need to be more focused and specific.

Workshop Assessment

The workshop was offered to three different user groups, students, library faculty and teaching faculty, with a total of about twenty attendees across all three campuses at George Mason (Arlington, Fairfax, and Prince William). The workshops were an hour long and the apps demonstrated were varied based on the audience. For example, workshops for faculty focused more on professional apps like SlideShark, Springer, and SSRN, while workshops for students focused more on apps like Flipboard and Evernote.

Following each workshop attendees were asked to answer five questions to assess learning in the workshops.

1. Where do you go to download and install iOS Apps?
2. Name three apps from this workshop that you would use to find information (ex. news, books, articles, etc.).
3. Where can you go to find recommendations or information about apps before you purchase/download them?
4. Would you recommend any of the apps mentioned in this workshop to your friends or colleagues? If so, which ones?
5. Was this workshop helpful? Do you have any recommendations for future workshops of this nature (ex. other apps, etc.)?

Based on responses from the assessment questions and informal feedback following the workshop participants found the apps demonstrated to be helpful and the learning outcomes for the workshop were achieved. Although the workshop was focused on iOS apps there were attendees who used only Android devices. These participants were able to provide helpful insight and valuable information about Android apps and the devices. Of all the apps demonstrated most participants stated they would most likely

recommend Flipboard and Evernote to their friends and colleagues. Surprisingly there was significant interest in the Congressional Record app, which was only an honorable mention in the workshop. Participants also provided recommendations on other places to go for reviews and requested more information about looking for apps for field research, e.g., an app that can record an interview and allow notetaking at the same time. Interest was also expressed in apps about statistics and workshops focused on Android apps.

Hindsight and Lessons Learned

The biggest lesson learned from this process was to include library staff feedback earlier in the development of the workshop. During the librarian-focused workshop, a number of great ideas were raised that led to a visual comparison chart of our highlighted apps and their features (http://infoguides.gmu.edu/researchapps). This chart contains useful information for anyone who wants an overview of one of the apps, including information on platform, cost, online/offline access, uses, saving/sharing, extra features, and if it is available in a desktop version.

Future

Through research, the online *Apps for Librarians* course by Nicole Hennig, and the three workshops completed so far, we have started planning for the future of academic apps workshops. We plan to re-launch our survey with more specific and additional demographic questions in the following year, to see if there are any differences in what students are currently using to find information with their various technology options. By launching the survey farther into the semester, we hope to capture more students who might have been too busy at the start of the semester to take the survey. If provided any type of budget, we would like to offer a prize as a survey incentive.

Another goal for the future is to offer informal "Appy Hour" sessions in the library, or other places on campus, where students, librarians and faculty can share what apps they have found to be helpful with each other, over a cup of coffee and some snacks. Another idea we have is to have an "App of the Week" highlighted on our library's blog and social media sites (Twitter and Facebook). This would require some planning in order to ensure we have enough apps to highlight throughout the semester, but would be beneficial in providing an online discussion or exchange of ideas.

With our workshop structure, we intend to develop more targeted workshop sessions. This Fall semester, we plan to do an apps workshop that is specific to finding data and statistical information with iOS or Android devices, as many of our reference questions pertain to that subject. We would also like to host more sessions that focus on professional development, to highlight apps such as *SlideShark*, that can assist with presentations or publishing. Depending on the audience, our Academic Apps workshop could be re-formatted for specific academic disciplines, such as music, health sciences, humanities, etc, as there are a number of apps available that could aid the research process of students or faculty in those fields.

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The Choice Is Yours: Collections in a Patron-Driven Climate

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Abstract

As libraries grow and shift with an increasingly digital world, the role of librarians is growing and shifting as well. One aspect of our jobs that is being challenged is that of materials selection. As we face shrinking budgets, one of the first things cut is our materials budgets and - some would argue - for good reason. Many are aware of the 80/20 rule - that 80% of the whole collection's use is driven by 20% of the collection. So how can we reduce spending money on items that get little to no use? One possible solution is through patron-driven acquisition (PDA). A usage analysis and cost variance of PDA purchases was compared to librarian-selected ebook and print titles over a 2 year span. Results inform suggestions for future collection building.

Introduction

Collection development within libraries is a constant challenge. Selecting quality items suited to institutional and departmental interests as budgets shrink, stack space gives way to varied collaborative spaces, and information – both quality and not – is abundant on the Internet is compounded with the increasing availability of academic titles in electronic formats and varied platforms and licensing agreements to consider. The American Public's interest in ebooks continues to grow, but does that interest translate to scholarly literature (Rainie et al. 3)?

Review of Literature

For more than a decade, libraries have been exploring the concept of patron-driven acquisition (PDA), also known as patron-initiated acquisition (PIA) or demand-driven acquisition (DDA). Early on, libraries explored purchasing select print titles requested through interlibrary loan (ILL) with great success (Tyler et al. 175). More recently, libraries have partnered with aggregators like ebrary or Ebsco, uploading thousands of ebook records into their local catalog for users to view alongside records of content the library already owns (Nixon, Freeman, and Ward 121). If a PDA title is "triggered" based on specific criteria, the ebook is purchased and immediately accessible to the user.

Allowing patrons to have a large – mostly unmediated – say in resources has caused some unrest among selectors who employ their subject knowledge in conjunction with their awareness of research needs and interests of specific departments to "expert[ly] select" respectable resources (Fischer et al. 470). Librarians question the quality of patron-selected materials as well as the overall cost of such an approach.

There is a lot of research supporting the contributed value of the PDA model. A study conducted in the University of Nebraska Libraries found that not only do users select content compatible to the larger collection; user-selected items also circulate at higher rates than librarian-selected content (Tyler et al. 174). Bibliographers at Purdue University Libraries surmised that a majority of the titles selected by users during their Books on Demand pilot – many interdisciplinary in nature – had as much long-term value as those obtained traditionally (Anderson et al. 8). The cost of the few titles users selected that fell outside the purview of what the bibliographers deemed "quality" was relatively small in comparison to adjusting their approval plan.

Background and Context

Miami University is a public university in Ohio recognized annually for its teaching and research opportunities for undergraduate students. More than 15,000 undergraduate students and approximately

2,500 graduate students studying in over 100 areas call Miami home. The psychology department in particular has approximately 1000 undergraduate majors, 80 graduate students, and 42 faculty researching in the sub-disciplines of social, clinical and brain, and cognitive science.

Miami University Libraries (MUL) began a patron-driven acquisition (PDA) pilot with ebrary and YBP in September 2010 and has added more than 14,000 records to the catalog to date. Prior to this pilot, a majority of our ebook content was largely publisher deals via our statewide consortium, OhioLINK. Like other academic libraries that have experimented with PDA, MUL opted not to advertise the pilot, remaining tentative about how long the initial delegated funds would last. Review of the first two months' purchases revealed little to no abuse of the pilot, prompting an increase in titles offered and money dedicated to the project.

Ebook purchases from ebrary are triggered a number of ways. If a user views ebook content excluding the table of contents or index for longer than 10 minutes, the title is purchased. If a user views 10 or more pages beyond the table of contents and index, the title is purchased. Any request to print, copy or download any portion of the text prompts a purchase.

The discipline of psychology walks a tightrope between social sciences and hard sciences. Miami's program is no different, with graduate- and faculty- level research in the three sub-disciplines noted above. Each of these areas utilizes monographs and journal content to varying degrees, but ultimately both are of value. This paper aims to explore the psychology titles triggered via PDA and compare usage and cost to both ebook and print titles purchased by the subject selector.

Motivation to actively begin purchasing ebook formats with discretionary funds when possible is two-fold. During the summer of 2011, the psychology collection moved into a space with shelves at over 80% capacity that employed a rigid zero-growth policy. Prior to moving, the collection experienced a rigorous purge, reducing total items by nearly 10%. In order to maintain a wide range and quantity of resources, the selector opted to seek ebook alternatives when possible. Initially, the library only had a contract with ebrary, but that has since expanded to include EBSCO ebooks during the recent year. These titles, however, are not included in this analysis.

Another motivating factor was increasing accessibility. The physical move pulled psychology content from a 24-hour facility and placed it in one that closed nightly. Electronic content allows for access during closed hours. It also saves users – specifically graduate students and faculty – from coming to the library and prevents titles from sitting on a faculty member's bookshelf for years, allowing access to other users when not in active use by another. Additionally, with the assistance of screen readers, electronic content is more user-friendly and accessible to disabled patrons.

Methodology

Selector-purchased titles were based on the author's judgment to support Miami's psychology department and program. Titles included in the PDA pilot were not available for purchase though many were of interest to the selector. Potential PDA titles were based on availability via ebrary and on select criteria set by administrators. The author was not involved in selecting potential PDA purchases. The available PDA titles changed periodically due to some publishers pulling select content.

Data regarding electronic titles – both PDA and selector-purchased – was parsed from reports from ebrary. PDA content spans from September 2010 to May 2013. Print and electronic titles purchased throughout two fiscal years (July 2010 - June 2012) are included in this evaluation. Usage statistics for all selector-purchased titles range from initial availability (i.e. shelf-ready or accessible via ebrary platform) through May 2013. At no time were PDA purchases rejected because a fund limit had been reached. However, the collective funds available were not specific to psychology titles. PDA titles used in this study include both ebrary-classified psychology titles and select social sciences titles that fall within the call number range and purview of Miami's psychology department. Selector discretionary funds were limited to approximately $13,800 for each of the two fiscal years included.

Limitations

There are obvious limitations in the comparison of numbers in relation to varied formats. Firstly, the structure of PDA leans in the users' favor as only triggered items are included, meaning an automatic 100% usage rate. Usage data for all electronic content was reliant on the ebrary platform on which it resides and required some author judgment when determining which titles purchased via the PDA pilot fell within the subject area of this study.

Also, usage of electronic content was measured by user sessions and print usage was measured by a combination of internal uses, checkouts, and renewals. The concept was that these were the most equivalent measures when considering whether an item was looked at by a patron. But it is acknowledged that these two measures are not exactly the same. One user could access an ebook multiple times and each access would count as a "use"; however, if a patron checked out a print book, only one use is "counted" unless the item is renewed, regardless of how many individual times they used the book during the 3-week checkout. Additionally, an ebook had greater potential for circulation as it became available to other users as soon as the browser window was closed. A print book can remain unavailable to other users while checked out, often for 3 weeks or more.

It is also apparent that different time ranges for collected data seem incongruous. A collective list of PDA purchases since the beginning of the pilot without purchase dates was the only accessible data from ebrary. And as noted, all titles purchased through PDA have at least one use. The very nature of the format allows for immediate access and use. Print and electronic titles purchased via selector's discretionary funds in the last fiscal year have had minimal time on the shelf or in the catalog. It therefore seemed somewhat unfair to include those most recent titles in calculations when they may have only been accessible for the last couple weeks of the semester. This also explains why the selector-purchased ebooks on the Ebsco platform are not included; they were purchased during the 2012-2013 fiscal year.

As the titles included in the PDA pilot are seamlessly added and removed from the catalog, it is hard to measure just how many psychology titles have been available over the 3 years of this study, and therefore hard to determine the overall percentage of available psychology titles purchased.

Findings

Cost

Over 33 months (September 2010 - May 2013), 1253 total PDA titles were purchased for a total cost of $111,370. Out of those, 98, or 7.8% of the total number of titles, were psychology titles. Those 98 titles were purchased at a cost of $8,997 or about 8.1% of the total amount spent and at an average of $91.81 per title.

During fiscal years 2011-2012 (July 2010 - June 2012), 134 (38.4%) ebooks and 215 (61.6%) print titles were purchased for psychology. $16,612 was spent on print titles for an average of $77.26 per title while $10,134 was spent on the ebooks, averaging $75.63 per title.

While PDA titles had several additional months of possible purchase time and potentially limitless funds, there were still fewer titles purchased overall compared to both selector-purchased ebooks and selector-purchased print books. It is worth noting that the selector had a set budget each fiscal year that had to be spent, though what format it was spent on was not pre-determined. Selector-purchased items averaged a similar cost per title while the average PDA title was priced 20% higher (see table 1).

Table 1
Cost Comparison of PDA & Selector-Purchased Titles

	Patron-Driven Ebook Acquisitions	Selector-Purchased Ebooks	Selector-Purchased Print Books
Purchased	Sept 2010 - May 2013	FY10-FY12	FY10-FY12

Total # Titles Purchased	98	134	215
Cost	$8,997.06	$10,134.19	$16,611.86
Avg Cost Per Title	$91.81	$75.63	$77.26

Usage

100% of PDA titles were used at least once (of course). Usage in the context of PDA includes any of the triggers noted above: 10 or more minutes of use, 10 or more pages viewed, a print, a copy, or a download. 36% of titles were only used once. There was a total of 429 user sessions across the 98 titles, and sessions ranged from 1 to 41, with an average of 4.4 sessions per item. Additionally, sessions ranged from 1 page view to 255 pages viewed with an average of 27 pages viewed per session.

Of the 215 print titles purchased, 92 (42.8%) at the cost of $4,587 have no usage. 40 (18.6%) other titles have one use, and 26 (12.1%) have two uses. Usage in the context of print titles includes the combined totals of internal use, checkouts, and renewals. The 123 titles that were used saw 494 total uses, or 4 uses on average. The 57 titles that had more than 2 uses had a total of 402 uses. In other words, 26.5% of the print titles purchased had 81.4% of the use. These numbers are slightly closer to Brennan's proposal that 80% of the circulation of LC classifications in which Psychology titles lie (BF, RC) are dominated by 30% of the collection (186). Tangentially, it is worth noting that print use – assuming it is either a checkout or renewal, not an internal use – makes it impossible for other or additional user access for at least three weeks, unlike electronic content.

The 134 selector-purchased ebooks saw bigger successes and failures. Usage of these ebooks is tallied more liberally than PDA purchases with each click on the accession link counting as one use. Only 56 (41.8%) titles saw any usage at all (see table 2). But those 56 items clocked 5,454 uses for an average of 97.4 uses each. Admittedly, there were 2 titles that saw excessive (over 1,000) usage, one being a guide to graduate programs and the other likely used in conjunction with a course. However, even removing those two titles, the 54 remaining titles that circulated still averaged 43.3 uses each. Additionally, 95% of usage for this subset was driven by 20% of the selector-purchased ebooks. Conversely, 6 titles (4.5%) are responsible for 80% of the usage.

Table 2
Usage Comparison of PDA and Selector-Purchased Titles

	Patron-Driven Ebook Acquisitions		Selector-Purchased Ebooks		Selector-Purchased Print Books	
Purchased	Sept 2010 - May 2013		FY10-FY12		FY10-FY12	
Total # Titles Purchased	98		134		215	
0 Uses	-		78	58.2%	92	42.8%
1 Use	36	36.7%	3	2.2%	40	18.6%
2 Uses	16	16.3%	4	3.0%	26	12.1%
3+ Uses	46	46.9%	49	36.6%	57	26.5%

In comparing cost and usage separately, numbers indicate that while PDA titles tend to cost more per item, they have a higher overall usage rate, perhaps justifying the cost. Even taking into consideration the extremely high number of non-used selector-purchased ebooks, the fact that those items that have circulated more than 3 times is more than 10% higher than the print counterparts seems to indicate that users are more likely to use ebooks.

It is the comparison of cost per use, though, that large divisions are most obvious. Because of extremely high usage of a couple of selector-purchased titles, – usage numbers nearly impossible for any print title to achieve – average cost per use of selector-purchased ebooks is less than 10% the average cost of PDA title per use and approximately 5% of the average cost-per-use of selector-purchased print titles (see table 3). Even discounting the 3 titles that had more than 500 uses each, the remaining 131 titles averaged $6.31 cost per use, still significantly less than either PDA cost-per-use or selector-purchased print cost per use.

Table 3
Cost Per Use Comparison of PDA and Selector-Purchased Titles

	Patron-Driven Ebook Acquisitions	Selector-Purchased Ebooks	Selector-Purchased Print Books
Purchased	Sept 2010 - May 2013	FY10-FY12	FY10-FY12
Total # Titles Purchased	98	134	215
Cost	$8,997.06	$10,134.19	$16,611.86
Total Sessions/Uses	429	5454	494
Avg. Cost Per Use	$20.97	$1.86	$33.63

Conclusion

Findings support much of what previous research found with regard to usage. Nearly two-thirds of PDA purchases were used beyond their initial trigger use whereas only about 40% of selector-purchased ebooks and selector-purchased print books had more than one use. In the context of circulation, these collective numbers speak well to the psychology collection at Miami University as nearly 62% of new titles added in the past three years have circulated at least once, significantly higher than the 50% Kolowich notes (2012).

Despite including a longer purchasing window, there were fewer user-initiated ebook purchases via PDA than selector-purchased. Relatedly, nearly 60% of selector-purchased ebooks have gone unused. It could be surmised that users of psychology materials at Miami are not excited or eager about ebooks. But the print usage numbers do not indicate that they are primarily print users either. Without reviewing circulation numbers and some level of analysis for the whole historical psychology collection to assess whether newer ebook purchases are filling a gap, one would more easily assume that Miami users are slowly coming around to ebook resources. It is hoped that future user interest in ebooks increases at the same or greater rate as shrinking space and funds.

Tangentially, there are implications for the larger concept of scholarship underlying this discussion of PDA. For years, libraries purchased numerous monographs – many which are published by university presses and written by scholars like the ones we support. However, it is many of those titles that contribute to low circulation numbers. As purchasing models are refined, it is likely that fewer titles overall will be purchased. If fewer purchases are made, publishers will reduce the number of titles they

produce. How do fewer purchased monographs on such a large scale impact the promotion and tenure process that relies so heavily on publication? Though this will have some impact on a discipline like psychology, it will have greatest impact on those in the humanities whose scholarship output is primarily in the monograph format than their peers in the sciences.

Ebook purchasing from a library perspective – both via PDA and selector-purchased – is a positive step for local collection building as the required number of items to pull from the shelf in order to satisfy the zero-growth policy decreases each year. It is clear by the strikingly high number of uses by the selector-purchased ebooks that electronic content has a strong value. It is highly improbable that any print book could have more than 1000 uses in a 2-year time span. Electronic content – at least for some types – is more desirable and versatile.

Still, the limitations on electronic content challenge some of the key principles of libraries. The inability to share ebooks beyond the purchasing institution has us taking a step back. However, this year our state consortium, OhioLINK, has begun an ebook pilot via YBP with three publishers currently on board. It will be exciting to see the advancement of shared ebook content and chart its success.

Additionally, the requirement to have access to or own an often costly device in order to access materials goes against the concept that information should be freely accessible. Modern libraries provide computer access to users, but the limitation of accessibility is less than ideal.

Future explorations

The cost per use discrepancy is one worth researching further. The extraordinary high usage numbers for a few selector-purchased ebook titles piques intrigue. It is possible that there is a loophole or quirk with ebrary's method of tallying usage. It is also possible that one or a few users repeatedly used the titles over a period of time. But considering the selector-purchased ebooks are on the ebrary platform just as the PDA titles are, one wonders why those titles failed to be part of the pilot. They ideally met basic parameters so as to appear in the selector's YBP slips. Should not such popular titles have been available for users to trigger on their own?

Though beyond the scope of this paper, future related research could include usability of ebrary and other platforms as well as accessibility of content on varied devices. There are also broader questions of digital preservation and collection management/weeding which reaches beyond this paper as well.

A driving question is whether selectors trust patrons to be able to select quality materials on their own. For years, selectors have used their expertise to line the shelves with quality monographs. This has been one of several skills librarians employ to justify the validity of the profession. But what has been demonstrated in this evaluation as well as others before it is that with some basic parameters, users are skilled at selecting quality sources that are not only useful to them but often to their peers as well. With this decreased role in individual title selection, librarians' roles within the context of collection development shift more to selecting publishers, subjects, and levels. Concurrently, librarians become more necessary in teaching how to evaluate and select sources as is done for online journal content and web content. After all, information is easy to find, but finding and evaluating quality content takes some skill.

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What Few Can Do:
A Mmall Library Using Technology to Make the Impossible Possible

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Abstract

Having six physical sites in six counties, it can be a challenge to support student information literacy needs. Crowder is implementing strategies, using technology, and developing partnerships to overcome distance and librarian/student ratios. We are striving to provide instruction to students in all formats through the use of a variety of technology resources.

Administration and Planning

Literature Review

Literature on administrative planning dealt with budgetary constraints of academia in the current downturned economy (Cohen; Nicholson). Many publications over recent years present situations with student numbers increasing online and at distance locations. As online functionality increases, libraries are identified more with the services they provide than with the physical building (Beaton-Garcia).

Providing appropriate services was seen as a significant challenge for distance sites (Cohen; Nicholson). Successes associated with novel approaches rely heavily on administrative and faculty buy-in, and inclusion of these individuals in all phases of the process is important (Cohen).

Findings

Crowder College has increased geographically across 6 counties, as well as adding significant online instruction. This growth presented the library with the need to modify how we were providing services to our customers.

At the beginning of Fall Semester 2012, we planned for library enhancement, regarding the changing environment. We evaluated how our history could direct and support our activities as we progressed.

The prior director focused library activities to support information literacy as a primary goal. The paradigm was appropriate to build our goals. Crowder College's mission statement, "build a civil, serving, literate, learning community of responsible citizens," strongly supported information literacy as a needed service. There was also a history of close inter-departmental interaction and coordination that would be useful as the library progressed.

Within this foundation, we identified goals for the upcoming shift.

1. We would implement a progression style model of instruction, where specific information literacy skills are taught in specific classes, and where those skills taught built on one another as the student progressed through their degree program. This model would decrease the amount of information presented to students during a single instructional session and decrease repetitive skills instruction, while increasing acquisition of skills at the point of need.
2. We wanted to continually evaluate technology and resources for their potential use, cost, and fit within the library program, while taking into account budgetary and library staff numbers.
3. We wanted to address the lack of synchronous and standardized library instruction with fully online students and distance site students, and gain a greater connection with these students.
4. As our student body became more reliant on web-based resources, the website design needed to be updated for usability and access.

5. We would make these modifications while continuing to maintain and foster relationships with our inter-college partners and Crowder College departments. A library advisory committee was formed with membership from faculty and administrative staff from different departments and instructional site locations.

Traditional Instruction

Literature Review

Furno emphasizes the importance of tailoring the instruction session to the needs of students in that particular course and how librarians can utilize a 60 minute instruction session. The findings, which are similar to the experience at the Lee Library, included more instruction on using Boolean Search Operators and source evaluation (264-271). Anderson identifies retention and the student's ability to conduct the research process solo as important goals for librarians. It is also crucial for librarians to collaborate with faculty, adapt to online environments, and to provide high quality consistent instruction in any medium (Anderson 495-498).

Findings

Since its inception a decade ago, the Library Instruction program has grown significantly. In the early years of the program, classes were offered for only a select few programs which were all taught by the college's solo librarian. When not managing the library and providing services, she created and grew a program that has, with an additional librarian and many more programs, grown into its current status. Currently, students can attend traditional instruction sessions at all five campuses. The table below reflects the previous and current FY instruction statistics.

Table 1
The attendee: session ratio

Fiscal Year	Traditional Instruction	Total Instruction
2011-2012	NA	1940: 127
2012-2013	1741: 121	2118: 168

a. Statistics not available at time of publication for traditional instruction in FY 2011-2012.

The session and participant statistics are not the only aspects of this program to increase. For the FY 2012-2013, the Lee Library collaborated with 5 of the 15 program divisions: Agriculture, Business, Communication, Nursing, and Social Sciences and Teacher Education. Instruction was provided to over 15 subject specific courses which included College Orientation, English, history, nursing, and Speech. These relationships emerged in a variety of methods: networking, verbal communication channels, improved interactions, recommendations, and by request (electronic, telephone, or in person). Requests can be made in person, by telephone or electronic mail.

Synchronous Instruction

Literature Review

Synchronous screen-sharing, video-chat software has been used by libraries at the University of Lethbridge, Champlain College, Broward College, and the University of West Georgia (Barnhart; Beaton-Garcia; Cohen; Nicholson). Such instruction addresses needed connection with the students at satellite campuses, while addressing travel budget and staff time limitations (Nicholson).

Synchronous online instruction provides needed interaction during instruction (Barnhart). Also the screen share function works both ways, so librarians can now see where students are having problems (Barnhart). Student attendance can be more appropriately monitored, verses video tutorial use (Nicholson).

Faculty and student unfamiliarity with the product can be a challenge (Cohen). Information technology regarding installation and troubleshooting is also a variable to consider (Cohen; Nicholson).

Findings

We evaluated modes of synchronous instruction, in an effort to address distance and online student information literacy instruction access issues. Initially we began using Skype as an interface to support that service. While the initial interactions were less than successful, they did teach us some valuable lessons.

While Skype provided the type of synchronous interaction we were looking for, in that we could screen share and provide real time instruction to distance classrooms and online student, it was a poor fit for our purposes. The software loaded in a manner that triggered administrative lockouts on campus computers. Instructors at the distance sites lacked the permissions to override those lockouts, so information technology professionals had to do a significant amount of upfront software downloading at the distance sites. When software failed during sessions, information technology would not be there to enter the appropriate administrative logins.

Instructor fear was enhanced associated with the new technology, and instructor buy-in diminished. Distance site administration concerns regarding bandwidth limits also limited buy-in.

Skype was replaced with GoToMeeting and GoToWebinar. The new software loaded in a manner that would not trigger administrative lockouts. These services also limited bandwidth usage with screen share function. Once these issues were worked out, buy-in for the service increased.

Embedded Librarianship

Literature Review

There are varying levels of embedded participation and formats. Some have outlined the necessities for levels of being embedded. Kesselman, though outlining a variety of factors, clearly states that the inclusion of integration and collaboration are important in the embedded process. Allowing "…new alternatives and opportunities for different methods and modes of instruction…" can enhance any program (Kesselman 387-388). Becker emphasizes that the embedded librarianship should include in the course management system an ask-a-librarian feature for discussions, library and information literacy resources and tutorials, and a variety of methods for communication (238). Dale and Kellam add to the discussion that innovation and annual assessment should also be considered in order to progress (51).

Findings

The Lee Library currently provides a partially embedded librarian at the request of faculty. This program was initially started spring 2012 which included a librarian embedded into an online accounting course. With little interaction from the students, the library decided to re-evaluate the program. In August 2012, Jennifer Johnson was contacted by one of the English adjunct faculty members about her recent publication on source evaluation. The faculty member was very interested in source evaluation and how, through this particular article, students could learn more about how to evaluate electronic content. Through this correspondence, the two decided to try embedded librarianship in an English 102 course. Initially, Jennifer was added as an instructor to the selected Blackboard course and a library tool was created. Through the library tool, students could access library resources such as the library catalogs, LibGuides, and research databases. Through more collaboration, they decided to create a library assignment which would fill two desired functions: force the students to contact Jennifer through the "Ask-a-Librarian" feature in Blackboard, posting questions related to their research papers; and to complete a library assignment which would fill the gap for lacking library instruction. (At that time, it was not easily possible to provide synchronous instruction to distance online students.) By the end of the semester, Jennifer was embedded in two more English 102 courses, two English 101 courses, and one English 109 course. While the library assignment option did not transfer over to the additional courses, it has continued to be offered in the English 102 courses taught by the original faculty member. In January 2013, the embedded librarianship model was reevaluated and, with the addition of the new web-based

videoconferencing system GoToWebinar, real time library instruction was provided to students in four sessions of web-based library instruction for English. Approximately 28% of the total enrollment in the 8 sections of English attended the web-based instruction sessions.

Embedded librarianship, like any other newly implemented library services, has its successes and failures. After being embedded in 14 web-based English courses, we learned the following outcomes:

- Librarians can connect with online students.
- Embedded feature per class is only as strong as those involved.
- It can be difficult marketing the embedded librarianship program.
- Management and maintenance can vary.
- It can be difficult to see immediate weaknesses.
- Planning and scheduling times allotted for the courses are vital.
- The requirement of the library assignment and chat feature are vital to the success of the embedded experience in each course.

LibGuides

Literature Review

Libguides are used as subject-specific pathfinders and as electronic handouts to reinforce instruction (Beaton-Garcia). The platform provides asynchronous instruction services for training at the point and time of need (Lockerby 785).

The software allows librarians with limited web-development or technological skills, to create interactive web-based resources without involving information technology personnel. Care should be taken to ensure a user-centered approach (Mooney).

Findings

Upon implementation of LibGuides in 2010, the librarians evaluated the manner that we wanted to structure the platform organization. We identified our primary structural desires, including minimal redundancy in maintenance workflow, and service area related content decisions. LibGuides allows librarians to reuse boxes, so that when a link or text is modified in one box or page, it is then modified automatically across the entire platform in all instances where that page is reused. This function became important when addressing the workload relative to library staff numbers.

We included three areas of use in our understandings of what LibGuides we would include, and in what manner they would be formatted. Identified use areas were:

- Faculty support
- Community service
- Marketing

Within the faculty support category, we wanted to provide broad subject or course type guides, in instances when no instructor had requested a guide. The idea was to facilitate buy-in, promote subject related resources, and use these guides as an example of what we can do, while we work to collaborate with the different departments. This activity served the marketing application, as we progressed, and that use was enhanced by providing subject specific database access within the subject library guide.

Community support functions included guides for the Joplin tornado recovery, an annual holiday guide, a guide to local fairs and festivals, tax information guides, and voting guides. We discovered, in the case of the holiday guide, that the guide actually had a significant effect on marketing the LibGuide program.

See the table below for trends. The numbers between 2011-2012 and 2012-2013 appeared to be a significant back-step, until we evaluated the nature of the hits. In 2011-2012, 40974 of the overall hits were to the holiday guide. In 2012-2013 only 23438 hits were associated with the holiday guide. We

believe that at home use of the holiday guide normalized the use of the LibGuides in the user's personal lives, and that this transferred into professional use by faculty and staff. When we factored out holiday library guide hits for all years, significant increases were seen.

Table 2.
LibGuide Hits by Year

Academic Year	Total Hits	Holiday Guide Hits	Non-Holiday Guide Hits
2010-2011	8755	25	8730
2011-2012	50744	40974	9770
2012-2013	33386	9948	23438

Video Tutorials

Literature Review

There is quite a bit of literature that relates specifically to product evaluation and comparisons. Watson clearly explains how simple and easy it is to create a video with animation and voiceover narration using Camtasia Studio (66-67). The ease of creating these video tutorials rests solely on the abilities of the individual librarian. Similar results were identified by Belvins when the William E. Laupus Health Sciences Library at East Carolina University evaluated three different software products, ultimately selecting Camtasia Studio as providing optimal results (1-7).

Findings

Currently, we provide over a dozen in-house produced library video tutorials as well as a variety of vendor supplied tutorials. The videos were created by librarians using, primarily, Camtasia Studio. In the early stages of video creation, the librarians used Jing which is open access video editing software. After identifying the strengths and weaknesses of Jing, a paid-for licensing agreement was pursued for Camtasia Studio. Through Camtasia, the user gets an easy-to-learn and access interface that allows you to record sessions in various time lengths. Once the video is created, the user can then edit the video in various time measurements (up to $1/10^{th}$ of a second) to edit out the undesired sections. Users can also modify the screen view, add animations and graphics, as well as zoom in/out. Once the video has been edited to meet the desired outputs, the video can be saved and exported in various methods (MP4, upload to Screencast).

Web Design

Literature Review

Usability standards in the web-design field generally follow Nielsen and Tahir criteria. It recommends placement of search functions and important links associated with natural user eye gravitation, with the most important links being located in the top left, and information placed in such a manner as to reduce scrolling (Harple-Burke).

Our usability results of needing a clean site with limited text and clarity of link labels echoed the results of a study done regarding the Carnegie Mellon University Library (George).

Our work also agrees with Queens College's experience of appropriate use of dynamic JavaScript, while preserving simplicity (Mellone).

Findings

Work began in 2010-2011 to enhance the usability of the library website. During that year, small modifications were made to the layout and text, including:

- Removal of paragraph style text in favor of shorter bullet statement style information.
- Beginning to update information.
- A catalog search form was placed directly onto the library website.

- Cleanup project began to address html coding errors that did not meet W3 requirements.

In 2011-2012, we gained greater control of our website, and were able to modify some of our pages directly, as opposed to going to other departments. Activities included:

- Add JavaScript to create on-scroll and on-click text boxes, creating a cleaner feel.
- Add new materials list links.
- Create A prototype website in preparation for a full library website upgrade.
- Compare usability study with students of the old website and the prototype.
- Plan to redevelop the Library Website after the Crowder College site was modified in 2013.

In 2012-2013, activities included:

- Continued our HTML cleanup project off of the live site, in preparation for the new site.
- Prepared updates of the library website interactivity.
- Embedded our blog into our main page, on the live site, but that change did not survive the Crowder website migration due to JavaScript use limitations on the platform
- Crowder College webpage changes went live in March.
- We looked at our usability information from the prototype and our prepared modifications and began modifying the live site.

Social Media

Literature Review

There is little guidance for small libraries on how to utilize these tools to meet their unique culture and community. According to Rod-Welch, "[i]t is crucial for librarians to understand how these social networking tools work and learn how to use them in order to better serve their library users" (Rod-Welch 138-171).

Findings

In July 2012, the Library created a free Wordpress hosted blog with the sole purpose of implementing another avenue for users to access library information which enhances our digital footprint. Through the blog, users can access recent posts on library events, new resources, updates, and more as well as pages on the Library overview, mission statement, staff information, events, and more information. The Facebook and Twitter pages are, through RSS feeds, linked to the blog. The Twitter account is updated each time the blog is updated. Initially, the staff looked into having private pages that require passwords to view the content. This was an option considered for accessing the staff and department manuals as well as student worker schedules and assignments. The Facebook page for the Library was created shortly after, with similar motives. In March 2013, a Twitter account was created and linked to the blog for updates.

Like other implemented functions, social media has its own strengths and weaknesses. Besides providing a new avenue of access and assisting in increasing the digital footprint of the library, it also is an excellent alternative way to spread news, updates, and important information as well as allowing the library staff to become creative in providing, supporting, and marketing the library. All three forms of social media were easy to set up, edit, and maintain. One of the biggest flaws when using Twitter and Facebook is that, depending on your user group, it may not be the best form of contact as users may not actively check their accounts.

Equipment

Findings

Equipment purchases were needed to prepare for strategic stages. In 2010-2011 in preparation for face-to-face instruction enhancements, we purchased computers for our instruction classroom. In 2011-2012, in preparation for service shifts associated with distance and online instruction, we purchased the librarians ipads for mobility, duel screen staff computers for multitasking, and a laptop for synchronous instruction. In 2012-2013 we purchased GoToMeeting/GoToWebinar software.

In preparation for plans for next year, we are purchasing an audiovisual system consisting of 5 TVs, FM audio transmitter/receiver for audio, satellite and internet connection. The system will be used for promoting and presenting electronic streaming resources, audiobooks, marketing of library services, and, used in tandem with GoToMeeting, as an electronic overflow for the classroom.

We are also in the process of evaluating student tablets, for greater access to our new 112,000 book eBook collection. The eBook collection was purchased through a MOBIUS consortium contract, and access will begin in July 2013.

The projects were funded through donors and re-organizations of the current budget.

Reference Services

Literature Review

With the invention of mobile devices such as the iPad, libraries have attempted to improve roving and remote reference services. In some cases, roving reference with the use of iPads occurred as a side effect of a larger study (Gadsby 1-5). Many libraries have gone as far as creating mobile reference services and embedded librarians in other areas of the campus with iPads in tow. Similar to the plans at the Lee Library, Maloney identified how one library implemented the use of iPads to improve reference interactions both at and away from the service desk (Maloney and Wells 11-16).

Findings

In Spring 2012, two iPads were purchased and provided to each librarian. While there are many advances to incorporating iPads into the academic setting, the primary purpose of this particular purchase was to support public service which includes roving librarianship. Initially, the librarians were given a $15 iTunes gift card which allowed the librarians to customize the device to meet their needs.

Until April 2013, roving reference was done as needed when the librarians were able to walk through the library. In April 2013, a roving schedule was started, which required staff members to rove through the library every thirty minutes. Starting in July 2013, the roving schedule will be tied to the desk schedule and the librarian on duty will be responsible for roving through the library every thirty minutes. Currently, the iPads are not being utilized to their full potential and, in the upcoming months, improvements will be made to increase usage.

Conclusion

As we continue into the future, our trajectory is set through strategic planning. All of the technological enhancements implemented will continue to be evaluated based on the goals presented.

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Reaching Out to International Students

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Abstract

Not being able to communicate well in English is a huge hurdle that many international students and second language learners face when attending college in the United States. Lack of familiarity with library services is an additional challenge. When international students come from countries where libraries have very limited services and resources, transitioning to using domestic academic libraries and learning about their services can feel overwhelming. Another intimidating factor is the sheer physical space of the library, as many academic libraries in the United States are drastically larger and more equipped than some in foreign libraries.

Rod Library took the initiative to learn about challenges that many international students and second language learners face. To better serve this underserved group, Rod Library is trying to enhance accommodations for international students through outreach initiatives. These initiatives will help international students succeed by putting them at ease and showing them the valuable roles that libraries can play in their academic success.

Introduction

International Programs at University of Northern Iowa (UNI) consist of four offices: Office of International Programs, Study Abroad Center, International Students and Scholars Office (ISSO), and the Culture & Intensive English Program (CIEP). In the spring of 2013, UNI hosted 402 international students. Of these, 328 were undergraduate students and 74 were graduate students. These international students came to UNI to pursue various educational goals: Two hundred ninety-five of the 402 enrolled at UNI were seeking degrees, 90 were in CIEP, and 17 were exchange students. Most of these students came from Saudi Arabia, China, India, Malaysia, and Russia. All newly enrolled international students were required to attend a week-long orientation program the week before classes started.

This study reports the challenges that international and English as Second Language (ESL) learners face in using U.S. academic libraries, and explores outreach methods for serving this group of students. Being a former ESL student and an international UNI student, the author is very familiar with the challenges that these students face. Many of the academic libraries in foreign countries are much smaller in scope and size, have limited staff, technology, and resources. Library staff members often have little training and very few professional librarian duties. Being a librarian in some countries does not even require any college degree. Many libraries in other countries do not have open stacks. Students in these countries are only allowed to check out a few books, if that.

Literature Review

In the United States, international education is increasing and more institutions in higher education are focusing on this topic. As more colleges and universities focus on international recruitment they are recognizing the importance of cultural diversity and global awareness (Serrano and Cramer 83).

In a 2012 report entitled "Open Doors," the Institute of International Education states: "International education is vital to strengthening economies and societies both in the United States and around the world". They indicate international student enrollment increased 6% in 2011/2012 and that there are 764,495 international students. These students shape less than 4% of the total United States higher education enrollment. Internationals students were comprised of 309,342 undergraduate and 300,430 graduate students, of which 44% are women. The top five places of origin that the international students come from are China (194,029 students), India (100,270 students), South Korea (72,295 students), Saudi

Arabia (34,139 students), and Canada (26,821 students). In addition, they cite "[d]ouble-digit percentage increases among the top 25 origins: China +23%, Saudi Arabia +50%, Iran +24%, Venezuela +14%, Spain +14%" (Open Doors). Open Doors also reported that California, New York, and Texas hosted 32% of all the international students in the United States and 22% of these international students study in business and management fields, 18.5% in engineering, 9% in math/computer, 9% in science, 9% in social sciences, 5.5% in arts, 5% in intensive English, 4% in health, and 18% in other fields. In 2011, international students contributed over $22.7 billion to the United States economy. Most of these students rely on personal and family funds to pay for their schooling.

Walker and Polepeddi indicate the first step in serving diverse groups/patrons is making a personal commitment. This may require going out of one's comfort zone and may encounter difficulties along the road. Bringing diversity through outreach to international students is important and vital for libraries (3). Hanna, Cooper, and Crumrin stated that diversity or a statement about fostering diversity is becoming a common theme among universities (1). It is essential for libraries to serve patrons from diverse backgrounds in order to have equity among patrons.

Diversity might be a new concept to some universities; however, it is not a new concept to library associations and federations. For a long time, library associations and federations have focused on providing services to all community members (Hanna, Cooper, and Crumrin 12). Hanna, Cooper, and Crumrin indicated that library staff and faculty need to understand the cultural differences among different international groups, make sure they do not offend others, and give them the best services possible (14). Also, library staff and faculty need to be aware of different learning styles among varied international groups. Libraries can contribute to campus internationalization and bring awareness about cultural diversity (Serrano and Cramer 83).

In order to have high quality service, as Walker and Polepeddi indicated, a library needs to provide materials that specific populations need. When materials have been purchased for a special collection, the library still faces some challenges because of initial choices made while purchasing the materials for the collection. Those who make decisions on purchasing material are front-line advocates for the collection and related services (7).

Eva indicates that international students don't seek help because of various cultural reasons. Some do not ask questions because it is culturally rude to do so: you should not question a person in authority. Some international students are shy and they do not feel comfortable asking questions with their limited English proficiency. Some international students feel that people who work in the library are incapable of answering their questions based on how libraries run in their country. Therefore these students need our help even more. These students not only face challenges and feel overwhelmed because of their language proficiency, but also because of cultural and traditional differences (94).

Jackson indicates that most international students are in the cultural and language minority while traveling to a foreign country and studying there. Even though this is an exciting adventure in their lives, at the same time it is frightening and frustrating for many students (197). Goudy and Mushey (qtd. in Jackson 198) point out that "international students experience more difficulty using the library than do domestic students, particularly in using online catalogues, print indexes, and with American classification systems."

Hickok points out that international students' prior experiences from their home country's libraries will shape their perceptions and their use of libraries in the United States. Hickok gave different examples of how libraries operate in other countries. For example, he mentioned that some foreign libraries have tremendously limited resources and some international students come to the United States with the mindset that libraries are useless. Some international students grew up in countries where librarian jobs do not require professional training. Librarian jobs are often considered low status clerical jobs. International students believe that librarians do not know very much. These attitudes have serious implications when international students arrive in the United States and are suddenly required to do assignments that require them to use the library (2-3).

Hickok indicates that if he helps an international student to understand that when he/she needs scholarly sources for his/her research to come to the library because the library has those resources through databases or its collections, then he had done his job. Hickok wants students to understand that librarians are expert information professionals and they are here to help students (15).

Most of the research on this topic brings awareness to academic libraries and shows that libraries have overlooked this particular group of students. Because the author is a former international student who has overcome many of these same problems (that international students still face today) gives her a better awareness of what needs to be done to reach out to this group of students. It also makes her want to better educate this particular group of students about our library's services because they are so overwhelmed with new instructional methods, cultures, homesickness, etc. not to mention feeling overwhelmed by such a different, larger library.

Current Study

For this project the author worked closely with the Culture and Intensive English Program and with the International Services and Scholar Office (ISSO). She used various outreach initiatives to help ESL learners and international students overcome their library challenges and stereotypes during their collegiate studies at UNI. This project will also help UNI reach out to international and ESL students in the future. Both the university and the Rod Library will benefit from these outreach activities.

Through a review of literature on this topic, the author learned more about library-related needs and obstacles faced by international and ESL students. She also looked at numerous academic libraries' websites to see what initiatives they implement to provide enhanced library services to ESL and international students. It appears that just a few libraries have a special collection for ESL learners. Or, if other libraries have a collection for these students, it was not advertised on their website. She did find several library guides for international students and ESL learners on different library websites. It seemed that creating a library guide is a common practice for libraries in this regard.

Outreach strategies

A series of initiatives were implemented to build students' knowledge of and comfort with using an American academic library.

LibGuide

The author created a library guide tailored to ESL and international students. The library guide will allow these students to refer back to information previously given to them when they attend library instruction sessions or after they take a library tour. This guide contains library terminology and their definitions. In addition, these terminologies are available to students in Chinese, Korean, Japanese, French, and Spanish. Also, the author found an electronic English-Arabic dictionary that students can use to type library terminology and then get the Arabic equivalent of those terms.

Designated reference librarians

Rod Library has subject librarians for all academic subjects; however, there isn't a designated librarian for CIEP. The author talked with the CIEP faculty and brainstormed various ways that Rod Library could help their students. Suggestions discussed were to designate a librarian for CIEP and that it would be beneficial to students if the library had both a female and a male librarian for CIEP. Many female students are not comfortable talking to males because of their cultural backgrounds. The author brought this up at a reference bi-weekly meeting, and now three librarians (one male and two female librarians) volunteer to serve as subject librarians for CIEP. These librarians make more of an effort to become familiar with the needs of this particular group of students.

Creating a collection

Open stacks do not exist in many countries so international students and ESL learners are not familiar with them. Some of the students do not know that they can check out books or about loan periods. Many

of them don't know how to look for a book in the library or about call numbers and how they work. For this purpose, the librarians started creating a book collection for these students (and others) to use. During orientation the students will learn about this collection which will also help them gradually become more familiar with how to use our regular stacks collection.

Rod Librarians shared a document called "wish list" through Google Drive with CIEP faculty and staff. Faculty and staff were able to add any titles in any format, including those for books, eBooks, audio books, newspapers, electronic newspapers, magazines, dictionaries, and language software. As CIEP faculty and staff are more familiar with their students' immediate needs compared to librarians, they are able to give us specific feedback on what to purchase. Also, CIEP faculty can then tailor their syllabi to include materials that push CIEP students to use the library.

Tours and library instruction

The librarians are planning to provide even more library tours and instruction sessions for international students. Right now, only faculty who are teaching the highest level CIEP classes bring their students to the library but after more discussion with the CIEP director and coordinator the group decided to provide more library tours for lower-level CIEP students. These tours will contain less jargon and more simplified instruction sessions. The librarians notice that when students come to the library in higher-level sessions, they may give the students too much information. If lower-level students come to the library, the librarians can build up the proficiency they need over a longer period of time rather than in just one library instruction session.

In instruction sessions for lower-level CIEP classes, the librarians pick general topics that are common topics in other countries, including soccer, global warming, etc. Most international students are familiar with these topics which makes it easier for them to understand how to use our databases, what kind of keywords to use, and how to narrow a search. Also, their writing instructors encouraged them to pick a popular topic in order for them to increase their language proficiency. The librarians introduce some of the databases that can be used for common topics and make these students more familiar with specific databases as well. For example, if they like to do research that is related to chemistry, the librarians show them where LibGuides are located on the website. The students click on the appropriate LibGuide so that they can find databases for chemistry subjects. The hope is that this will help these students feel more comfortable using the library and that they will learn how to use resources more productively in their studies and research.

International mandatory orientation

All UNI international students, except CIEP students, are mandated to attend a week long orientation program though ISSO. CIEP students have their own orientation and are provided with a tour of the library then. Unfortunately, the ISSO indicated that they do not have time for their students to come to the library. This was upsetting, but the author asked them if there is would be any time available where the librarians could at least talk to these students. They offered 50 minutes of shared time with Student Support Services and the author accepted the offer. She decided to create a PowerPoint presentation with pictures of different areas in the library rather than overwhelming them with only spoken information. She hopes the visual tools make it more memorable so they can recall the information later when they need it. She also sent this PowerPoint to the CIEP director and coordinator so that they can use it for recruitment purposes and send it to the parents of both our current and incoming students.

Lunch and learn program

ISSO also offers a one-hour lunch and learn program during each semester. An email is sent to all international students inviting them to bring their lunch and friends and learn about different campus services. We were lucky enough to be a part of this lunch and learn program. I used the same PowerPoint presentation for this event. Interestingly, at the end of this presentation some of the students asked if they could get an actual tour of the library and see the places I showed them on the PowerPoint, especially the graduate students.

Conclusion and Future Trends

Over the past several years, there has been more attention given to the ways academic libraries reach out to ESL and international students but there is still much more that needs to be done. The number of ESL and international students attending universities in the United States is increasing, thus it is important for academic libraries to pay more attention to this group of students in order to better serve them.

Ruswick (2011) indicates that collaboration with different campus departments is essential for success in outreach efforts in order to better serve international students. Libraries cannot provide quality information and programming to international students without assistance from the International Center, Office of Admissions, or equivalent departments. Rod Librarians believe in collaboration and work closely with ISSO and CIEP.

Because of the collaborative efforts, CIEP faculty and staff are feeling more comfortable communicating with librarians, sending emails with comments, suggestions, and requests for library tours and instructions sessions. Both CIEP students and international students now feel more comfortable and welcome in Rod Library. CIEP librarians try to introduce themselves to CIEP students and international students whenever they find the opportunity in order to break the ice between these students and library staff.

In order to determine if efforts in reaching out to international students and CIEP students are effective, the author plans to conduct a pre- and post-instructional intervention research design. After the ESL and international students have received a library tour, instructional session, and have used the library for their research, they will receive a survey that will enable her to compare students' knowledge and attitudes before and after the intervention. This survey will also help Rod Library and other academic libraries learn about additional needs that these students have and how librarians can address them. The survey will ask these students whether they feel more familiar with our library and its services after attending a library tour and instruction session.

Overall, these initiatives should help UNI with retention of current international and ESL students. They are beneficial for bringing increased diversity to the library and to expose other students to this diverse group. Other ways that libraries can increase diversity and help international students are to create different events such as celebrating different countries' festivals/holidays events such as Chinese New Year, Norooz (Iranian New Year), Cinco de Mayo, etc. Having library tours in other languages might be another helpful way to reach out to international students.

Librarians have the opportunity to teach faculty and staff who are working closely with these students about the services that the library has to offer by providing workshops to learn about these students and their needs. It is also important to teach library staff about language barriers and cultural differences as well as the need to understand and respect those differences.

Hickok, in a paper published in the 2007 LEOX conference proceedings, indicates that speaking English is challenging for these students and many of these students are self-conscious about their limited English proficiency. He also states international/ESL students may be overwhelmed by their library's unfamiliarity, causing many of these students to avoid learning more about how their academic library can be of assistance to them (89). Therefore, because Rod Library staff members believe their success is defined by student successes, implementing outreach programs for international/ESL students is a necessary and essential endeavor.

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Why Undergraduate Students Choose to Use E-books

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Abstract

Many academic libraries were early adopters of e-books and continue to acquire e-books to support student learning. The e-book is an innovation that purports to replace the printed book; however, research finds that students continue to prefer to use printed books. While students prefer the printed book, academic libraries that provide access to e-books report their e-book collection is being used as much or more than the printed book collection. In this study, eight factors were identified and explored to determine whether one or more of the factors affected undergraduate students' choice to use e-books. A quantitative research design using a convenience sampling method and chi-square analyses was employed in the study. The population of interest was undergraduate students attending Southwest Baptist University, a small, traditional, liberal arts institution. A survey was administered to students attending a university-wide chapel service. Four research questions were developed to explore whether a relationship existed between students' use of e-books and using e-books for leisure reading, using e-books as a textbook, using e-books to conduct research, using e-books to read an assigned reading outside of class, using e-books to read an assigned reading out loud in-class, using e-books as the format of choice, using e-books due to forced adoption, or using e-books due to convenience. Leisure reading, conducting research, forced adoption, and convenience were factors positively related to students' choice to use an e-book. In-class reading was negatively related with students' use of e-books. Textbook use and reading assigned readings were not related with students' choice to use an e-book. When both the printed book and e-book were available, students' choice was positively related with the printed book and negatively related with the e-book. When the e-book was the only format available, students' choice was positively related with the use of the e-book. Finally, students' use of e-books was positively related with convenience. This study was conducted in fulfillment of the presenter's doctoral studies.

Don't Make the Kid Who is Blind Play Dodge Ball: Making Interactive Library Instruction Accessible to Students with Disabilities

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Abstract

Currently, there is a movement for libraries to provide more interactivity in instruction sessions to foster greater student engagement. However, Angie Brunk, born with a visual disability, and Dale Monobe, with a teaching/educational background in rehabilitation counseling, have both observed how students with disabilities may be left behind. For example, popular activities, such as the "Amazing Library Race" and a "Scavenger Hunt," may be completely inaccessible for students with disabilities. Most library instruction is meant to encourage library use. Unfortunately, activities that are not well planned can leave students with disabilities feeling unwelcome and make it more difficult for them to seek assistance from librarians. We will describe several popular library instruction activities, explore potential difficulties for students with disabilities and offer modifications that allow students with disabilities to fully participate in instructional activities.

Introduction

Gamification has become force in higher education and especially in libraries. This had led to an increasing use of games and other interactive learning activities in library instruction (Kim). The stated goal of gamification is often to increase student engagement and involvement with the library. However, many of the commonly used activities present barriers to students with disabilities. We will examine several activities presented in the book entitled Let the Games Begin!, as well as one activity presented at LOEX 2013, and suggest modifications to these activities. Activities from these sources are widely available to members of the profession and represent types of activities frequently used in library instruction.

Most librarians will encounter students with disabilities. According to the U. S. Department of Education, 88% of all institutions of higher education enroll students with disabilities. Nearly all, 99%, public two and four year institutions enroll students with disabilities (Raue and Lewis 3-4). A librarian may not always be aware that students with disabilities are present, but most librarians will encounter students with disabilities during their careers. Failure to consider the needs of students with disabilities in instruction sessions can lead to student not being able to access vital information. Library instruction sessions are often designed to encourage students to use the library in the future. A student who is unable to fully participate in classroom activities in the library may feel unwelcome in the library as a whole.

Review of Literature

Alienation

People with disabilities throughout history have experienced alienation in various degrees despite the well acknowledged need of all humans to feel a part of the social group. Unfortunately, such alienation may cause a person with a disability to experience anxiety and consequently reduced self-esteem and self-belief (Agarwal). Other authors have echoed this by saying that such alienation and related treatment causes a sense of isolation (Henderson) and a sense of not belonging (Brown et al.).

Providing Opportunity and Engagement

To remediate such historical alienation, providing equal opportunity to succeed in school and consequently in the workplace have been consistent themes (Wright) throughout the literature. One

approach to providing such opportunity is to emphasize the importance and need for accommodating student learning styles (Sahlen and Lehmann). Another approach is to increase the student's sense of engagement and connectedness to their educational environment, which can lead to academic success (Upadyaya and Salmela-Aro).

Modifying Information Literacy Classroom Activities

To accommodate the learning styles of students with disabilities (necessitated by their disability) as well as to engage and to instill a sense of connectedness in such students, Henderson advocates that "teachers should . . . try to understand the classroom conditions that may negatively affect students . . ." (192) and recognize individual and variant styles of learning and try to adapt teaching methods to fit them" (193). As for literature on information literacy classroom games, there are several; however, a search for information literacy games that are modified for students with disabilities failed to return any results.

Accommodating Students Satisfies the Law

Accommodating student learning styles not only facilitates pedagogical goals but also helps satisfy *The Rehabilitation Act* (Sahlen and Lehmann). More specifically, " . . . Section 504 of this act requires schools at both the secondary and postsecondary level to provide necessary accommodations for students with disabilities" (Cawthon and Cole 113).

Modifying Classroom Activities Benefits All

It is significant to note that though the above literature may focus on people with disabilities, there is from time to time a reminder to all that we all have connections to people with disabilities and if we do not have a disability now, we may at any time experience a disability. With time, the chance of having a disability almost becomes certain. "Disability is, after all, an identity that touches everyone . . ." (Fox 47).

Activities, Problems and Modifications

Online Jigsaw Puzzles

In this exercise, online jigsaw puzzles are used to teach students about constructing proper citations. (Porter) The students are asked to put a puzzle together the reveal a correctly formatted citation. This activity would be difficult to impossible for students with visual impairments or limited use of their hands. The muscle control required for precise alignment of objects with a mouse would pose a challenge to students with limited use of their hands. A person with a visual impairment may not be able to see puzzle pieces in enough detail to match pieces together. The online component would remove any tactile sensation. Also this program would not be compatible with screen readers and may not respond well to magnification. It would be difficult to modify this activity for students with disabilities. However, if the instructor knows there are no disabled students in the class then the activity would present no problems.

Library's Best Beach Ball

This activity is essentially a library scavenger hunt. (McDevitt and Stillwell) A beach ball is tossed to students. Students then pick their library location to investigate based on where their right thumb lands. Students then investigate a location or service in the library and report their findings to their classmates.

Library scavenger hunts in general present some challenges. Navigating new spaces can be difficult for students with mobility or visual disability. Signage is often designed for people with average vision. All of this can be more problematic if students are working in teams and the game is competitive. Catching a thrown object can be very difficult for students with visual or motor impairments.

This activity can be modified for students with disabilities. Offer students a brief walking tour before they go to their areas. This can be very brief because you are relying on students to fill in the bulk of the information. If there is a student in the class who feels it is necessary, offer an individual walking tour to help them navigate more successfully before the class meets. A student may not feel comfortable participating, and should be offered a 1 on 1 alternative. Don't use a beach ball. Draw places out of a hat

or use a list randomizer to assign students to teams to investigate services. You can find one at RANDOM.ORG.

Library Quest

Library Quest requires teams of four students to use library resources to answer questions. (Ellis and Falcone) The creator of this activity suggests projecting the rules and using large sticky notes to record answers. This activity also requires the use of computers in the classroom, which may not have appropriate adaptive technology for students with print, visual or mobility disabilities.

A few modifications make this activity much more accessible to disabled students. Have at least one printed copy of the rules that students can hold and read the rules out loud. Read the answers on the answer sheets out loud. Be familiar with the adaptive setting available on all computers and ready to deploy them as needed. Windows and Mac both have built in voice over and magnification and can modify the mouse controls.

One Minute Paper

This is a fairly common exercise in which students are asked to write a very brief response about what went well, what didn't go so well and what they learned during the instruction session.

This is a fairly low risk activity. However, students with mobility or visual impairments may find writing on paper or using a non-adapted computer difficult.

Be prepared to accept a student's submission later if needed. Be familiar with adaptive technology available in any computer lab you are using.

YouTube Detectives

Students watch a YouTube video to develop a research question. (Villa) They then use popular and scholarly sources to evaluate the information presented in the YouTube video. Unfortunately, many, if not most, YouTube videos do not include closed captioning. Also the quality of YouTube videos often means that details are lost when going to full screen. Some videos could even cause seizures in student with light sensitive epilepsy. There are several options to make this exercise more accessible to students with disabilities. If the instructor is working from a set list of videos, make sure that at least one of the options is closed captioned and/or the information that would help students form a research question is available to that student. Alternatively, allow students to use another popular format such as researching the veracity of information presented in a meme, web page or Facebook post.

Photo Comic Book Storytelling

Students write a script and then use an iPad to take photos and a comic app to create a photo based comic book telling their story of the research process and/or describe various features of the library (Upson and Mudd). Use of the iPad and app can be problematic for students with visual or mobility disabilities. If students are working in teams, any student unable to use the iPad or app could be assigned to another part of the project. Students could also be prompted to tell a story about their experience or the library in a way that works for them. This would also be beneficial for students who do not like the comic book genre.

Game Modification Rule of Thumb

A employment-based rehabilitation placement rule of thumb it to try to place a person with a disability back in the same job she or he had with accommodations if needed; if that is not feasible, then try to place the person with the same employer in a different job with accommodations if needed; and if that is also not feasible, then place the person with a different employer with accommodations if needed. Applying this rule of thumb to a classroom game, the instructor should try to accommodate a student with a disability (such as allowing extra time or providing large print instructions); if this is not feasible, then the instructor should change the game to accommodate the student; and if this is not possible, the instructor should find a different game that allows the student to fully participate.

Conclusion

Gamification of library instruction has the potential to present instructional barriers to students with disabilities. However, with some pre-planning most popular interactive activities used in library instruction can be successfully modified, removing barriers and engaging students with disabilities. We recommend that future research on interactive learning in library instruction focus on outcomes for and experiences of students with disabilities to ensure that librarians are serving all students equitably.

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