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State-It: Connecting Students to the Archives

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Maryville, Missouri**

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Making Room: Digitizing Your Scholarly Output

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Abstract

With an eye toward re-purposing physical library space, the University of Kansas (KU) Libraries has moved forward with the digitization of post-1923 theses and dissertations created by its student body. This scholarly work is unique to the university and therefore has priority for digitization. With the entire collection totaling nearly 30,000 volumes and consuming a large portion of library shelving, a one-year pilot project began on February 1, 2016 to digitize 1,000 volumes. The volumes are made available through the institutional repository called KU ScholarWorks. This retroactive digitization of duplicate copies also allows for better inventory control – one archival copy will remain in off-site storage while an electronic copy is added to those post-2006 that the Libraries has acquired in born-digital form. The workflow librarians developed aims to provide online access while monitoring staff/student time, equipment costs, copyright, storage, and preservation concerns. One year into the process, the presenter shares lessons learned and future goals for the project.

State-It: Connecting Students to the Archives

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Abstract

The University Archives Department at Indiana State University (ISU) assists faculty, students, and the public by providing access to and preservation of primary resources and ISU history. Despite the resources and services available, archival holdings are often underused and receive few donations from students and student organizations. These students are often unaware of the function and uses of the archives. To address these concerns, Special Collections staff have created a website utilizing the Omeka platform called STATE-IT to engage students with the University Archives. This site houses digital archival materials, digital exhibits, and oral histories. STATE-IT also provides a quick and easy access point for students to contribute images, documents, and other historical items. This paper focuses on how creating an interactive component increases students' motivation to contribute to and use the University Archives, providing a look into the past and highlighting their current experiences and perspectives as ISU students.

Review of Literature

One of the best resources for university students exists within the University Archives and Special Collections departments of school libraries. Through archives and special collections, students can access rare books, manuscripts, archival holdings on student life, and university records. Despite the great benefits and resources available, few students use these resources for a number of reasons. Traditionally, special collections and archives' holdings primarily attracted professional researchers while failing to draw students to sources that can improve their educational development. Buchanan and Richardson report 1) that university archives historically focused on preserving institutional records, often failing to properly document the lives of students and 2) these materials are both important to the history of the school but also engage many students (2012). Despite the new focus, archives struggle to get student organizations to donate their material.

To encourage students to preserve materials in the archives and develop a more robust student life collection, several campuses have developed different programs. Archivist graduate students and archival staff created the Bruin Archives Project (BAP) at the University of California, Los Angeles (UCLA) (Buchanan & Richardson, 2012). This group connects the institution's archives with students and encourages students to donate materials. Uniquely, this group was student led,

showing the students desire to preserve their works and engage with the archives by leading the way to educate, advise, and contact student organizations about preservation.

Another university archives examined the school community's perception of the archives and developed outreach initiatives to better educate the university about their mission. At Adelphi University in New York, a survey found that few students knew of the university archives, correctly understood what the archives preserves, and very few students saw the value of their personal or student organizational material to the archives. Some even hesitated about donating any personal material because of privacy concerns. Adelphi archivists also realized that not many groups know how to preserve the social media aspect of student life records (Wagner & Smith, 2012).

To solve the identified gaps in the archival holdings and student's knowledge, Adelphi library personnel worked with the marketing committee, which promotes the library university wide, to specifically educate students about the University Archives (Wagner & Smith, 2012). They utilized library websites and freshman orientation to educate student organizations about donating materials to the archives as well as the archives' collection policy. They also coordinate with campus groups in charge of student organizations for easier communication. Adelphi archives staff are now looking into student organization's websites to find other avenues to capture important student organization information on social media sites like Twitter or Facebook. One important goal throughout the process was to make it easy for the students to donate. Adelphi used drop-off boxes in dorms and prizes as important components to encourage contribution. Outreach and simplifying the donation process became key to Adelphi's strategy to get more student participation (Wagner & Smith, 2012).

Archive's new emphasis on engaging students creates a "user centered not record centered" approach, facilitating access and involvement to the archives rather than maintaining the archives as "gatekeepers" of history and knowledge (Theimer, 2011). This new approach aims to make archives both inviting and participatory, educating the student population on how archives work while introducing students to the sources. This ideology emphasizes the importance of appropriate technology and using innovative and flexible ideas to involve the public and cultivate knowledge (Theimer, 2011).

About Indiana State University and Students

Indiana State University (hereafter ISU), located in Terre Haute, Indiana, was established in 1865 as Indiana State Normal School, a public school dedicated to educating teachers. Expanding beyond this initial mission, the university now contains seven colleges with more than 100 majors. The degrees offered include Bachelor's, Master's, Doctorate and Educational Specialist. The university is relatively small with a total enrollment of 13,584 for fall 2015 with 2,784 as first-time freshmen. ISU has over 100,000 living alumni and a campus of 435 acres with 72 buildings (Indiana State University, 2016).

Since the beginning, ISU students formed several student organizations. Since then, the increasing number of student organizations and clubs on campus engage students socially and intellectually. Today, students take part in a variety of student assemblages, with 270 registered

student groups on campus including almost thirty sorority and fraternity chapters, in addition to organized weekend programs (“Student Organizations,” n.d.).

Special Collections

The current Cunningham Memorial Library, which houses the Special Collections department, opened its doors in 1974. As a central spot on campus for group and individual study, research, and events, the Library is coined “Your Campus Living Room.” Located on the third floor of Cunningham Memorial Library, the Special Collections department consists of Rare Books and Manuscripts, the Permanent Art Collection, the University Archives, and Digital Initiatives. Between all the units, Special Collections contains books, manuscripts, pamphlets, prints, photographs, maps, paintings, sculpture, digital files, and memorabilia. The Special Collections department provides many services, including digitizing images, books and art, creating physical and digital exhibits, working with classes, and providing access to our non-circulating holdings in our Reading Room. In addition to its collection of manuscripts and rare and unique books, Rare Books & Manuscripts also claims one of the most robust dictionary collections in the world, called the Cordell Collection, rivaled only by Oxford. Digital Initiatives includes the Digitization Laboratory, hosts the Wabash Valley Visions and Voices Digital Memory Project and manages the university's Institutional Repository, Sycamore Scholars. The Permanent Art Collection serves the university's artistic needs such as maintaining sculptures and other art on campus and overseeing donations and purchases. The collection contains thousands of drawings, paintings, and sculptures that are placed around campus and are used for student's educational advancement.

University Archives

The University Archives collection focuses on university materials of historical and administrative value that range from when the university started in 1865, to the present. In addition, the Archives contains an extensive photograph collection from the Martin Photo Shop, depicting life and events on campus from the 1930s to the early 1970s. Because of the past emphasis on administrative material and photography, the university archives is significantly weaker in regards to student life on campus.

Problem

In the past, the ISU University Archives has only been partially successful in collecting material related to student life on campus or attracting students to the archives. In addition, student groups previously tracked their history in the form of scrapbooks and printed photographs. Much of the current material is digital, as organizations use social media, computers and smartphones to memorialize their organizations' activities. Many archives are struggling to adapt to the evolving technology, and the ISU archive is no different. Another major issue is awareness. Many of the student organizations in the university are not aware of the Indiana State University Archives, in general, nor the archive's desire to collect material from student organizations. The University community views the Archives and the entire Special Collections department as largely off-limits, and due to necessary policies regarding special material, intimidating and difficult. Even filling out a regular Deed of Gift appears daunting and too much of a hassle for students. For

these reasons, Special Collections staff created a digital environment for students to easily and comfortably interact with the University Archives by accessing resources through a social media type platform, while also adding to the University's history.

Goals

The State-IT (Indiana State University, 2013) website engages students by developing a social site to connect with each other and material from the Archives, while also contributing new material. Creating a site that acts like a social hub for the university helps students to engage with each other in an environment very familiar to current students who constantly use social media. This site allows students to easily donate images to the archives just as they would upload an image to a social media site. They do so with the understanding that the images will be added to the archived history of the university, assisting the department to document their student group activities and students experiences at events on campus. At the same time, these images appear alongside older images digitized from the University Archives collections. Combining the past with the present gives students the chance to interact with the University Archives in a comfortable setting, promotes resources, provides an avenue to quickly and easily donate material, and develops students' understanding of what the University Archives contains. As a part of Special Collections and the Cunningham Memorial Library, State-IT will also make the Library a virtual social hub of the university itself. The Library advertises as "Your Campus Living room"; State-IT provides a digital format for this "living room" environment that encourages placement of the University Archives/Special Collections, and therefore the Library, as a central component of the University community.

Process

The idea of State-IT came about from the various needs of University Archives and Special Collections. ISU's previous Archivist tried to create a photo competition as a way for students to donate current images of student life. Due to unforeseen events, this project was tabled. At the same time, a previous Special Collections staff member developed an online exhibit for the Rare Books & Manuscripts collection using the open source Omeka software. When the current Archivist and Data Curation Librarian arrived, the department started conversations regarding updating our website, reducing the number of pages and making it more appealing. For University Archives this meant cutting or transforming the numerous old exhibit pages with some valuable information. In addition to discussing updating the website, the department discussed advertising their holdings and services to attract more interest. By combining the idea of students donating material, the department's existing Omeka site, the need to update and reduce the Archive's web pages, and the need for the department to better advertise our holdings and services, the Data Curation Librarian and University Archivist developed the State- IT website.

Based on the decision to create a social site and because of the department's previous use of Omeka, Special Collections staff explored the software to see its capabilities and how others had utilized it in the past. From there, Special Collections staff talked with Library Systems personnel who had initially set-up the Omeka site years ago about modifying, updating, and adding various such as contributions. Special Collections staff also later used the expertise of a

graduate student to adjust the look and deal with technical issues in designing and implementing the site. Staff focused on making contributions easy and user-friendly on mobile devices, as many students take images with their phones or tablets. Though Omeka allows contributors and users to add relatively detailed metadata elements, staff focused on minimal metadata as more fields would decrease student's interest to contribute. Staff developed a rights clause so that all items would become part of the University Archives and set it up so that different events and groups on campus could add images to those collections. Staff would be notified of any contribution and approve images for public access and simultaneously preserve the images in the University Archives.

In addition to collecting contributions, State-IT also became a site for Special Collections' exhibits. Three times a year, Special Collections staff develop informative and engaging exhibits using our collections, all of which are put in State-IT. The University Archivist takes scans or digital photos created of each item in the exhibit as well as the text panels and recreates the physical exhibit in State-IT. The physical exhibits contains a QR code that links to the digital version and the website is noted in news releases.

When it was ready, staff demonstrated State-It at several events geared towards students. The Cunningham Memorial Library hosts an annual event called Library Extravaganza where staff tell students about library and university services in a fun environment with giveaways and free food. During Library Extravaganza 2015, Special Collections staff told students about the impending website. The University Archivist received a lot of positive feedback about "being part of ISU history." The subsequent year, the Data Curation Librarian worked a booth dedicated to State-IT. Students could take photos individually or in groups in front of a green screen, and staff later added a digital Extravaganza background to the images and posted them in a new collection on State-IT. During Extravaganza, students were told where to check out the images. The booth proved popular with around 100 photos taken at the event, many of which were group shots composed of 2-4 people. Many of these students contacted the department the following week hoping to find and share their images.

In addition to the Library Extravaganza event in 2016, Special Collections staff also promoted State-IT through an exhibit. The Fall 2016 exhibit focused on ISU student organization's history. To promote both the exhibit and State-IT, the Data Curation Librarian invited student organizations to come enjoy free food, receive a free draw-string bag with the State-it brand on it, and have their picture taken at a photo booth. Unfortunately, the event had little success. A few organizations expressed interest, including one student group that had contacted the Archives about traditional physical donations. Since this initial contact, this group has been very interested in State-IT, not only coming to the event, but also posting things to State-IT and agreeing to be interviewed about the history of their organization. Despite limited success, Special Collections staff hope to build on the few interested parties that came to the event.

Fraternities and sororities are some of the most well-known student organizations on campus. They often have large budgets, alumni support, and significant fundraising ability. Because of the popularity of these organizations, Special Collections staff found them to be a logical starting point for advertising our site. Through our student workers in the library, the University Archivist made connections with multiple Greek organizations. One Greek organization

approached the Department Chair, requesting their composite photos of members be digitized. The Data Curation Librarian used this opportunity to suggest the images be added to STATE-IT and that a collection could be created to house these images. The fraternity mentioned that they had recently remodeled their house and offered to provide a tour. The Data Curation Librarian accepted the tour and subsequently planned to create a collection that would include digitized composites as well as other images and documents, a digitized tour of the fraternity house, images of the new and old facilities and a place to store images of future group activities and events.

When approaching other organizations, staff present the groups with exiting content and show rival organizations' collections. This inspires competition and encourages contributions to current collections as well as creating new collections. This technique has been successful, not only for growing STATE-IT, but also creates word of mouth advertising around campus and in the community. Other outreach efforts include presenting the site as a resource and service through outlets such as the Faculty Center for Teaching Excellence (an on-campus center for teaching resources and professional development) and to organizations such as Student Government Association and *The Statesmen*, ISU's campus newspaper.

In addition to networking with student groups on campus, Special Collections staff are also working to address preserving social media posts and making it easier to start using STATE-IT. With social media playing such a significant role in today's culture, STATE-IT have a Social Media collection in order to archive and preserve department's social media posts across platforms. The collections goal is to provide researchers with data for various research interest and enable users to view the social media activities of their organizations and others in one convenient location. In the future, The Archivist and Data Curation Librarian plan to continue to expand collections and users. The department's future goals include embedding STATE-IT into other organizations on campus such as the Office of Campus Life. Staff would like to receive notification whenever a new organization is created or an event is to take place and provide an easy and efficient way to donate items relevant to Indiana State University history. Each new organization will have the opportunity to begin building their collection and staking their place in ISU history from day one. This will also allow Archives to better record the history of the university and provide the ISU community with a central location for access and preservation, ultimately increasing the use and relationship between ISU students and the University Archives.

While State-IT focused on students contributing images, documents, and videos to capture the student experience of the past and the present, State-IT dovetailed into another Special Collections project focused on the university's 150th. The Sesquicentennial Oral History Project, organized by the Special Collections Department Chair, offers students, staff, faculty, and alumni the opportunity to record brief oral histories about their tenure at ISU. The Chair, University Archivist, and public history students, recorded quick oral histories at Homecoming in 2015 and 2016, as well as Library Extravaganza in 2016. Unlike Homecoming which draws a lot of alumni to the booth to record their favorite moment at ISU, the Library Extravaganza event is focused on currently enrolled students. For this reason the Extravaganza recordings are placed in State-IT. At Extravaganza, the University Archivist and Department Chair asked students to record their names, the year they expect to graduate, and what they like about ISU. Before recording,

students were asked to sign a form agreeing to let the recording be saved in the University Archives and to be placed online. The form is simple and quick to encourage participation. Special Collections staff conducted the recordings in a temporary booth made of a metal frame and soundproof pads purchased through a mini-grant offered by the University for the Sesquicentennial. A student worker did all necessary editing of the files in the spring of 2017, and placed the completed files in State-IT.

Conclusion

Engaging the student body is always a difficult task, especially in the library. The Special Collections department, has a lot to offer our students and can provide access to resources that can contribute to their academic success. With rare books, manuscripts, university records, an art collection, an incredibly robust dictionary collection, and the institutional repository, ISU Special Collections is potentially a one stop-shop for students looking to conduct research. In order to attract students to this hidden treasure, Special Collections staff created a site that can unite and engage student and student organizations with the University Archives and the Special Collections' digital exhibits and oral histories. The purpose of the State-it website is to link students socially to the university, as well as each other, and provide an opportunity to become part of the official record of the university. By uploading files to State-IT, current students can ensure that the University Archives preserves their donations. As current images live alongside historic images, students will reshape their understanding of the University Archives holdings and become more comfortable with engaging archives resources they helped create. Using the Omeka software, State-IT is designed to be a collection of past and present stories, images, videos, and recordings donated by students, faculty, staff, and alumni of Indiana State University.

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Using LibWizard to Create Active Virtual Learning

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Abstract

The University of Nebraska-Lincoln's new Virtual Learning Librarian was tasked with developing fully online library-related instruction as part of a comprehensive Virtual Learning Program to meet the needs of all the University's students, not just those in online courses. To increase the achievement of learning outcomes, he designed tutorials that incorporated active learning using Springshare's LibWizard software. This paper summarizes the reasons why the author deemed active learning to be a critical piece of online library instructional resources and how LibWizard's features allow for the creation of active learning experiences in a virtual learning environment.

Introduction

For the past several years, the University of Nebraska-Lincoln Libraries faced the same challenge as many other academic libraries: A steady increase in the number of fully online courses and students requiring asynchronous library support. Between 2013 and 2014, the University experienced a 22 percent increase in fully online student credit hours (Niemic, 2015) and an analysis of data provided by the University's Office for Online and Distance Education revealed that approximately 58 percent of all enrolled students took at least one online course and approximately 11 percent took their courses fully online (Cano, 2016). Consequently, the University Libraries' administration repurposed a vacant faculty line into a new Virtual Learning Librarian position and hired the author to fill this position in January 2016. In addition to the need to better serve fully online students, faculty within the Libraries' Reference and Instruction Services (RIS) department realized that virtual learning should not be restricted to online courses. The department was receiving an average of over 300 one-shot instruction requests per academic year and the relatively small number of RIS faculty (approximately 25 in a university of over 25,000 students) was having difficulty meeting that demand. Furthermore, there was a lack of standardization of instruction, leading to a challenge meeting the requirements of increasingly complex assignments and needs. While the University Libraries did offer a half-semester credit-bearing course, few departments required it and decreased enrollment led to the course's discontinuation. Consequently, the author, in collaboration with the RIS Chair and the Instruction Coordinator, expanded the role of the Virtual Learning Librarian position to include the development of all asynchronous library-related instruction as part of a comprehensive Virtual Learning Program. Critical to this instruction was the ability to create active learning opportunities, which research has shown to enhance learning.

Background Literature

The research on the benefits of active learning is substantial. As Chickering and Gamson (1986) explained:

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 (p. 3).

Bonwell and Eison summarized this by defining active learning as “instructional activities involving students in doing and thinking about what they are doing” (1991, p. 5). Bonwell and Sutherland advanced this work by providing a framework to “allow faculty to consider their course objectives and teaching style and to determine through self-reflection what active learning strategies best meet their needs” (1996, p. 4). This framework included the development of course objectives, integration of an instructor’s personal style, minimizing the risk of failure, correctly perceiving the instructor’s role, and assessing students’ experience (Bonwell & Sutherland, 1996).

The application of these principles has traditionally focused on traditional classroom settings. In recent years, however, research on active learning has shifted its focus to the online classroom. Koohang (2012), for instance, recognized the growth in online postsecondary enrollment (10 percent per year compared to 2 percent for the traditional classroom) and proposed a systemic model of active learning in online environments based on the existing body of active learning research. Koohang, Kohun, and DeLorenzo (2013) then applied factor analysis to validate this model. Some researchers have shared their personal experiences integrating active learning into an online course. For example, Donovan (2005) shared the professor’s experience with creating active learning environments in their online classrooms and recommended best practices. Similarly, Varela, and Westman (2014) shared how their use of active learning in an online course led to better learning outcomes than the face-to-face section through the promotion of online discussions and use of web-based tools to complete assignments. The research has also shown that students support these efforts. In Koohang, Paliszkievicz, Klein, and Nord, for example, the researchers conducted a study of undergraduate and graduate students enrolled in online courses and “all elements of active learning received above average to high mean scores indicating learners’ favorable view of the importance of the active learning elements in the design of online courses” (2016, p. 24). This affirmed the importance of designing online classes with active learning in mind.

Research has also been conducted on active learning in library instruction. Lorenzen (2001) defined active learning and applied it to several library instruction scenarios. Dewald included active learning as criteria for good online library instruction practices, writing that “[a]ctive learning in an online tutorial may be defined as exercises conducted by the student online, whether this involves using online forms to review material...or sending online worksheets or quizzes to the librarian...” (1999, p. 27). More recently, Walsh and Inala (2010), summarize existing research on active learning and develop practical examples of how it can be applied in library instruction. Detlor, Booker, Serenko and Julien (2012) conducted a survey of undergraduate students who had experience both passive and active learning information literacy instruction and found that active instruction produced more positive effects on student learning.

Designing Active Virtual Learning

Based on the existing research, the author began to develop online library instruction tutorials that promoted active learning. After initially creating tutorials on the Guide on the Side open source platform, the author decided to adopt Springshare's LibWizard tool, which is an updated and enhanced version of the company's LibSurveys product. He made this decision because the Libraries already used Springshare as a vendor (e.g. LibGuides, LibInsights) and LibWizard improved upon the features of Guide on the Side that promote active learning.

The primary feature that made LibWizard appealing is the ability to create interactive tutorials on a variety of content, including websites, images, videos, or PDFs. This promotes active learning as students are interacting with the content instead of passively reviewing static material (e.g. screenshots). At the University of Nebraska-Lincoln Libraries, the author and his colleagues use this feature to create online tutorials that are fully "hands-on" as students are able to follow the instructions given as they navigate web pages or complete activities within the embedded media. For example, the author was able to create tutorials that walk students through the research process while they are actively conducting searches and narrowing their results using delimiters in one integrated experience. This not only saves students time in not having to repeat these steps in a live website later but keeps them actively engaged throughout the entire tutorial. An added benefit for librarians is that they can integrate existing content into their tutorials without having to create original material.

Secondly, LibWizard tutorials are comprised of individual slides, each of which can feature a different embedded object. For example, the first slide in the research process tutorial starts with a PDF describing the research process and, when activities related to that slide are completed, moves on to a slide featuring the live university catalog. This promotes engagement as the student's experience is constantly changing, in addition to the aforementioned benefit of live interaction with content. When professors request specific concepts or ask for tutorials to be expanded or shortened, it is very easy to edit, add, and/or delete slides. As tutorials are customized for individual courses, this also allows for lessons and activities to be designed to meet the specific needs of a student in a particular course. In the example of the research process tutorial, individual slides demonstrating how to conduct a search usually include general examples that would be appropriate for any new student. However, when designing tutorials specific to the Educational Administration online graduate program orientation, the examples used were edited to include only searched on discipline-specific topics using discipline-specific databases. Therefore, not only are students engaged in active learning due to the tutorial's interactive features but also through the completion of activities relevant to their specific needs.

This all presumes, however, that the students are not just completing the tutorials but also demonstrating that they are actually learning. Therefore, a very appealing feature in LibWizard is the ability to create quizzes with a variety of question types. These questions can be included at any point in the tutorial. The author, for example, incorporates questions into individual slides to both assess a student's learning of a particular concept but to also keep the student actively learning as the correct answer can be required before advancing to the next slide. Alternatively, an entire quiz can be included at the end of a tutorial and a passing score be required to gain credit for completing the tutorial. In other words, it is easy to require demonstration of

knowledge in order for a tutorial to be considered completed and students receive their results instantaneously. Furthermore, both students and professors can be emailed the results of these assessments, allowing for opportunities for feedback and improvement. Subject Specialist Liaisons can also use these results to identify areas of strength and areas of improvement for individual students as they develop the information literacy skills necessary to succeed in their programs of study.

Finally, it must be noted that while these tutorials are at the core of the University of Nebraska-Lincoln-Libraries' Virtual Learning Program, they are part of a bigger curriculum that students will be engaged in throughout their course of studies. Therefore, LibWizard's ability to be able to be integrated seamlessly into an LMS (Nebraska uses Canvas) as either a widget or embedded URL allows the author to set prerequisites that are either strongly encouraged or required. For example, all tutorials require that students have completed an orientation to the Libraries, the Libraries' website, and created Libraries-related accounts. All these concepts are taught in tutorials that are the prerequisite for subsequent tutorials. By embedding a Libwizard-based tutorial into a Canvas module, the author can add settings where the tutorial cannot be started until any prerequisites are met. Even should students access tutorials directly by URL, the prerequisite tutorials are listed in the current tutorial's welcome screen and can be accessed by hyperlink. This contributes to active learning as students recognize that the library-related concepts are all interconnected and, consequently, they become more engaged as they apply previously-mastered concepts as they learn new ones.

Conclusion

As library instruction moves online, it is important to design active learning opportunities in order to enhance learning. This can be achieved through the application of evidence-supported methods that have been demonstrated to work in online settings. Springshare's LibWizard provides a valuable tool to aid the creation active learning-based library instruction and all librarians involved in instruction should consider using it to create interactive online tutorials, especially if their library is already a Springshare customer.

At the University of Nebraska-Lincoln Libraries, online library instruction tutorials created in LibWizard are at the core of the Virtual Learning Program. These tutorials are designed to promote active learning according to the best practices identified in the current research. As use of these tutorials continues to increase, more of the assessment features will be used to assess whether the goal of improving student learning outcomes is achieved. For example, as the tutorials are required in more courses and programs, aggregate data will be collected to identify the level to which students are demonstrating knowledge gained through the active learning. This assessment will lead to continuous improvement to enhance the active learning that is possible in a virtual classroom. Thus, as more students choose to take their courses entirely online, the University of Nebraska-Lincoln Libraries will be there to help them succeed through a Virtual Learning Program that is fully online and promotes active learning.

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Meeting Your Students Where They Are: Making the Most of Your School's LMS

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Abstract

Marymount University announced during the fall of 2015 that it was considering switching to a new learning management system (LMS). The library immediately recognized the opportunity to integrate LibGuides into the new LMS platform, providing students with desired information and resources at their point of need. Integrating the library in the LMS, which every student (traditional or online) visits weekly for their coursework, would both increase the visibility of library resources and, potentially, the usage. Over the course of a year and a half, the library partnered with the teaching faculty, administration and the Information Technology department to integrate customized LibGuides into every course with the launch of the new LMS. As a result, there was an increase in LibGuide sessions, an increase in usage of the online chat reference service and an increase in student research appointments with their subject specific librarian.

Literature Review

The use of LibGuides as a platform to provide information to students is a common practice in academic libraries. While the authors were preparing to integrate LibGuides into the University's LMS, it became abundantly clear that as an organization there wasn't enough attention paid to the actual design of the guides. Since 2009, guides were often created to meet a specific need or for a specific program by a variety of librarians and there was very little consistency or best design practices implemented. Prior to launching the LMS plugin it was necessary to research best practices in LibGuides design, user experiences, general web design and LMS integration to ensure the library provides the best possible products for the students. What follows here is a brief literature review of those topics.

LMS Integration Literature Review

Murphy and Black (2013) examine whether the design of library guides influences usage. Librarians at Ohio State University embedded their guides in their LMS and concluded that having guides available in the LMS increased discovery and usage of those guides. In addition, students reported that the guides were useful, that they also benefited from direct librarian involvement in their classes, and that promotion of guides in introductory level courses resulted in increased student usage. The University of Buffalo (Foley, 2012) integrated the library into

their LMS in 2011 and noted that a best practice was putting the library resources in the same place in every course so students knew they could rely consistently on those resources. Another goal they set was to provide students with “straightforward choices without overwhelming students” (p.712).

Roberts and Hunter (2011) focus on the importance of supporting online learners and praises LibGuides as efficient way to accomplish this. LibGuides allow flexibility in design and presentation of materials, are easily customizable to meet student- and course-specific needs, and allow the librarian to integrate themselves at the student's point of learning. The shortcomings of LibGuides are that students have to seek them out and be motivated to do so. However, this hurdle can be overcome by integrating LibGuides in learning management systems. According to the Association of College and Research Libraries (hereafter ACRL) tips and trends report for instructional and technologies, “in order to be proactive in the online classroom, the library must have a presence in the LMS” (ACRL, 2015). In addition, integrating LibGuides into an LMS increases the visibility of content, makes librarians more accessible to students and can increase the usage of services and resources. However, it is noted that regardless of how well the library is integrated in an LMS, student usage of library resources still depends on the faculty promoting library resources (ACRL, 2015).

LibGuides Best Practices Literature Review

Cognitive load theory is a vital component to consider when creating an online guide. Cognitive load theory “is based on the idea that cognitive capacity for learning is limited and that techniques can be developed to help learners avoid cognitive overload” (Little, 2010). To combat cognitive overload when designing guides it is best to chunk instructions and information, provide direct access to materials, direct users to the resource for their need instead of a general list of available resources, combine information literacy concepts with the subject matter covered in the course, avoid library jargon, provide clear signals or headings identifying what information is covered in a particular section of the guide, include brief descriptions of resources, create templates for consistency across guides, provide examples of searches, eliminate redundant information, and avoid being wordy and use a conversational style (Little, 2010).

A Fall 2016 webinar hosted by ACRL described best practices for implementing consistency across LibGuides utilizing the new functions available in LibGuides v2. The webinar focused on user experience and how to improve it. As a matter of general web design, librarians were encouraged to design guides thoughtfully and ask themselves if the information added anything and/or made it more useful. This requires focusing on writing for the web and acknowledging that web readers skim rather than read heavy text, therefore guides have to be created using a less wordy approach. Regarding the actual language, it should be casual and free from jargon, use lists and bullets whenever possible, avoid typing in all capitals and use images whenever possible to avoid lengthy paragraphs. In addition, guides should focus on specific resources (i.e. it is better to have a targeted list of databases specific to that user's need than to provide the laundry list of all the possible resources) and only provide 3 – 5 of the best resources. Focusing on positive user experience, the best practice is to have contact information on every guide and to focus on consistency to reduce cognitive overload. Strategies for being consistent include

creating a template, locking design features at the administrative level, creating a style guide and creating a storing guide for frequently used boxes (ACRL, 2015).

The Process

Step One: Buy-in

The integration of LibGuides into an LMS is a multi-step process. The first step was to gain buy-in from the University faculty; as the literature review showed, the success of the library in the LMS depends largely on the faculty promoting the resources. In order to gain buy-in, the concept of integrating library guides into the LMS was presented to faculty in the September 2015, a full year prior to adopting Canvas as the University's LMS platform. A follow-up two-minute tutorial discussing integrating library resources was emailed to all faculty members to ensure that every full-time and adjunct faculty member was aware of the new initiative. A second presentation was given to faculty in January 2016 demonstrating how the integrated guides would look and asking for feedback and suggestions for improvement. Faculty were surveyed at this event with 98% agreeing that students would benefit from integrating library resources in the new LMS. In March 2016, after presenting the survey results to the University's Academic Instructional Resources Committee, the library was given permission to integrate a library guide into every course.

Step Two: Inventory LibGuides

The implementation project was an opportunity to focus efforts on inventorying and weeding the existing library guides. Over time as programs changed, the needs of students changed and as a result there were many guides with low usage and/or outdated information pertaining to projects that were no longer assigned as course work. In order to best utilize the resources of the library, all guides were reviewed for usage and date last updated. Librarians deleted old or outdated guides; this process proved very helpful to maintaining the overall quality of the guides. In addition, a list of programs for which new guides would have to be created was generated and assigned to liaison librarians.

Step Three: LibGuide Standardization

The standardization of guides was a huge undertaking that required the participation of seven full time librarians, one part-time librarian and several professional staff. After conducting research on best practices for LibGuide design, a template was developed as well as an accompanying style guide. The template ensured that all guides would follow the same layout to avoid cognitive overload and provide students with a consistent library presence in every course throughout their university career. The style guide provided basic information for librarians to follow, such as font size, color scheme, tips for minimizing text, how to use the storing guide and how to use the widget and asset features in LibGuides. All librarians were given a syllabus that outlined the goals of the initiative and a timeline for aligning all existing guides with the new template and style guide. Several librarians sought the help of professional staff with whom they partnered to get this work accomplished. The amount of time and effort put into ensuring the consistency guides cannot be overstated.

Step Four: Partner with IT for implementation

Beginning in May 2016, the Electronic Services Librarian partnered with Information Technology (IT) to determine the steps required to integrate LibGuides into the Canvas LMS system. In order to integrate LibGuides into Canvas, both systems needed to be configured correctly to ensure they could communicate with each other. This proved challenging as Springshare, the company that owns LibGuides, provided general information on how to embed guides into an LMS, but did not partner specifically with Canvas to create instructions. Therefore, the trial-and-error approach was used to find the right configurations for both systems, but the two systems were administered by two different departments, IT and the Library, which complicated matters greatly. No one employee at that time had access to both systems as an administrator, which made the project even more complex. After discussion with IT's Canvas Administrator, the Electronic Services Librarian and the Canvas Administrator both agreed that the best way to solve this problem was to assign the Electronic Services Librarian as a Canvas Administrator in a Canvas test environment to determine the exact steps and settings to implement in both systems. With the general integration information from Springshare and assistance from the Canvas Administrator, the Electronic Services Librarian identified the key field, "context label", from Canvas courses list file to be used to link to the LibGuide system, which was not an easy job at the time, since every university's course list could potentially be in different format with no information on how to find this key field from either side. Another key issue to address is the best way to configure how to match specific courses with specific LibGuides automatically. There are two automatic matching methods, "parameter matching" and "translation table". The later method is more straightforward than the former, but it requires more maintenance work. After discussion with all librarians involved in this integration project, the decision to use "parameter matching" method to link Canvas courses with LibGuides was made.

Step Six: Metadata

Once the IT steps were aligned for integration, the next step was to assess what metadata the existing guides would require to embed properly into the LMS. Partnering with the registrar's office to determine the course codes and program designations, which were manually entered into the appropriate LibGuides using the custom metadata function, allows guides to be properly matched with the course. At this point, the need for the creation of a general library guide that could serve as the default guide in the event that a program didn't have a specific guide already created was recognized. As a result, the implementation of a three-tier LibGuide system was created to ensure every course has an appropriately matched LibGuide. The three-tier system consisted of: course-level guides, program-level guides and a general guide for any courses not covered by either a program-level guide or course-level guide.

Step Seven: Pilot

In the summer of 2016, the LMS integration was piloted using manual metadata coding to integrate LibGuides within courses that were early adopters of the new LMS platform. This allowed the library time to test the implementation and make changes to the guide template and style guide as needed, based on LMS navigation factors.

Step Eight: Launch

In the Fall of 2016, Canvas launched with a LibGuide integrated in every course. Again, the importance of having a default guide was recognized, since some courses were oddly coded by the registrar's office and therefore not correctly paired with the right course or program guide. For example, a clinical course in the Nursing program did not follow the standard NU course designation but rather NUF; since this wasn't known to the librarians at the launch of the integration, none of the courses that were designated NUF had integrated guides specifically for the nursing program. However, the default guide was automatically integrated into these courses so there was still a guide present in the LMS. It is worth noting that situations like this are inevitable, but can be addressed very easily once you have established best practices for assigning metadata at your institution.

Results

In January 2017, after the first semester that LibGuides were integrated into the LMS, the library presented to faculty and surveyed them on their satisfaction with the integrated guides. Sixty-seven percent of faculty were aware that the library was integrated in their Canvas course in the current semester under 'Library Resources'; of those respondents, 67% also reported encouraging their students to use the library resources. 90% of faculty surveyed agreed that having the library integrated at their students' point of need was beneficial. In the open-ended comments of the survey, faculty reported satisfaction with the ease, reliability and customization of guides that were available and that it was now easier to direct students to the right resources. The concerns from the faculty focused on their learning curve with the new LMS and neglecting to direct students more often to the integrated library resources. Another faculty member's suggestion led to the expansion from a three-tier guide system into a four-tier system, with an addition of a section-level LibGuide. It is not uncommon to have several faculty teaching different sections of one course in the semester, which means that the same course might be taught differently, using different assignments and resources; therefore, there is a need for customized LibGuides for different sections of the same course. For example, the introductory English composition courses may be taught by as many as 10 faculty members, each of which may require slightly different resources for their students in the integrated guide.

Several library system usage reports have been analyzed to determine the impact of the integration. One major report is the LibGuide usage report. Since the integration has been fully implemented for two semesters, a semester-to-semester comparison was conducted to analyze the result as below:

Table 1.

Comparison of Libguides Usage.

LibGuides Statistics	Fall 2015 & Spring 2016	Fall 2016 & Spring 2017	Semester-to-Semester Change in percentage
Total Number	513	503	-1.95%
Total Views	169697	120495	-28.99%
Total Sessions	65639	73184	11.49%
Guide Views per Session	2.59	1.65	-64.80%

The results of the above table came as a surprise to the librarians initially, since the expectation was an increase in total guide views. After consulting with Springshare, it was determined that there are some irregularities in how guides are being tracked when they are launched with the LTI plugin which has resulted in inconsistencies in the data. Another reason for the decrease in total views could be an unanticipated consequence of the main goal of the integration: providing tailored one-stop LibGuides to students in the LMS. In Fall 2016 and Spring 2017, on average, students visited 1.65 LibGuides before leaving the LibGuide system, while students visited 2.59 LibGuides before leaving LibGuide system in Fall 2015 and Spring 2016. The impact of customized guides embedded in the LMS resulted in students not having to visit multiple LibGuides to get the information they are need, so the decreased total views data could not be used to accurately measure the impact of the integration. However, the tracking for sessions has been consistent, so the use of the “total sessions” statistics as an indicator for the usage comparison is more static. These statistics demonstrate an 11.49% increase in sessions from Fall 2015 and Spring 2016 to Fall 2016 and Spring 2017.

Another area of the library that has seen a dramatic increase in usage since the launch of the LibGuide integration is individual research appointments conducted with liaison librarians. There was a 10% increase in individual research appointments when comparing the academic year prior to the launch year. This increase may be attributed to the Help page of the embedded guides which includes the contact information for the subject liaison, as opposed to the general library contact information, and a form to schedule a research appointment online.

Data from LibraryH3lp, an online chat service system, directly demonstrated the effectiveness of the integration. A semester-to-semester comparison was conducted as below:

Table 2.

Comparison of LibraryHelp Statistics.

LibraryHelp Statistics	Fall 2015 & Spring 2016	Fall 2016 & Spring 2017	Semester-to-Semester Change in percentage
Total Chats	664	774	16.57%
Chats from LibGuides	209	361	72.73%
Percentage of Chats from LibGuides	31.48%	46.64%	

As indicated in Table 2, which compares the fall and spring semesters prior to and post integration, the library received an increase of 110 chats post integration and 152 of those chats originated from with LibGuides. Therefore, we can conclude that the integration promotes the usage of library resources and demonstrated a positive impact in library services.

The integration of LibGuides into the LMS provided the opportunity for librarians to analyze LibGuide usage not only by courses, but also by program, which had not been possible prior to integration. Figure 1 shows the LibGuides launched most often from within the LMS. Figure 2 identifies the top ten academic programs that launched LibGuides most frequently from the LMS courses:

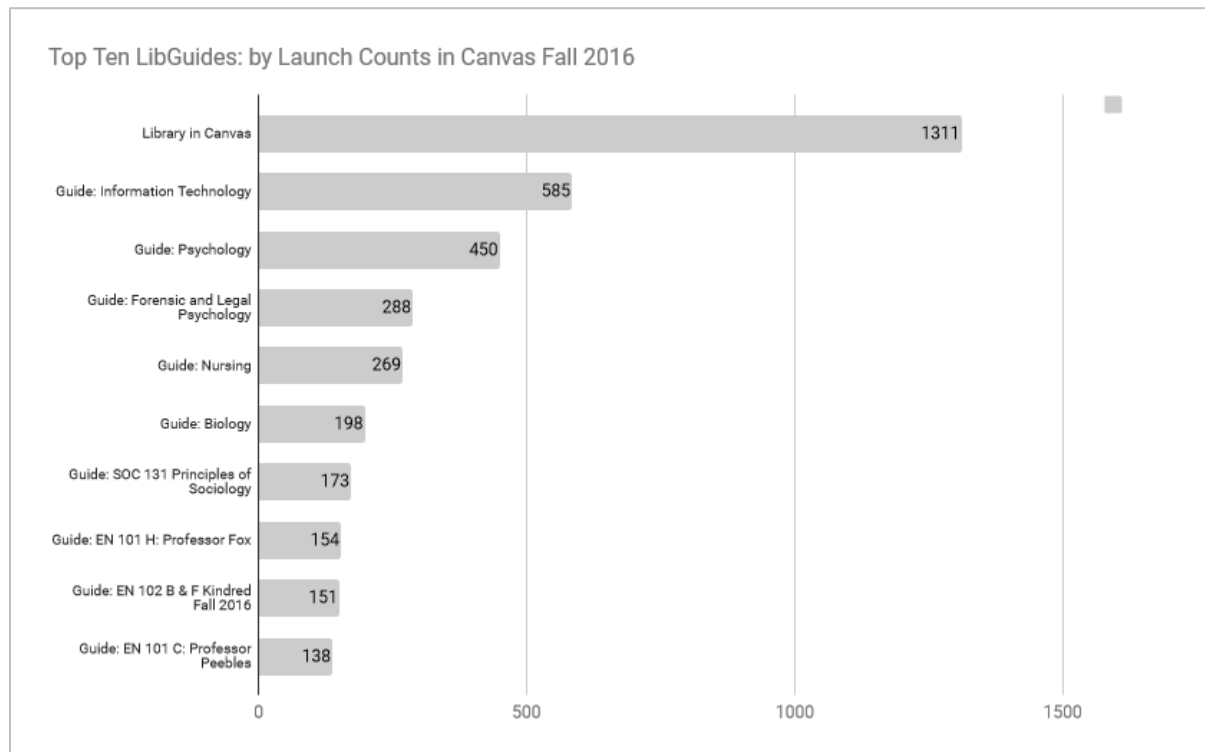


Figure 1: Top Ten LibGuides: by launch counts in LMS Fall 2016.

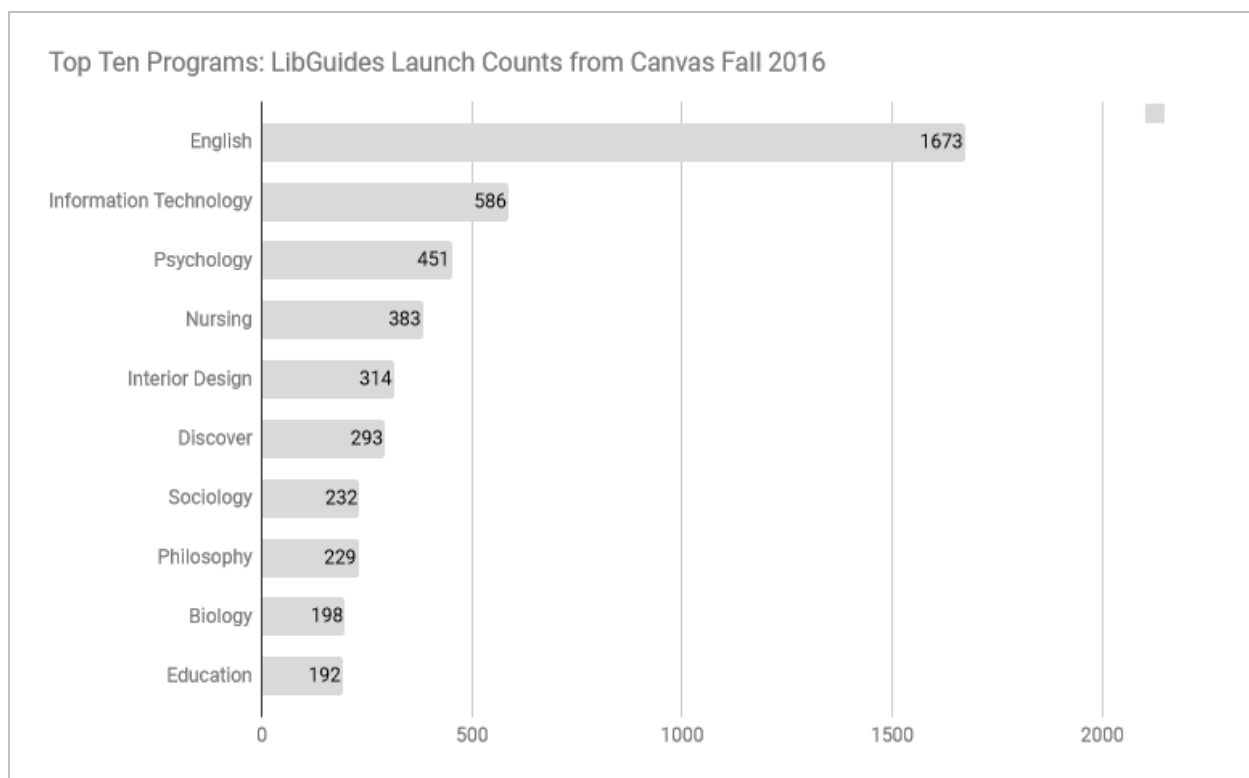


Figure 2: Top Ten Programs: by LibGuides launch counts from LMS Fall 2016

With the analytic results above, librarians can identify targeted programs that need more tailored LibGuides and other library resources. Also, librarians can use the analytic results above to show the value of academic libraries to the university administration. Further study with multiple years' data or with data from other universities that have undergone a similar integration would be needed to fully understand the impact of this integration.

Next Steps

While constant upkeep and maintenance is required in order to maintain the high quality of the guides, the next step in this process will be to assess the students' satisfaction with the resources. Assessment of user experience will further enhance the guides and ensure we are meeting the needs of all of our user groups. In addition, creating customized integrated resources to support our teaching faculty is another possible next step as we continue to strive to provide the best resources at the point of need for all patrons. Furthermore, data analysis from year one to year two and three of implementation will help guide additional next steps.

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Does a NextGen Catalog Imply a NextGen Library?

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Abstract

Much has been written about Next Generation (or, NextGen) catalogs and their implications for searching and retrieval. The NextGen ideal moves beyond a discovery layer or federated search to approach a single database offering seamless access to all library resources. Criss Library at the University of Nebraska at Omaha is now four years into its experience with OCLC's WorldShare Management Services (WMS), a NextGen catalog which merges the library's WorldCat holdings with records from other sources ported in through a Knowledge Base. This presentation addresses several technical curiosities that users may encounter in WMS, but it also steps back to examine concerns related to the nature and management of the library. The WMS environment blurs distinctions between the local and the global, which sometimes proves confusing and perhaps raises questions about the library's responsibility to its primary constituencies. Implementation of WMS prompted the library to largely dismantle technical services and redeploy staff to other areas. Much of the reorganization was born of changing workflows relative to the NextGen catalog, but it also reflected changing priorities and expectations in the library.

“There’s a Module for That:” Developing Information Literacy Modules at MU Libraries

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Abstract

Development and implementation of innovative technologies is crucial to libraries as they strive to provide relevant instruction, and reach an increasing number of online students. At the University of Missouri, online courses - and even a number of on-campus courses - do not schedule time to bring students to the Libraries. Simultaneous budget cuts and a hiring freeze have resulted in fewer librarians with less time dedicated to instruction. In order to engage students beyond the occasional one-shot class, the MU Libraries Instruction Committee spent the 2016-2017 academic year designing and developing a series of information literacy modules. Practical use of these learning tools allows librarians to provide students flipped content prior to one-shot classes, enables course instructors to assign interactive tutorials, and encourages students to explore library resources outside of the classroom. This session will focus on the process of topic selection, creation, implementation and marketing of modules to support library instruction within the curriculum.

Introduction

As the largest University in the state of Missouri, in 2016 the University of Missouri-Columbia had a student population of over 32,000 students. The MU Libraries system includes a main library and nine specialized libraries, in addition to Special Collections and Government Documents. The MU Libraries Instruction Committee – made up of representative librarians from different libraries and departments – constantly examines new technologies and innovative ways to support information literacy, and address challenges that occur.

While the Columbia campus has a large in person student population, recent years have shown increasing demand for online course work. This online presence occurs through the campus Learning Management System (LMS), which is currently in the process of shifting from Blackboard to Canvas. Mizzou Online currently offers over 100 degrees and certificate options online, supported by over 1000 online courses at both the undergraduate and graduate levels (“About Mizzou Online,” 2016, para. 1). Some degrees offer a combination of both face-to-face and online options, while others have progressed to primarily online options. An example of a department that has greatly benefitted from the support for online distance learners is the School of Social Work – graduate students are required to participate in internships throughout the state, and cannot feasibly be in Columbia for all of their classes. However, despite the benefits, this dramatic expansion of distance learning students limits opportunities for face-to-face information literacy instruction, and even basic library interaction.

Simultaneous budget cuts across campus resulted in a campus wide hiring freeze (Williams & Hack, 2016). While the Libraries are able to make the occasional argument to hire, overall the number of librarians involved with instruction has significantly decreased. In the past few years, the Instruction Committee addressed this shortage through the creation of a mobile Library Scavenger Hunt, geared toward redirecting librarians’ time to instruction rather than tours. While successful in this goal, the mobile tour fails to introduce distance learners to the library, provide information literacy support to online courses, or support students whose classes never visit the library for instruction. In order to reach these student populations, the Instruction Committee decided to consider implementation of information literacy modules.

Review of the Literature

Online Modules & Resources

Packaging lessons on information literacy into manageable pieces has long been a part of library instruction toolkits. Creation of subject-related teaching materials and sequential learning activities allows for ease of access, instructor distribution throughout a semester, and individual practice (Robertson & Bellinger, 1989). College and University libraries created pathfinders, workbooks, and step-by-step instructions on how to use library tools in conjunction with course work in order to support information literacy while reducing library instruction within the classroom (Knecht & Ried, 2009). Revised and repackaged material into modularized units allowed for short, subject-specific lessons (Knecht & Reid, 2009).

This capability has come to the forefront as current trends toward online courses and flipped classrooms continue. Many library users are no longer physically in front of us, creating a shift in library instruction toward use of online tools and instruction formats (Zhang, Goodman, & Xie, 2015; Johnston, 2010). At the same time, librarians are facing increasingly limited opportunities to meet with students in the classroom, a change driven by both faculty with content-packed curriculum and by constraints of librarian time and personnel (Thill, Rosenzweig, & Wallis, 2016; Koenigh & Brennan, 2002). To address these challenges, librarians are progressively more involved in developing e-learning and technology-enabled teaching resources.

The formats of online information literacy instruction vary greatly, including podcasts (Dobozy & Gross, 2010; Ralph & Olson, 2007; Johnston, 2010), videos and multi-media (Thill, Rosenzweig, & Wallis, 2016), and games along the lines of scavenger hunts, library races, and mysteries in the library (Goldman, Turnbow, Roth, Friedman, & Heskett, 2016). Piecing these new tools together allowed for development of online modules, establishing a method to embed library instruction within online courses. Libraries often make a choice between the macro approach of integrating instruction through general library instruction, and the micro approach of providing course specific materials (Shank & Dewald, 2003; Black & Blankenship, 2010). Regardless of method, the literature makes it clear that creation of online resources is the leading approach to providing information literacy instruction beyond the classroom.

Benefits & Concerns

Prevalence of online library tools has illuminated a number of both strengths and weaknesses presented by this newer format. The advantages are clear: the ability to meet students at their point of need (Dobozy & Gross, 2010); the ability for students to learn library skills at their own pace (Zhang, Goodman, & Xie, 2015; Johnston, 2010; Michel, 2001), and the ability for students to access library tutorials anytime, and anywhere (Zhang, Goodman, & Xie, 2015; Goldman, Turnbow, Roth, Friedman, & Heskett, 2016). Games and introductory modules increase student awareness and comfort with the library and library resources, supporting future research projects and the likelihood of using the library (Goleman, Turnbow, Roth, Friedman, & Heskett, 2016; Zhang, Goodman, & Xie, 2015). These benefits are particularly relevant for programs that are entirely online (Dewald, 2000), and for at risk students who are proven to do better with interactive materials that provide immediate feedback (Knecht & Reid, 2009).

Another apparent positive of information literacy modules is the direct correlation to the time saved by librarians in classrooms, and a reduction of one-shot classes taught (Michel, 2001; Knecht & Ried, 2009; Zhang, Goodman, & Xie, 2015; LeMire, 2016; Thill, Rosenzweig, & Wallis, 2016). Librarians have the option of flipping instruction sessions, with less time spent on teaching technical skills, and more focus on active learning and engaged practice (Arnold-Garza, 2014; Datig & Ruswick, 2013).

On the other hand, numerous concerns exist in relation to online information literacy instruction tools. Despite increased reliance on online modules, little scholarly research exists on the effect they have on the populations they serve (Thill, Rosenzweig, & Wallis, 2016), even in the face of demands to measure student success resulting from library instruction (Knecht & Reid, 2009). Studies that do exist suggest low participation rates and low interest in certain topics by the intended populations – without external incentives many will never access modules at all, and the vast majority of those who do will not complete the modules (Thill, Rosenzweig, & Wallis, 2016; Dobozy & Gross, 2010).

Further scholarship addresses the fact that if library instruction only exists online, students do not have the chance to meet a librarian, which may influence their comfort and willingness to seek out assistance in the future (Germain, Jacobson, & Kaczor, 2000; Nichols, Shaffer, & Shockey, 2003). Other issues include the fact that not all modules are universally accessible, that librarians with little programming knowledge are responsible for maintaining and updating modules, and

that the pricing of software and technology required to create modules often is more than shrinking library budgets can afford (Goldman, Turnbow, Roth, Friedman, Heskett, 2016).

Effectiveness

While concerns surrounding student participation, access, and maintenance play a role, the largest discussion revolves around the effectiveness of online modules and instruction (Johnson, 2010; Zhang, Goodman, & Xie, 2015; LeMire, 2016). Are students actually learning online, and how does that learning compare to face-to-face instruction? Numerous studies focus on the comparison between delivery modes to determine if online instruction is as effective as in-person library instruction (Germain, Jacobson, & Kaczor, 2000; Churkovich & Oughtred, 2002; Nichols, Shaffer, & Shockey, 2003; Silver & Nickel, 2005; Anderson & May, 2010).

The question of efficacy seems to be addressed two main ways: by leveraging active learning to engage students (Dewald, 20; Reece, 2005; Hrycaj, 2005), and by blending a combination of online and in-person instruction (Churkovich & Oughtred, 2002; Kraemer, Lombardo, & Lepkowski, 2007; Johnston, 2010; Usova, 2011; Zhang, Goodman, & Xie, 2015). Students surveyed were split between preferring to learn through self-paced, online modules and face-to-face information literacy (Johnston, 2010), so a combination of the two formats appeals to the learning styles of both groups. Classes with a blended approach showed improved performance and higher test scores as well (Churkovich & Oughtred, 2002; Kraemer, Lombardo, & Lepkowski, 2007). The literature suggests that flipping classrooms and providing a blended approach seems to be the best approach when an option for face-to-face library instruction exists. However, when courses are completely online, it is crucial to create materials that are as interactive as possible.

Module Development

Brainstorming

After an examination of literature on creating online learning modules, the MU Libraries E-Learning Librarian, Navadeep Khanal, proposed the project of creating a series for library introduction and information literacy to the Instruction Committee. Initial meetings brainstormed feasibility, available resources, and potential topics. Discussion additionally focused on determining whether modules should stand-alone, or be grouped together as series with similar topics.

Feasibility concerns featured time, funding, staffing limitations, and constraints regarding access to software. The primary burden of time fell to MU's E-Learning Librarian and his graduate student worker. While the Instruction Committee planned to assist with brainstorming and creation of material, most module development would fall to these two individuals. For example, in terms of creating a video, Committee members would assist with developing topics, organizing the information, writing a script, and possibly reading the script. The E-Learning group would then record the script, create video footage, edit the created video and audio materials, and then input them to the correct module. While the time investment would be extensive, the ability to reach an increasingly online student body made this project a necessity.

The investment in information literacy modules would additionally open the door to possibilities of flipping classrooms, saving library instruction time for active learning.

Creation of videos, quizzes, and interactive tutorials were determined to be of little use unless they could be integrated within courses. Lack of funding limited module software options to products already purchased by the University System – the choice ultimately came down to either Qualtrics or SpringShare products (LibGuides & LibWizard). After brief deliberation, the Committee decided to choose Qualtrics due to the ability to implement the tool within Canvas.




Once the software was determined, work began in earnest to determine what module topics would be most useful. Original brainstorming resulted in far too many themes to cover, or to expect students to utilize. Grouping topics together to incorporate as short pieces in a larger module addressed this concern, with related topics presented as a scaffolding series. A range of topics were considered, narrowed down, divided into categories, and assigned for initial research and development.


1. Collections
 - Libraries and collections
 - Finding and using collections
2. Getting Started With Research
 - Choosing a topic
 - Background resources
 - Creating a search string
3. Sources
 - Primary vs. secondary sources
 - Where to find primary sources
 - Scholarly vs. Popular vs. Trade
 - Anatomy of scholarly articles
4. Evaluation of Sources
 - Credibility/CRAAP test
 - Authority
 - Peer-Review
 - Fake vs. Real
 - Online: How to search Google/Google Scholar
5. Citations
 - What is a citation? Why we cite
 - How to avoid plagiarism
6. Graduate Student Resource Introduction

Each of the six module topics included multiple sections, with each section presented in a unique way. To address attention span concerns and promote completion, the original goal was to cover each section in under five minutes, with multiple sections coming together to form larger modules that could be assigned to students as a whole, or in pieces.

Creation

In order to space out the creation of modules into manageable pieces, Committee members were assigned topics and began working one at a time with the E-Learning Librarian to determine the best methods for presentation. The Collections module was first in line, broken into two separate sections to address both the introduction of the multiple specialized libraries and collections available at MU, and the introduction of how to find general resources from the collections. The first piece was designed to incorporate an interactive map of campus, providing location and information of subject libraries. The second section, how to find resources, is still under development.

In addition to Ellis Library , there are multiple **specialized libraries** (indicated by the numbered yellow icons ) which can be found around campus. Use the interactive map to explore and locate these libraries on campus before completing the exercise below. Please note that points of reference are designated by black dots .



Identify the number that corresponds to each library.

Engineering Library

Figure. 1. Interactive campus library map.

Next up was the Sources module, with the focus broken down into two sections: differentiating between primary and secondary sources, and where to find primary sources. Tackled by the Humanities Research Services Librarian, Rachel Brekhus, these sections includes definitions,

examples, and active practice identifying sample resources. Examples included relate to MU campus history and materials in order to appeal to the intended student audience.

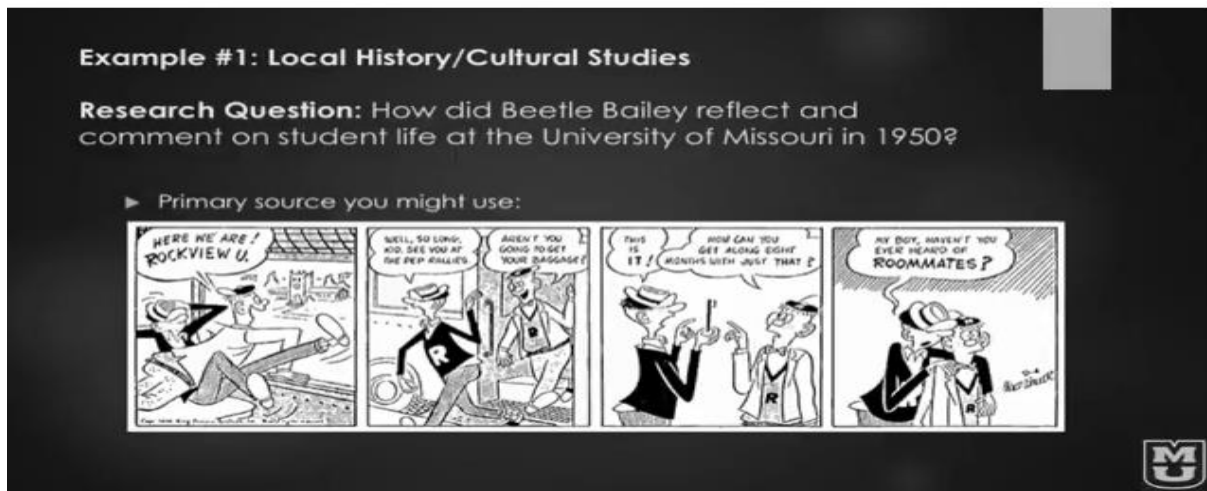
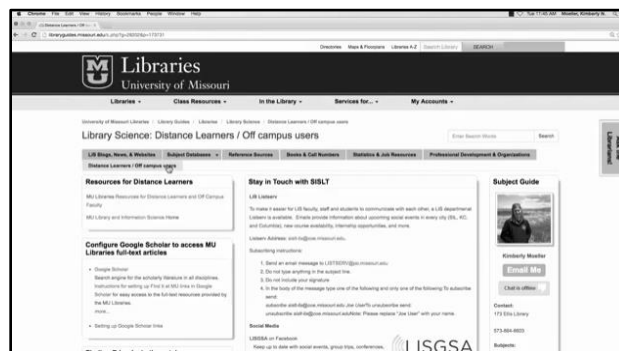


Figure 2. Video demonstrating examples of primary and secondary resources.

The module for Graduate Student Resources had an original focus of introducing tools and services offered for Masters, PhD, and Professional students. Citation management tools, LibGuides, open access versus predatory journals, journal metrics, where to publish, and literature review information were all considered as possible aspects to include. However, many of these topics are covered by the Libraries workshop series, which held in person, online, and has recordings available. The Committee decided to eliminate this module in favor of creating a script and shooting a short introduction video for graduate resources instead. The script was intentionally written as a mockup that could be modified by subject liaisons to make graduate videos specific to departments and programs.



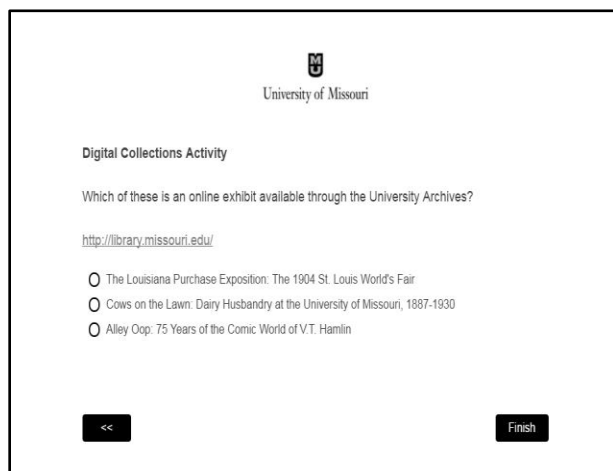
Figures 3 & 4. Graduate library introduction video.

Developing a module on the evaluation of sources included partnership with the MU Journalism Library, building on a course specific module used during a core Journalism course. Modification for general purpose allowed the committee to utilize components created to address the CRAAP test, fake news, and more. Similarly, previous creation of a plagiarism tutorial by the Instruction Committee laid the groundwork for adapting content to fit the citation module.

Future Module Goals

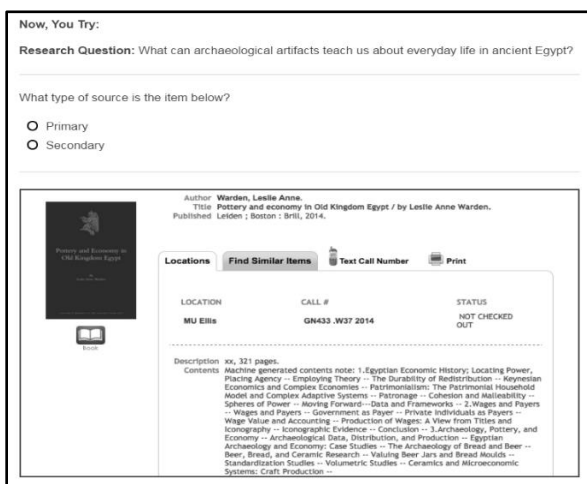
Previously created library instruction tools at MU have shown the importance of course integration. In the spring of 2016, MU Libraries implemented a mobile Library Scavenger Hunt to replace library tours. The smart phone activity was marketed to both instructors and students, and within the past three semesters has been taken over 1,670 times, but only 1 student out of that number participated voluntarily. This outcome mirrors what literature pertaining to online library instruction suggests (Dobozy & Gross, 2010; Thill, Rosenzweig, & Wallis, 2016). Clearly the most effective way to utilize created modules is to provide an incentive. Embedding tools within courses, including them as part of graded curriculum or as extra credit, or adding them as a requirement for student activities will drive student participation.

Many modules contain videos and materials that are easy to skip, so to ensure students actively engage with materials, each module features interactive questionnaires. Students receive immediate feedback on questions, and after the completion of each module receive an email notification. This attribute has the added bonus of providing a visible grading or participation component for instructors to see, and gives students visible proof of completion if there are multiple courses that require the same module.



The screenshot shows a digital collections activity from the University of Missouri. It asks the user to identify an online exhibit available through the University Archives. The URL <http://library.missouri.edu/> is provided. Three options are listed: "The Louisiana Purchase Exposition: The 1904 St. Louis World's Fair", "Cows on the Lawn: Dairy Husbandry at the University of Missouri, 1887-1930", and "Alley Oop: 75 Years of the Comic World of V.T. Hamlin". Navigation buttons for back and finish are visible at the bottom.

Figure 5. Collections module question.



The screenshot shows a primary sources module question. The research question is "What can archaeological artifacts teach us about everyday life in ancient Egypt?". Below the question, it asks "What type of source is the item below?" with radio button options for "Primary" and "Secondary". A preview of a book cover is shown, titled "Pottery and economy in Old Kingdom Egypt" by Leslie Anne Warden. Below the preview is a table with columns for "LOCATION", "CALL #", and "STATUS". The table shows "MU Ellis" for location, "GN433 .W37 2014" for call number, and "NOT CHECKED OUT" for status. A description of the book's contents is provided at the bottom.

Figure 6. Primary sources module question.

Within Courses

Inclusion of library tools within classes requires buy-in from instructors, inspiring a multi-pronged marketing approach for new modules. Within the past year, MU Libraries began utilizing WordPress in order to create posts for a blog, which seemed a natural starting point. Blog posts can in turn be incorporated into engaging emails and social media. The marketing plan for modules is based on the Instruction Committee drafting templates for introducing modules, and then encouraging distribution prior to the start of the Fall 2017 semester.

Subject librarians at MU typically contact their assigned departments, so each liaison will be requested to forward an engaging email on to their department contact, who frequently is the department chair. Special attention will focus on instructors for whom modules are particularly

relevant (ex: Primary Sources = History Department), and for instructors who teach online sections. Subject librarians will individually contact courses that are both online and fulfill campus Writing Intensive requirements, in addition to reaching out through their departments. Further distribution will occur during the Chairs meeting that occurs prior to the beginning of each academic semester. The Chair of each department is invited to attend, including departments that exist in the Libraries. This gives both the E-Learning Librarian and the Head of Instructional Services an opportunity to present newly developed tools that are relevant to teaching faculty.

The Head of Instructional Services similarly has an opportunity to promote the modules during orientation presentations to graduate instructors for freshman composition, the Student Success Center, and Freshman Interest Groups. Freshman composition, known as English 1000 at MU, typically has 100-120 sections each semester, and is a required course. While approximately 65% of English 1000 instructors choose to bring their sections to the library, there is no requirement to do so, and many students miss out on information literacy instruction. An increasing number of these sections are also being taught online, meaning in-person library contact isn't an option at all. Together, these factors make English 1000 perfect for LMS targeted library modules. Other freshman introductory courses that would benefit from these modules include the one credit hour courses offered both by the Student Success Center (SSC 1150) and Freshman Interest Groups (FIGs). Each course is designed to support students in their first year of college by introducing them to campus resources. Many SSC 1150 and FIGs already visit the main MU library to complete the Library Scavenger Hunt, and may find it beneficial to include an introduction to information literacy that goes beyond just the physical space.

Beyond Courses

Information literacy is certainly relevant beyond the classroom, so the Committee examined various campus programs and organizations that might benefit from access to library modules. At the University of Missouri, numerous organizations support student inquiry and discovery. The Undergraduate Research Center is an active participant in campus research, encouraging students to present on their projects during a poster forum that occurs every semester. The McNair Scholars Program is dedicated to preparing students for doctoral study, and the Writing Center provides tutors for all majors to assist with the process of writing papers, reports and assignments. The Coordinators for these campus units will be contacted to determine the usefulness of library modules as a referral tool for the students they serve.

In addition to undergraduate and graduate students, the University of Missouri participates in many programs with high school students from around the state. Most high schoolers have no experience with a University library, and may feel overwhelmed by the size of MU Libraries. Frequent interaction with these students comes through the summer Missouri Scholars Academy, events such as National History Day at the State Historical Society, or library research field trips during MU spring and fall breaks. Access for high school instructors to share with students would serve as an introduction prior to visiting, and allow for time in the Libraries to be more productive.

Conclusion

The MU Libraries Instruction Committee is excited to roll out a series of online modules to address instruction needs brought about by an increasing number of online courses and decreasing number of librarians. A review of the literature and examination of previously created tools emphasized the importance of creating tools that were both interactive and required, providing incentive for participation and completion.

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Maximizing Classroom Dynamics Through Teaching Methods

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Abstract

Today, more than ever, information literacy is at the forefront of what academic librarians strive to accomplish. As academic librarians at an open admissions mid-sized university the presenters face the challenge of instructing a diverse population. Additionally, working with students face to face and online creates a unique opportunity for pursuing a dynamic learning environment in every type of classroom. The type of classes range from the traditional one-shots to semester long courses. The presenters discuss various experiences of utilizing multiple teaching methods while considering strategies to build an effective classroom environment.

Session attendees will leave with several classroom teaching methods that can be incorporated into various courses such as: working as part of a team of instructors with various roles, as a visiting librarian, and as the faculty of record. The session will also discuss ideas for establishing an optimal classroom setup.

Collaborative Approaches to Digital Projects: Enhancing Collections Through Effective Access and Promotion

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Abstract

Academic libraries house a variety of primary historical materials in their archives and special collections. Increasingly, archivists and librarians charged with curation have turned to digitization, an effective access tool that addresses institutional constraints while offering worldwide access to collections. In addition, these digital collections can support the teaching and research mission of the university by ensuring the accessibility of the university's historical materials of enduring value. Moreover, by using existing digital collections as a foundation for digital scholarship and digitizing physical collections in order to enhance their accessibility and visibility, libraries promote their teaching and research mission. Digitization facilitates collaboration with and between interuniversity departments and community organizations. This article addresses: how libraries engage the campus, local, and global community with digital collections or projects; how libraries serve the needs of these communities; and how libraries establish community partnerships and digital collaborations.

Keywords: digitization, archives, special collections, collaborations, digital collections, community engagement, partnerships

Introduction

Academic libraries house a variety of archival materials and special collections. In a time of web-based information seeking, academic libraries are digitizing their unique and specialized collections to make these materials accessible to the public. Academic libraries are contributing their skills and expertise to collaborative digital projects with their diverse communities. Librarians bring an expertise for digital initiatives and scholarship including digitization methods, digital preservation, open access, and digital repositories. Collaborative digital projects serve as a model for providing access to historic records and facing the challenges of cultural heritage organizations operating with finite resources. This environment directly impacts the availability of the stories found in the historical records in local and global communities.

Background

Digitization and digital preservation are part of UNO Libraries' Archives & Special Collections' core purposes of providing access and preservation for historical material. The developing vision

includes expanding and sustaining digital collections, while promoting and strengthening partnerships and collaborations with the UNO and Omaha communities. By engaging with their communities, UNO Libraries' Archives & Special Collections offered community partners opportunities to share their own stories and voices through digital collections.

UNO Libraries' Archives & Special Collections' digital platforms include CONTENTdm® (<http://www.oclc.org/en/contentdm.html>) hosted by OCLC as the primary platform for archival and special collections materials. Archives & Special Collections uses the Omeka.net (<https://www.omeka.net/>) platform for sharing digital collections with a specialized outreach focus. These platforms are part of the libraries' efforts to build and maintain unique digital collections and provide online access. The selection of platforms on which to present digital collections employs a needs assessment to ensure that the wishes of the community, content characteristics, digital platform system functionalities, and institutional system capacity are sufficient for it to be successful in making digital collections more visible and accessible. As of June 2017, UNO Libraries presents over 5,000 digital objects on the CONTENTdm® and Omeka platforms, including collaborative digital projects.

Engagement with community partners is key to the UNO Libraries' fulfillment of the university's mission. The community engagement goal in part calls for the university to "build and expand partnerships with community partners" ("Strategic Plan," 2016). Community engagement initiatives, including partnerships and collaborations, are also a priority in the UNO Libraries' 2017 strategic plan. UNO Libraries' Archives & Special Collections uses digital collections to create and enhance digital engagement opportunities with community partners including other cultural heritage organizations.

Review of Literature

The primary purpose of archives and special collections repositories in academic libraries is to preserve the history of the institution and regional communities and make these memories available. Archival materials document local and regional histories, cultures, and traditions. Schwartz and Cook describe archives as records that "wield power over the shape and direction of historical scholarship, collective memory, and national identity, over how we know ourselves as individuals, groups, and societies" (2002, p. 2). As networking and presentation technologies have made more libraries' historical materials accessible online, digitized collections can be more widely used and provide considerable impact, defined as "the measurable a change in the life or life opportunities of the community for which the resource is intended (Marsh, Punzalan, Leopold, Butler, & Petrozzi, 2015, p. 330)", within a local or the global community. Libraries, archives, and museums are able to engage with their communities through collaborative digital projects (Marsh et al., 2015, p. 329-330).

Academic libraries commonly support digital collections through the expansion of their collections within both academic environments and regional communities. Effective outreach and communication are critical to building trust with these communities (VandeBurgt & Rivera, 2016, p. 260). Building relationships at the individual staff and organizational levels with community partners is vital to the success of cooperative digital projects. And by creating

cooperative digital collections, libraries also assist communities in preserving their local histories (Johnson, 2015, p. 2).

As part of the mission of academic libraries, it is important to raise the awareness of digitization methods and services, which can empower communities and help them understand the benefit of digital preservation and web-based presentations of materials (VandeBurg & Rivera, 2016, p. 261). Community involvement through outreach is beneficial for academic libraries. For example, volunteers from a community can provide expert descriptions about their own materials, which enables discoverable and properly contextualized material (VandeBurg & Rivera, 2016, p. 262).

Digital Collections at UNO Libraries

Community participation with digital collections maximizes visibility and the impact of one's stories and histories, as well as the opportunity to participate in archives. Through these individual and organizational partnerships, libraries provide public access and easily understandable digital content for diverse audience, connect people with digital collections, and continue to grow digital collections. Digital collections can cultivate community engagement and expand inclusive communities by welcoming a wide audience to view and use libraries' digital collections.

The goals for web-based presentations include bringing together diverse digital collections and integrating access to digital and physical resources for distinct audiences. For online presentation, as well as digital preservation, using appropriate digitization tools maintain appropriate levels of quality assurance control for these digital objects and the long-term accessibility of the digital objects. The type of equipment used in digitization depends on the condition and format of the materials, such as physical dimensions, characteristics, and fragility. Therefore, it is important to establish guidelines for digitization, including digital imaging resolution, file formats, file naming conventions, and file management. Receiving digitized materials directly from a donor (as opposed to born digital collections) can present challenges as these materials were digitized outside of the library. These digital objects often lack the quality assurance control procedures that the library has in place as part of their digitization guidelines.

Community partnerships and relationships are an integral part of most archives and the work of most archivists including collection development, documentation strategies, collection access, and outreach. According to Bastian, archivists "care, not only because all of us are part of communities but also because in archival terms, all communities are communities of records and of memories. Understanding those records and that memory and creating relationships between archivists and communities is critical if archivists hope to document society in holistic and inclusive ways" (2016, p. 10). UNO Libraries' Archives & Special Collections' focus on community engagement and digital engagement comes from this reasoning, reinforced daily by the missions and strategic plans of the university, library, and department. The relationships between the department and community partners include providing consulting and advising services to volunteer-run archives that are part of churches and historical societies as well as providing digitization services for small, one-time projects. Archives & Special Collections' recent one-time digitization projects include working with a small, volunteer-run historical

society to digitize a handful of newspapers recently donated to the organization that had not been previously microfilmed. One-time projects have also been undertaken with mid-size cultural heritage organizations. For example, Omaha's Durham Museum wished to digitize a single 16th century Milanese manuscript chant book from its collection to enable students to more easily use it for a research project. Inquiries from organizations about these types of projects began after Archives & Special Collections purchased a new overhead scanner. Moving the department from these one-time projects to larger or ongoing community partnerships that make use of staff expertise, equipment, and collections is the basis of creating meaningful and lasting digital and community engagement.

Queer Omaha Archives

The Queer Omaha Archives was conceived by UNO students, UNO employees, and Omaha community members to address the underrepresentation of the LGBTQ+ communities in the collections of cultural heritage organizations in Omaha, including UNO Libraries' Archives & Special Collections. The initiative emerged from a presentation by Josh Burford, co-hosted by UNO's Gender and Sexuality Resource Center, during LGBTQ History Month. The presentation was about queering history and archives, which included Burford's work at the University of North Carolina at Charlotte, to collect historical material and oral history interviews for the university's archives. Members of the UNO community became interested in supporting a similar initiative in Omaha. After an organizing meeting attended by students, UNO employees, and representatives of community organizations, active collecting of historical material began in 2016 with a successful community celebration to officially launch the collecting initiative and raise awareness in the Omaha and campus communities. The core mission of the Queer Omaha Archives is to preserve and provide access to material of enduring value, preserving the legacy of LGBTQ+ communities in greater Omaha. The collection of photographs, posters, scrapbooks, videos, oral histories, correspondence, and other historical material ensures that the public can hear the underrepresented voices and witness historical events specific to the region's LGBTQ+ communities. This act of collecting material is a testament to these often omitted and disregarded histories of Omaha. The Queer Omaha Archives is an effort to combat an archival silence in the community particularly by utilizing digital collections and digital engagement to make LGBTQ+ communities aware that the archives would welcome their records. The Queer Omaha Archives is presented online by the UNO Libraries using Omeka.net.

The magazine *The New Voice of Nebraska* was published from 1984 to 1998 and a complete set of the magazine was donated to the Queer Omaha Archives shortly after the initiative launched. The magazine was digitized by a community member not affiliated with the magazine several years before the Queer Omaha Archives collecting initiative began and distributed on CDs. A copy of the JPEG files created for this digitized collection was donated to the archives by a member of the editorial staff for inclusion on the Queer Omaha Archives website (<http://queeromahaarchives.omeka.net/>). As part of the quality assurance process to verify the quality of digitized collections, UNO Libraries' Archives & Special Collections librarian conducted image inspections, re-scanned materials when necessary to offset the poor quality of JPEG images received, converted the JPEG files of each magazine page to PDF files, and combined the PDF pages into single issues.

When records do not exist, the archives may have to see that they are created through documentation or an initiative such as an oral history project. The Queer Omaha Archives works with community partners to consciously collect and support the creation of new oral history interviews by working with UNO faculty and community members. The UNO Libraries does not have an active oral history program and creating oral history interviews to document Omaha LGBTQ+ communities is one means of addressing the archival silences surrounding these communities. Archives must listen for silences and sometimes take action or seek others who may take action (with or without the archives) to address these silences (Carter, 2006, p. 231).

The first oral history interviews for the Queer Omaha Archives were collected in partnership with UNO sociology professor Jay Irwin and students in his Introduction to LGBT Studies course. Dr. Irwin worked with Archives & Special Collections to provide an introduction to the archives along with resources for conducting oral history interviews including biographical questionnaires and release documents for the students to use. The intention was for students to participate in creating content for the archives as well as connecting community members to the existing archives as well as the university. Working in pairs, the students interviewed community members and served as ambassadors for the archives and in most cases were the first contact the narrators had with the Queer Omaha Archives. While some of the interviews were imperfect, this initiative is important in part because it partners the archives with faculty, students, and community members.

While identifying potential narrators for students to interview, Dr. Irwin learned that one planned narrator was in hospice and could not wait until the middle of the semester to be interviewed. Not wanting to miss capturing their story for the archives, Dr. Irwin and archivist Amy Schindler interviewed the emeritus faculty member before the semester. Dr. Irwin went on to collect a second oral history interview from another community member and due to their continuing interest in and support of the initiative also intends to continue gathering oral history interviews in the future.

The Queer Omaha Archives' LGBTQ+ Oral History Collection will be presented on the CONTENTdm[®] platform using the Oral History Metadata Synchronizer (OHMS) viewer and SoundCloud. Oral history interviews from other collections were successfully made available online using the OHMS viewer and SoundCloud (<http://unomaha.contentdm.oclc.org/cdm/landingpage/collection/p16383coll8>) in a 2017 pilot project. Using OHMS and SoundCloud, the oral history interviews will be delivered together with the corresponding time tag description of the interview. The OHMS viewer helps to advance the access and use of the oral history interviews by making them widely available and easier to navigate. The oral history project is a major way the archives is creating documentation of LGBTQ+ communities when collections of personal papers and organizational records have not yet been located.

Metadata provides information about digital collections and helps users to both locate relevant material and understand its content and context. Since digitized photographs do not have text (like a magazine or letter) indicating their content in the words of their creators so appropriate metadata is required to properly identify and retrieve digital material. Part of the challenge with presenting digitized photographs is knowing how to correctly describe the photographs and

deliver the stories they present. To address these challenges, UNO Libraries identifies people by their name when known and includes identification of their presumed race or ethnicity when the people in the photograph are unidentified. Over time, the repository sees the value of creating extensive metadata that can be corrected and expanded outweighing the drawbacks of incomplete metadata. Also, as photographs sharing the stories of Omaha's diverse communities are encountered, whenever possible the story about a community is described in detail to provide context about the creation of a photograph as part of what aspires to be an inclusive and constructive dialogue about descriptive practices (see Figure.1).

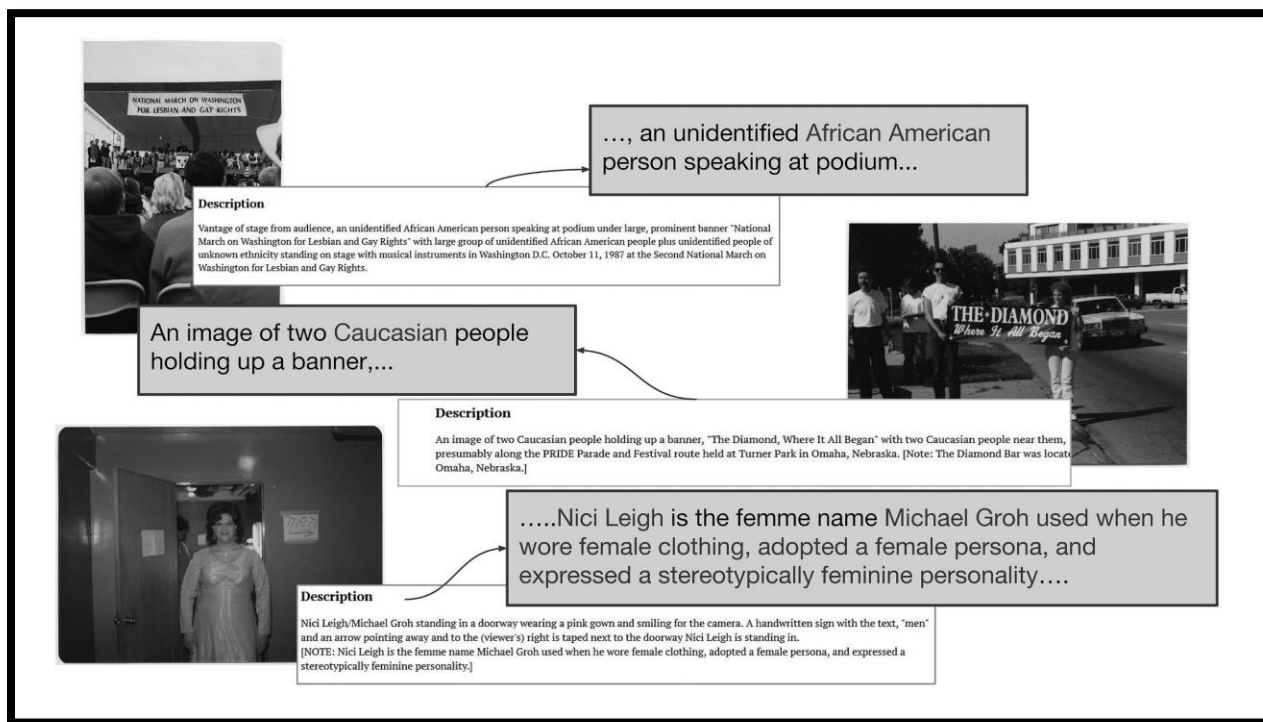


Figure.1 Metadata for photographs from the Queer Omaha Archives.

A new challenge for metadata practice in UNO Libraries' Archives & Special Collections is the necessity to link between digital collections and their finding aids so that the finding aids can be accessible to users viewing a single digital object on an online platform outside of the context provided by its larger collection. Utilizing the open source support ticket system osTicket, UNO Libraries' Archives & Special Collections established systematic workflows to request and complete the digitization and cataloging of digital objects, so that staff activities can be more efficient and focused. With the ticket system, staff supervising digitization and cataloging communicate with each other as well as with other staff as needed to add the URLs of finding aids to records for digital objects and of digital objects to finding aids or records in the library catalog (see Figure. 2).

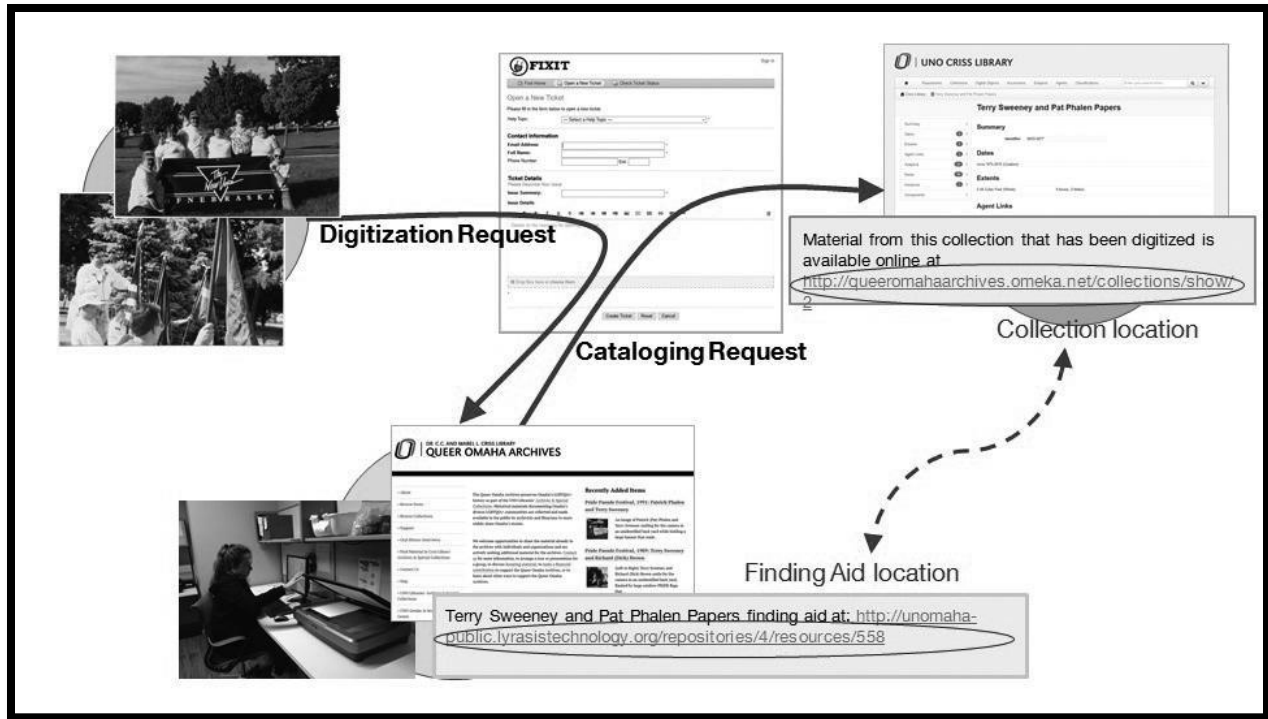


Figure 2. Linking between digital collections and finding aids.

Accessing finding aids from the digital object record allows users to learn more about the contents of the single digital object's collection of personal papers or organizational records. It also allows users to navigate and retrieve information more efficiently and effectively between the separate databases for finding aids and digital collections.

Episcopal Diocese of Nebraska Collaboration

The Episcopal Diocese of Nebraska Newspaper Collection consists of *The Guardian* and *The Diocese of Nebraska*. These newspapers from 1873-1897 are the primary source of information on the early history of the Episcopal Church and Diocese of Nebraska. The original newspapers and other historical material are available in the archives of the Episcopal Diocese of Nebraska (EDON). The EDON archives does not have regular hours when it is open to the public and is staffed by a volunteer less than one day per week. The volunteer archivist approached UNO Libraries' Archives & Special Collections about a possible community partnership to digitize selected material from the EDON archives. A letter of understanding, signed in 2016, granted UNO Libraries permission to make the historical material available online with an attribution approved by the EDON. In 2016-2017, 125 issues of EDON's 19th century newspapers were digitized, described in the library catalog, and made available via UNO Libraries' Digital Collections CONTENTdm® platform (<http://unomaha.contentdm.oclc.org/cdm/landingpage/collection/p16383coll4>).

The EDON community partnership benefits EDON by sharing a portion of its early records online as well as drawing attention to the fact that the EDON archives exist and hold further

material. The UNO Libraries and EDON jointly drafted a news article about the partnership in 2017, which was distributed to both EDON's members through its newsletter and communication channels and through the UNO Libraries' communication channels (<https://www.unomaha.edu/criss-library/news/2017/04/episcopal-diocese-of-nebraska-partners-with-archives.php>). The collaboration is useful to EDON as it prepares to mark its sesquicentennial in 2018 and benefits researchers, genealogists, and others who would not otherwise have access to these historical records. The UNO-EDON digital engagement project will continue on an ongoing basis with newspaper volumes and other historical material loaned to UNO Libraries for digitization, description, and online access.

Omaha Public Library Collaboration

The UNO Libraries partnered with the Omaha Public Library (hereafter OPL) to digitize issues of the World War II-era Glenn L. Martin Plant company newsletter *The Martin Marauder*. UNO held several issues of the newspaper-style publication in Archives & Special Collections, while OPL held more than twice as many issues in its collection. OPL approached Archives & Special Collections to launch the project to digitize all known issues of the publication to assist researchers who were forced to visit multiple repositories, as well as remote researchers who would not otherwise have access to the publication. UNO agreed that the proposed digitization project would also benefit UNO students in a World War II history course who regularly used material from Archives & Special Collections. After the OPL and UNO issues of *The Martin Marauder* were digitized, UNO contacted a third library in another state which held the most complete set of *Martin Marauders* in or to borrow the publication for digitization. In the end, over 100 issues of *The Martin Marauder* were made available online through this community partnership (<http://unomaha.omeka.net/collections/show/27>). This is a limited scope community partnership unless more issues of *The Martin Marauder* should be discovered in the hands of other repositories or individuals in the future.

Conclusion

Academic libraries support campus, local, and global communities to meet research demands for online access to unique collections. Creating honest, inclusive, and detailed descriptions of digital collections while understanding the context of the materials can be a challenge. Description plays an essential role in delivering and preserving the story and history of communities. It is important to provide easy access and easily understood digital content for diverse audiences, connect with those people through the digital collections, and continue to grow digital collections through community partnerships. UNO Libraries' Archives & Special Collections has been collaborating across university departments and community organizations to create digital collections and expand digital initiatives and engagement. Digital projects document local and regional histories as well as present the memories, cultures, and traditions that make communities unique.

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Purposeful Instruction Through Scaffolding

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Abstract

Research has shown (Pan, Ferrer-Vinent, & Bruehl, 2014; Dorner, Taylor, & Hodson-Carlton, 2001; Mackey & Jacobson, 2004; Samson, 2000) that repeated instruction with differentiated learning objectives at multiple levels is valuable for student success. Presenters showcase a partnership with discipline-specific Biological Sciences faculty for embedding information literacy components at different points in required curriculum for all Biological Sciences majors. Learning objectives, an instructional plan, and assessment strategies were all developed with faculty collaboration. This tiered information literacy strategy provides an incremental mastery of skills documented by post-session multiple-choice assessment.

Within Principles of Biology, a freshman level course, a foundation of information literacy skills was established for beginning science students. This exploratory and inquiry-based laboratory session utilizes popular scientific literature as an underpinning for students to locate and record concepts (<http://libguides.nwmissouri.edu/PrincBio>). Students use these concept lists to build search strategies that are shared via a Google Form. The Google Form's results are viewed and refinement strategies are discussed. These search strategies are applied to locate peer-reviewed literature containing methods and results sections within scientific literature. Students complete an article review that includes a Scientific Style citation. Feedback (2014, 2015) from students showed 90% of respondents felt the opportunities for hands-on research practice were very effective and 72% felt very confident to confident about finding articles on their topic in a database after class.

Students at the sophomore/junior level within General Zoology are asked to focus solely on primary literature (<http://libguides.nwmissouri.edu/GenZoo>). Each student researches an assigned topic and compares search results from specific science databases and Google Scholar to become literate in the functionality and navigation elements of each database or tool. Students are required to find primary, peer-reviewed sources from within the current 5 year period. Faculty comments (2014, 2015) underscored the session's impact on student success in completing a class assignment written by the professor.

Students at the senior/graduate level within Biological Science Seminar are asked to integrate information literacy skills taught through the previous tiered instruction program in order to evaluate review and primary research articles (<http://libguides.nwmissouri.edu/biosem>).

Students' research culminates in producing an experimental design poster session with a review of literature.

This presentation highlights a collaborative faculty-librarian, discipline specific plan for tiered instruction featuring incremental mastery of skills. The tiered instruction encompasses learning objectives and strategies for student achievement from freshmen to senior/masters level Biological Sciences research. Scaffolding and project-based learning are primary features of this strategic information literacy initiative.

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More Than Fake News: Fostering Critical Information and Media Literacy Across Campus

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Abstract

Starting with the 2016 Presidential election, fake news has grabbed a lot of headlines. It also served as a catalyst for the School of Journalism and the Libraries at the University of Kansas to raise greater awareness and understanding of critical media literacy among students, faculty, and the greater community. Teaching students how to identify and avoid fake news, however, is merely treating the symptom of a larger problem. Instead we focused our collective efforts to educate folks about such values as questioning authority, Free Speech, and Freedom of the Press. We held teach-ins, handed out “fake” cookies and, in the process, learned as much as we taught. Join us to discover how we partnered with the School of Journalism to launch a campus-wide initiative to raise awareness of critical media literacy among students and faculty.

Moving from Collection to User Centric Operations: The University Library in the Knowledge Economy

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Abstract

“Do we need a physical library in the age of Google?” This was the question posed to the Washburn University Libraries in 2008, as the institution set about looking for cost savings and seeking to define what type of graduates it would produce in the future. The initial response of Washburn’s librarians was a classical one, without a library you are not a university. The problem with this argument was that the physical usage of the libraries, as reported by the library administration to the central university leadership, was declining rapidly each year. The university was existing, its students graduating and succeeding, all without the libraries playing a regular role in the student lifecycle.

Through a strategic planning process, the Washburn University librarians chose to change the operational model of their unit. No longer, they decided, would growing the research collections drive the daily thinking of the libraries. Instead, in the new model, the focus in every decision and action shifted to the user experience—helping students become information literate. In 2009, as the Washburn University faculty began a conversation about institutional Student Learning Outcomes (SLOs) the conversation about the role of the institution’s libraries was significantly advanced that the library leadership could engage the dialogue and ensure that information literacy became a SLO. Once established as an institutional SLO, the library leadership and university librarians worked to not only incorporate it into but make it the primary learning outcome of Washburn’s new First-Year Experience program. The argument, one accepted by the University’s faculty, was information literacy is the key lifelong learning skill that promotes undergraduate student success and post-graduate success in the knowledge economy.

Throughout this period of philosophical restatement, Washburn University’s main library, the Mabee, began a physical metamorphosis that, without adding to the physical size of the structure, revolutionized activity within and around the building. The university librarians embraced the digital explosion of information resources, shedding those print resources not central to the learning community of Washburn University. Instead they focused their energies not on the traditional activities of curating a print collection that exists just in case of need, but upon

teaching information literacy. No one at Washburn University now asks whether or not a physical library is necessary in the age of Google because its libraries are now in their historic position at the center of life in the community of learning. Physical usage is setting records, electronic usage is setting records, and graduates are leaving Washburn University confident of their ability to succeed in the knowledge economy due to their developed Information literacy skills. This presentation and scholarship is both an explanation of how the transformation occurred at Washburn University and an examination of the takeaways that other librarians can use to ensure their library is essential to the future life of their institution.

Academic Library Safety and Security – Administrators and Staff Need to Be on the Lookout

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Abstract

Safety and security in academic libraries can span a variety of areas: human threats (stealing, vandalism, violence – individual and mass, illness); environmental threats (fire, water leaks, mold, bugs, natural disasters); and facility threats (fire code violations, ADA compliance issues, broken equipment). The threats vary in magnitude of harm and likelihood but none should be marginalized. Library administrators and staff need to understand their vulnerability to these threats and be on the lookout whether it be a gunman or a suspicious mold growth on a ceiling tile. Both can have devastating results and both can be mitigated. The first step is understanding what kind of threats exist. The Rowan University's Campbell Library administrators and staff have begun acknowledging the threats and how to report and handle them.

Introduction

The world is not as safe as it used to be. Places that were considered safe (movie theaters, schools, churches, and libraries) have been violated; however, many people do not give those incidents a second thought when they enter those types of facilities. Academic libraries are ripe for threats like those from a gunman but do not underestimate a suspicious mold on a ceiling tile. Library administration and staff should be aware of how libraries are vulnerable to the full range of threats be it from humans, the environment, or non-compliance to safety codes, general laws and policies. All library staff can help minimize the threats and be prepared to handle the threats if they do occur.

Why Should Academic Library Administrators and Staff Be Aware?

Many libraries/librarians embrace an open access policy which often comes with a very trusting and helpful perspective. Patrons also tend to feel safe in the familiar walls of the library (Sanders, 2012; Shuman, 1999). Why wouldn't a patron feel safe? Most libraries are easy to access (Chadley, 1996) and academic libraries tends to be open more hours a week than other campus buildings (Pearson, 2014). But are the one or two staff members that work the late-night shifts trained to provide protection? Typically, no. Are library staff asked to report fire code violations or know how to handle a ceiling water leak? Perhaps. A blocked fire exit or a slow ceiling water leak in a remote area of the book stacks can create equally devastating results for patrons, staff and/or the book collection. "Keeping the library environment safe is a very delicate balancing act" (Waynick, 1999, p.103).

Areas of Threats and Vulnerability for Academic Libraries

Libraries, in general, are subject to vulnerability and threats but the degree or intensity might be different for some of the areas based on the type of library (public, academic, or special). The three general areas of threats and vulnerability are Human (or related to human behavior), Environmental (related to the library environment and/or ‘mother nature’) (Halsted, Clifton & Wilson, 2014) and Facility (related to laws, codes, policies and maintenance) as seen below in Table 1. - Three Areas of Threats and Vulnerability for Academic Libraries. The lists in the Table 1 are not comprehensive and may have cross over between areas.

Table 1.

Three Areas of Threats and Vulnerability for Academic Libraries

HUMAN	ENVIRONMENTAL	FACILITY
Theft (library property, patron or employee property)	Fire	Fire Code
Vandalism/arson	Water Leaks (ceiling, pipes, flooding)	Americans with Disabilities Act (ADA)
Assault (of patron)	Mold/dust/allergens (in facility, in books)	Occupational Safety and Health Administration (OSHA) Laws & Regulations (related to Worker’s Compensation)
Workplace Violence (assault on employees)	Bugs/Rodents/Birds/Bats (Plants and food in building can impact)	University or Library Policies (ex: Service animals, Concealed weapons)
Illness/health epidemic (staff or patron come in sick or contagious)	Temperature/Humidity Issues (impacts quality of books and air quality)	
Sexual misconduct (ex: sex in public, lewd acts)	Air Quality	
Incivility/Bullying (between patrons or between patron and staff)	Ultraviolet Light Damage	Equipment/System Maintenance (ex: internet, alarm system, IT Network, electricity)
Active Shooter	Natural Disasters (ex: floods, earthquakes, blizzards, tornadoes)	
Harassment/stalking		

Human Behavior Threats and Vulnerability

The general area of human behavior threats and vulnerability include safety and security issues cause by an individual’s choice of behavior (Cravey, 2001). The individuals could be library patrons/visitors or employees. The behaviors cover the full gamut of minor offenses to sever.

- Theft of library material/equipment and personal possessions (Albrecht, 2016; Shuman, 1999). Library material/equipment theft should always be reported to police. If patrons or staff report their personal possessions to library staff, the individual should also be encouraged to report the theft to police and the library should keep an incident log.

- Vandalism of library material/equipment that have been defaced/destroyed (Albrecht, 2016). An example in many libraries is writing and carving on a book, study carrel or restroom wall. Not all vandalism may be fixed or repaired. Some vandalism may require removing the item and considering the replacement of the item. This can be very expensive.
- Violence – physical harm to a person or group of people. This area would include assault (Albrecht, 2016), workplace violence (Albrecht, 2016; Shuman, 1999), and active shooter (Peet, 2015; Steel, 2016). All violence should be reported to police and some may require immediate medical attention. However, it is important to remember that workplace violence (Albrecht, 2016) includes verbal abuse. In libraries, patrons/visitors may be upset for some reason and verbally assault the employee (Shuman, 1999). Some encounters may be more aggressive and require a call to public safety officers to help remove the upset patron/visitor. Many university public safety departments provide Active Shooter Training and Simulation so staff understand ways they can respond, where they can go, and how law enforcement will behave.
- General misconduct of patrons (and staff) in the library - stalking (Albrecht, 2016), harassment, incivility/bullying (Albrecht, 2016; Bartlett, 2016; Freedman & Vreven, 2016), and sexual misconduct (Albrecht, 2016). If any of these behaviors are done by library staff and reported/observed, the library administration needs to minimally contact the human resource department for consultation on how to proceed. Severe behaviors would also require an immediate call to public safety for an official report.
- Illness/health epidemics (Cravey, 2001) brought into the library by staff or patrons. Employees sometimes underestimate how contagious they might be and go out in public because they have no sick time and college students have to finish an assignment by a deadline. Though some patrons and staff might be conscientious about covering their mouths when they cough and sneeze, germs still spread on to door handles, elevator buttons, water fountain buttons, computer keyboards and mice, and table surfaces. How often does the custodial staff clean those items? Also, what about germs on books which are not able to be cleaned?

Environmental Threats and Vulnerability

The general area of environmental threats and vulnerability relates to more naturally occurring activities that happen in the environment (in and around the building) and are not typically created by human behavior. These types of activities typically have specific emergency plans related to them.

- Fire and water (leaks/flash flooding) damage are typically the first two activities that libraries plan to prevent, minimize and recover from. Of course, recovering from a fire in a library, if the building and collection are not considered a total loss, means the library will also be recovering from water damage. Academic libraries need to consider if it is worth saving a water damaged collection if it is NOT considered ‘special’. With online resources available and collection sharing options (interlibrary loan), the cost to try to

save and restore the water damaged items might not be monetarily worth it.

- Mold can happen within the building as well as attach to books/material. Not all mold found in the building (on a walls, ceiling tile, etc.) is considered dangerous but it never hurts to report it to the university's environmental, health and safety department for review. Mold on books is never good and should not be ignored. The item or items need to be isolated. Unless the item is 'special', it is likely not worth the conversation to determine if it can be salvaged.
- Dust/allergens naturally occur and settle on library book stacks and the tops of books. Are the book stacks regularly and systematically dusted? The quality of filter capacity within the library's heating and cooling system also impacts the levels of dust and allergens.
- Bugs/mice/birds/bats (and even an occasional squirrel) can find their way into libraries. Libraries are a gold mine for some bugs and mice with all the types of material available for them to nibble. Academic libraries typically allow students to bring in food (to some degree) or even open small cafés in the library. Where there is food, there will be mice and bugs, and that is why pest control should be conducted on a regular basis (Trotta & Trotta, 2001). Bird, bats and miscellaneous other small creatures find their way into libraries through doors, loading docks, small holes, etc. Knowing what department to contact to extract them is the answer.
- Extreme temperature and humidity levels in the library can cause issues for users and physical collections. However, fluctuating temperature and humidity levels can cause damage over time (Cravey, 2001; Ogden, n.d.). Add in the building's heating and cooling system not being able to filter air properly and then the consequence of the fluctuations can create indoor smells and pollution or cause "sick building syndrome" (Simon, 1990, p. 87).
- Air quality in a building full of aging material covered in dust can be hard to handle. If the quality is very poor, this issue could then be an Occupational Safety and Health Administration (OSHA) issue or violation which is covered in the Facility Threats and Vulnerability section. "Many of the problems that attack books and other materials are also harmful to the people who process, catalog, and otherwise deal with these materials" (Waynick, 1999, p. 101). Report an air quality concern to the university's environmental, health and safety department for review.
- Ultraviolet light damage to furniture and books. If library windows do not have treatment (ex: blinds or tinting filters), then books can be damaged. Light breaks down the fibers in the books making the pages and covers brittle (Ogden, n.d.). Note that just like a little sunlight can be good for humans, the sunlight can help restore damp books but too much for either is detrimental.
- Nature/Natural Disasters (floods, blizzards, earthquakes, tornadoes, etc.) is another area for which libraries typically have reaction plans and practice drills. Natural disasters can

all be very risky and are as much of a safety concern for libraries as crimes (Foote & McManus, 1999; Sanders, 2012). For some libraries, natural disasters might hit more frequently than other threats. Note that natural disasters can then cause other environmental threats such as fire, flooding or extreme temperatures, especially if power is lost.

Facility Related Threats and Vulnerability

Facility related threats and vulnerabilities require following federal and state acts/laws, codes, university and library policies regarding the facility/building, and keeping equipment inside the facility/building maintained. Most of these threats and vulnerabilities are identified in laws, codes, etc. but still requires staff to make sure the rules are followed and help keep the library patrons and staff safe.

- Building fire codes are important for library administration and staff to know and understand. Though it might seem like common sense not to lock or block an emergency fire exit, sometimes persons do not consider the consequences to themselves or others. Fire marshals look for a variety of things such as non-functioning emergency lighting, fire horns and strobes; expired fire extinguishers, outdated equipment that could spark a fire, and blocked emergency exit paths (Albrecht, 2016; Kahn, 2012; Trotta & Trotta, 2001).
- Americans with Disabilities Act (ADA) compliance is a ‘newer’ issue with its signing in 1992. Libraries deal with compliance on both the patron side and the employment side. Making sure that the building, restrooms, computers and other equipment as well as the collections are accessible by someone with a disability is not a small task (Kowalsky & Woodruff, 2017; Trotta & Trotta, 2001). The positive side is any update to improve the access for someone with a disability will automatically help all with access. An example is the installation of a soap dispenser above the sink at a level too high for someone in a wheelchair to reach.
- Occupational Safety and Health Administration (OSHA) was created by Congress to assure employees with safe and healthy working conditions. It is important that library staff or other university employees working in the library are properly trained so they are less likely to hurt themselves, co-workers or patrons. If the library is staying open for business while having a section of the building renovated, it is important that the contractors follow OSHA guidelines for their protection as well as others (Trotta & Trotta, 2001).
- University and library policies need to be consistently followed not only for the given subject of the policy but to maintain order. If staff do not enforce the policies equitably, it opens up the staff for potential conflicts with patrons that could lead to a verbal assault or worse. The policies are usually trying to direct a human behavior though it might be related to an environmental and facility issue. One example is a university policy only allowing registered service animals on campus and thus the library. Comfort animals are not the same as service animals and bringing in an unleashed animal into the library is

extremely dangerous (Albrecht, 2016). Even the sweetest of family pets might react differently to a stranger and bite. Another example could be a policy that restricts access to spaces such as a balcony. Many people might see a balcony as a place to see a lovely view of the campus but to someone with evil intent, it could be a snipers nest. An individual that is depressed might see a balcony as a place to jump and commit suicide. The policy is designed to be restrictive but is ultimately for everyone's protection.

- Equipment or system maintenance deals with keeping equipment in good condition or removing broken items that could be dangerous. Most, if not all, of the equipment or systems that require repair or maintenance will NOT be the responsibility of the library staff to fix but the university's facility department or possibly an outside vendor (Trotta & Trotta, 2001). It is the library staff's responsibility to notify the appropriate person so a work order can be placed with the right department or vendor. This could be as simple as an emergency light bulb that needs to be replaced or a broken chair to be thrown away. However, it can be as critical as a power or internet outage (Halsted, Clifton & Wilson, 2014). If the power goes out, who checks to make sure that no one is stuck on an elevator or that someone in a wheelchair is not stuck on an upper floor of the building?

A Plan of Action

The list of threats and vulnerabilities for academic libraries is long and the task of creating a plan of action may seem overwhelming but for the sake of safety and security, library administrators need to swiftly keep moving forward. Many libraries already have action plans on as how to react to fires, power outages or a burnt-out light so the first step is to determine initial actions and actions that require planning.

Initial Actions

- Initially, communicate to staff the different areas of vulnerabilities and threats in academic libraries so they understand the broad aspects of safety and security.
- Provide staff development and training on the different areas so staff have a deeper knowledge of the issues and ways to respond (Albrecht, 2015; Bell, 2012; Cravey, 2001; Cuesta, 1996; Graham, 2012). This training can be as simple as reviewing emergency evacuation procedures. Eventually, time will need to be spent on developing training on the different areas.
- Empower staff to look out for and report concerns and if necessary to call police (Albrecht, 2015, Graham, 2012). It is important that staff know that their assistance is needed to help keep everyone safe. This could be reporting a carpet snag that might become a tripping hazard or reporting a patron that is acting peculiar and making people feel uncomfortable.
- Practice drills create muscle memory (Kahn, 2012; Trotta & Trotta, 2001). These drills can include doing fire evacuation with scenarios that make staff determine different exit

paths than commonly used, using fire extinguishers, or responding to an upset patron.

- Conduct meetings with appropriate departments related to safety and security such as department of public safety, emergency management, environmental health and safety, and facilities. It is important to develop relationships with these other departments to help provide training and planning assistance.

Actions That Require Planning

Certain actions/activities will require planning and library administrators need to be proactive to keep the planning moving swiftly.

- Review current policies and create new policies if needed (Graham, 2012; Sanders, 2012; Trotta & Trotta, 2001). It is important that policies be administered consistently but it is equally important that policies are current and relevant. Maintain a policy library that is easily available to all staff and also determine if/where the policies should be posted for patrons. Some policies might be important to post signs while others might be appropriate to have on the library's webpage. If in doubt, check with the university's attorney about posting requirements.
- Controlling access to the building (keys) is a major step in maintain safety and security in the building (Graham, 2012; Pearson, 2014; Shuman, 1999). One side of this access is about staff access. Library administrators should know exactly who can access what parts of the building. As for patron access, the more control the better but that is not always an option. Some academic libraries may not restrict access for all sorts of reasons but if a card access system is used, it will provide a potentially safer environment.
- Conduct security audits or surveys to help determine vulnerabilities (Albrecht, 2015; Cravey, 2001; Parsons, 2016). Asking for assistance from the university public safety department is recommended for this action. Public safety department staff are trained to look for threats that library staff might not notice.
- Create emergency plans in conjunction with the university emergency management department (Kahn, 2012; Halsted, Clifton & Wilson, 2014). The staff of that department will know where the university's plan begins and the library's specific plan should end. For example, the library staff will never be responsible for coordinating the response to an active shooter in the library. The library would more likely be called upon to plan the recovery of the collection after water damage.
- Create a business continuity plan (or continuity plan or continuity of operations plan) (Hamilton & Brown, 2016). This type of plan is less focused on the reason for the problem and more on how to keep business operations functioning. For example, the reason the building is not accessible is irrelevant if the goal is to maintain operations. The reason the building (and the collections) is not available could be a gas leak in the building, the building is a mass murder scene, or the building was destroyed by fire. None of those reasons really have any impact on how the staff try to re-establish as many of the

library services as possible.

- Hire a security office or facility manager that can coordinate safety and security issues (Graham, 2012; Shuman, 1999). If funding is available, having a person with specialized skills and training would be the best choice to assist the library administration in the area of safety and security.

Conclusion

All libraries have experienced some of the areas of threats and vulnerabilities; none are immune. Library administrators can try to be proactive to prevent or minimize the threats but the reality is issues will still happen. As shown in Table 2, Campbell Library in a four year time frame experienced 16 different areas. Many staff were involved with identifying the problems and are more trained today on how to handle a wider variety of these issues. It takes time, dedication and resources but libraries “cannot afford to ignore safety and security issues” (Harrison, Armstrong, & Hollenbeck, 1996, p. 93).

Table 2.

Example of Threats and Vulnerabilities: Rowan University - Campbell Library’s Experiences from 2013-2017

HUMAN	ENVIRONMENTAL	FACILITY
Theft – books and furniture	Water Leaks - ceilings/pipes/ Flooding/standing water	Fire Code Violations
Vandalism – writing on study carrels and restroom walls	Mold/dust/allergens complaints	Americans with Disabilities Act (ADA) Compliance
Assault of patron – minor	Bugs/Rodents/Birds/Bats – removal	University or Library Policies - Service Animals
Workplace Violence – verbal threats and verbal assault to employees by patrons	Temperature/Humidity – inconsistent causing air quality issues	Equipment Maintenance - torn carpet, broken chair, broken equipment, power outage, network outages, phone outage
Illness	Ultraviolet Light Exposure and Damage to furniture and material	
Sexual misconduct - sex in study rooms; report of lewd act	Natural Disasters – snow closure; flash flood causing standing and running water	

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Strategies for Building Diverse Library Collections

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Abstract

Library collections should reflect a range of opinions and viewpoints, and the librarians developing those collections must be mindful of the diverse population served by the library. ACRL's Diversity Standards: Cultural Competency for Academic Libraries may serve as a starting point from which libraries can develop local approaches and goals. Assessing the current collection with an eye on diversity is a good starting point, and ultimately libraries should adopt a collection development policy that outlines a commitment to diversity. In addition to current funding for collections, fundraising initiatives devoted to specific diversity goals are a good way to ensure that library collections meet diversity goals.

Making the Complex Simple: Managing the Analysis of Large-Scale Evaluation of Library Instruction

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Abstract

This report documents the continuation of the pilot of a hybrid evaluation and assessment instrument in Composition I (ENGL 101) at the University of South Dakota (USD). Members of the University Libraries' (UL) Research, Reference, and Instruction Services (RRIS) deployed the instrument in the fall semester of 2015. The quantitative and qualitative evaluation results suggested strong student satisfaction with the UL's instruction. However, a significant number of students made recommendations for improving instruction, suggesting less than full satisfaction with librarians' teaching. To resolve this discrepancy the researchers analyzed the quantitative and qualitative data using hybrid methods. This yielded significant findings that further inform instructional practices and suggest areas for professional development.

Evaluation and Assessment in Academic Libraries

Evaluation and assessment enable academic libraries to demonstrate support of institutional goals through effective teaching and student learning (Oakleaf, 2010). A cycle consisting of curricular planning, instruction, evaluation and assessment, reflection, and professional and curricular development and revision is crucial for sustaining a culture of evidence-based practice and continuous improvement in educational institutions (Farkas, Hinchliffe, and Houk, 2015; Oakleaf, 2011).

There are additional local reasons to engage in evaluation and assessment. USD espouses Responsibility Center Management (RCM), whereby service centers like the University Library (UL) are expected to demonstrate return on investment (ROI) by "satisfy[ing] customer expectations" and developing "support center priorities" in response to "customer input" (USD Budget Allocation Model Advisory Committee, 2012; Vonasek, 2011). Evaluation and assessment can demonstrate that the library is meeting the expectations of its "customers," i.e., the academic units receiving instruction.

As faculty, USD's librarians are expected to undergo a regular evaluation, which can provide valuable data for promotion decisions. Using evaluation and assessment data, librarians can reflect on their teaching effectiveness and engage in individual professional development as

needed (Oakleaf, 2009). Evaluation and assessment data enable the UL's Instructional Team to identify areas for improvement in instruction, provide professional development, and engage in curricular revision. Soliciting student feedback also affords the inclusion of student voices in evaluation and assessment (Accardi, 2010).

The UL embraces evidence-based practice, excellence in teaching, and a culture of assessment (University Libraries and Wegner Health Science Information Center, 2015). "Demonstrating effective teaching, academic achievement, and program success are important undertakings that justify library funding and situate the library faculty within legitimate institutional faculty activities." (Leibiger & Aldrich, 2015a, p. 10).

USD's Evaluation and Assessment Context

IL instruction is mandated in ENGL 101, a general-education, writing-skills course required of first-semester freshman. The UL supports two ENGL 101 assignments, the Research-Based Academic Argument (RBAA), which is a general research paper; and a second paper (either a media analysis or a synthesis essay) in face-to-face library sessions.

Because of the volume of ENGL 101 teaching in 50 or more sections per semester on the main campus and a satellite campus, 11 members of RRIS provide instruction. The IL Coordinator designs instruction to maximize active learning. Because students engage in flipped instruction before library sessions, RRIS members are encouraged to spend no more than 15-20 minutes reviewing the use of the library catalog, research databases, and searching strategies. This allows students to spend the remaining time on research. RRIS members are expected to interact with and provide guidance to each student in this constructivist design.

Communication underlies library encounters, and instruction shares communication's instrumental and relational dimensions (Leibiger & Aldrich, 2015a). The instrumental goal of IL instruction in ENGL 101 is to enable students to find and evaluate resources for their assignments.¹ The relational goal is to develop a positive relationship between students and librarians so that students return to the UL with future research assignments. Evaluation and assessment are useful in determining whether RRIS members have provided quality instruction and facilitated learning in support of these goals.

Design and Implementation of the Evaluation and Assessment Instrument

When asked by the Dean of Libraries to initiate evaluation and assessment of library instruction, the Instructional Team faced multiple constraints. The instrument needed to be simple to administer and to access and short enough to be completed in five minutes. It also had to ensure the anonymity of both librarians and students. To encourage buy-in, the Instructional Team collaborated with RRIS to develop a hybrid evaluation and assessment instrument. Evaluation questions consisted of four Likert-like closed-ended questions and one open-ended question,

¹ ENGL 101 instruction aligns with the Association of College & Research Libraries' (ACRL) Information Literacy Competency Standards for Higher Education 2 and 3. Since 2005 the South Dakota Board of Regents has mandated IL as a system general-education requirement, and the ACRL IL Standards provide the student learning outcomes for this requirement.

derived from RRIS discussions about what constitutes good instruction. A final open-ended question assessed learning from the session, which emphasized searching using library resources. The placement of the assessment question was strategic; the designers wanted students to leave instruction having reflected upon what they had learned and feeling positive about it (Leibiger & Aldrich, 2015b). The researchers decided not to include demographic questions about librarians because the focus of the study was on factors over which RRIS members had pedagogical control. Additionally, demographic information from such a small group would enable identification of individual librarians, violating principles of ethical research. The instrument's questions are listed in Table 1.

Table 1

Evaluation and Assessment Questions

<i>Evaluation and Assessment Questions</i>	
<u>Question</u>	<u>Closed-Ended Evaluation Questions</u>
1	The librarian presented the material effectively.
2	The librarian presented clear and accurate information.
3	The librarian answered questions competently.
4	Students had the opportunity to participate and/or ask questions.
<u>Question</u>	<u>Open-Ended Evaluation and Assessment Questions</u>
5	How could the librarian have taught this session better?
6	What did you learn in this library session that you could pass on to fellow students or friends to help them complete this assignment better?

Because all ENGL 101 students must write the RBAA paper, the RBAA session was chosen as the site for evaluation and assessment. The instrument was made accessible using the quiz function of Socrative™, a free online student-response application. Students were asked to complete the instrument during the last five minutes of their research session.

Ten of 11 RRIS members participated in the evaluation and assessment project in 40 sections of ENGL 101 taught on USD's main campus in fall 2015.² Instructors culled the data from their Socrative™ accounts, and gave them to the RRIS Graduate Assistant (GA), who stripped them of identifying information. The GA provided the depersonalized data to the Instructional Team, which conducted quantitative and qualitative analyses during the summer and fall of 2016. The Instructional Team engaged in benchmarking and further analysis of the results during the spring semester of 2017.

Due to length considerations, this paper presents only the evaluation data and analysis. Assessment results will be reported at a later date.

² One RRIS member did not submit evaluation/assessment results, resulting in the loss of one section's data. A secondary analysis determined that the lack of one section's data had minimal impact on the results.

Description of Quantitative Data

A total of 618 students responded to the four quantitative evaluation questions using a Likert-like five-point scale anchored by strongly disagree = 1 and strongly agree = 5. Additional responses included disagree = 2, neither agree nor disagree = 3, and agree = 4. The mean score across all sections for each question is presented in Table 2.

Table 2

Overall Mean Scores for Evaluation Questions 1-4

<i>Overall Mean Scores for Evaluation Questions 1-4</i>		
<u>Question</u>	<u>Closed-Ended Question</u>	<u>Mean</u>
Q1	Librarian presented materials effectively	4.52
Q2	Librarian presented clear and accurate information	4.51
Q3	Librarian answered questions completely	4.51
Q4	Students could participate and ask questions	4.53

The mean scores suggested a pronounced lack of variability. The lowest mean score was $M = 4.00$ on Q3, and the highest mean score was $M = 4.93$ on Q4. Further work on analyzing variability is presented in the “Stratification of Data” section below.

Description of Qualitative Data

The Instructional Team coded the data from the open-ended questions. For the evaluation question, students provided 618 responses, 587 of which were usable. Responses identified as unusable were ones where students failed to answer or provided nonsensical or irrelevant comments.

Students generally answered the evaluation question in one of two ways. First, 382 students commented positively on their librarians’ instruction; 100 responses containing more than one positive attribute were unpacked, yielding a total of 482 positive responses. Of these, 312 (65%) contained “holistic positive” statements of approval (e.g., “S/he did a great job”) usually without mentioning specific behaviors or making recommendations for improvement. These responses suggested strong satisfaction with instruction, appearing to validate the high quantitative averages.

The 172 students that did not provide holistic positive comments praised librarians for specific behaviors. Their comments produced 16 themes, the most frequent being effective explanations (19%). The most prevalent themes derived from students’ identification of positive instructional behaviors are listed in Figure 1.

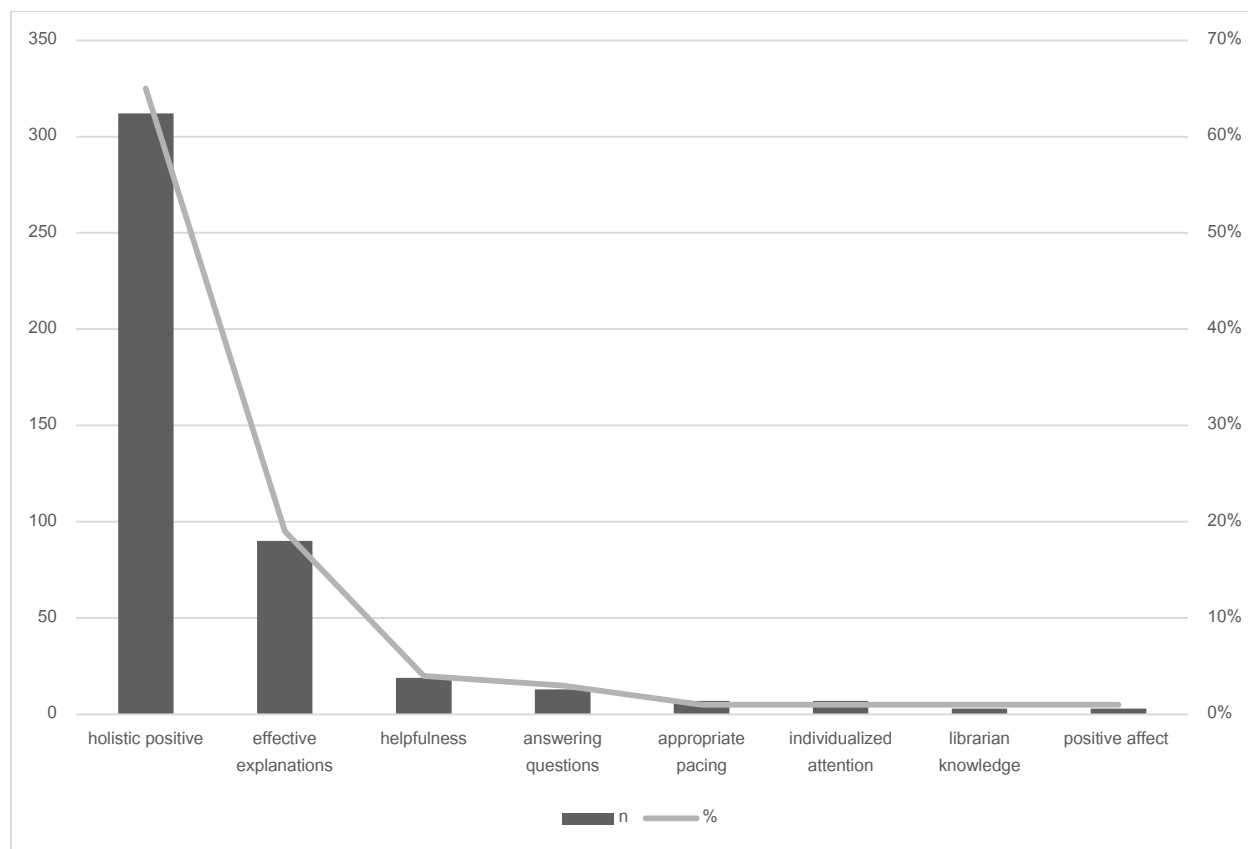


Figure 1: Librarian Positive Instructional Behaviors from the Open-Ended Evaluation Question.

Second, 189 students interpreted the open-ended evaluation question as an invitation to critique instruction by providing specific recommendations for improvement, implying less than full satisfaction. Twenty students responded with more than one recommendation; unpacking the responses yielded 219 unique recommendations. Additionally, 19 students responded that their librarian had taught well, yet made recommendations for improvement. These responses were coded “generally positive” because the recommendation suggested less satisfaction than that communicated by “holistic positive” statements, which (with one exception) were not accompanied by recommendations.

The student recommendations yielded 29 themes that were grouped into larger instructional categories. These categories include: instructional management (e.g., appropriate pacing and attending to students), explanations (e.g., detailed, effective, or focused explanations), and self-presentation (e.g., librarian affect, appropriate volume, appropriate movement, and humor). Most students ($n = 126$ or 56%) made recommendations relating to instructional management; of these, 40% ($n = 87$) recommended better pacing of instruction. In the next highest category, students identified a need for detailed or effective explanations ($n = 66$ or 29%). In the category of self-presentation, 13 students (6%) recommended that librarians display more positive affect, and 7 students (3%) suggested that librarians should speak with appropriate volume. The categories and themes with raw numbers and percentages are presented in Figures 2-4.

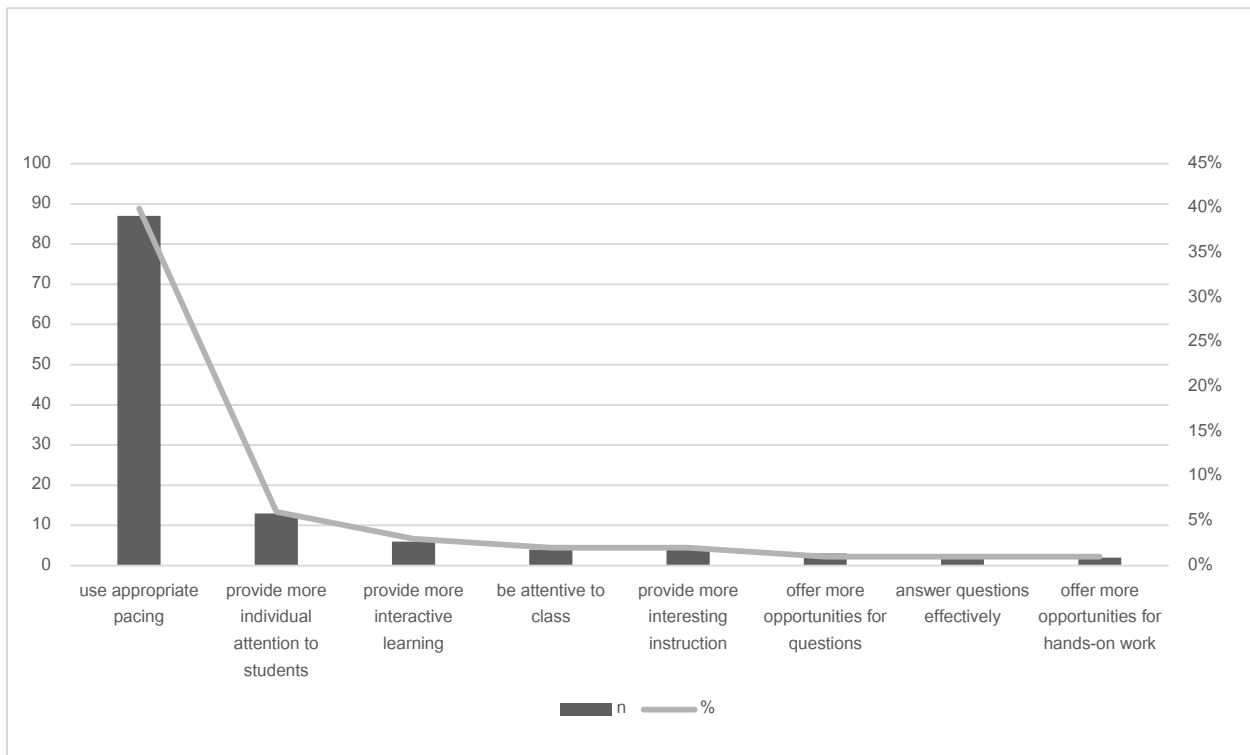


Figure 2. Student recommendations from the open-ended evaluation question. Instructional management.

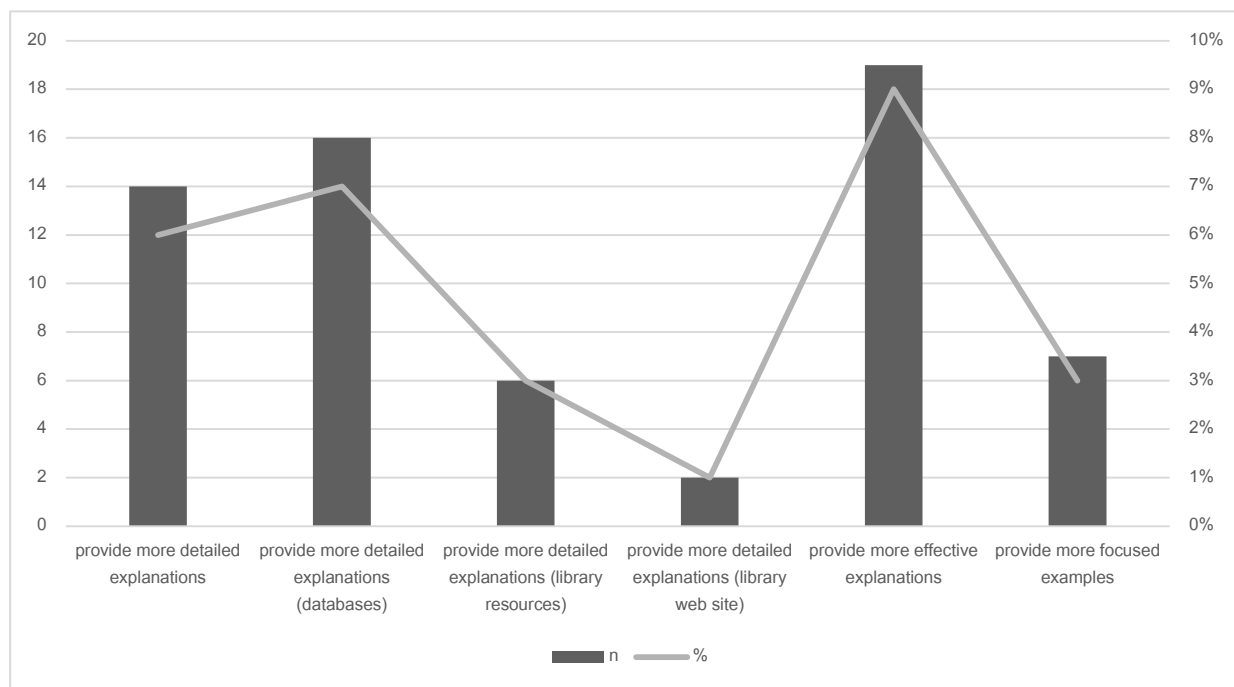


Figure 3. Student recommendations from the open-ended evaluation question. Explanations.

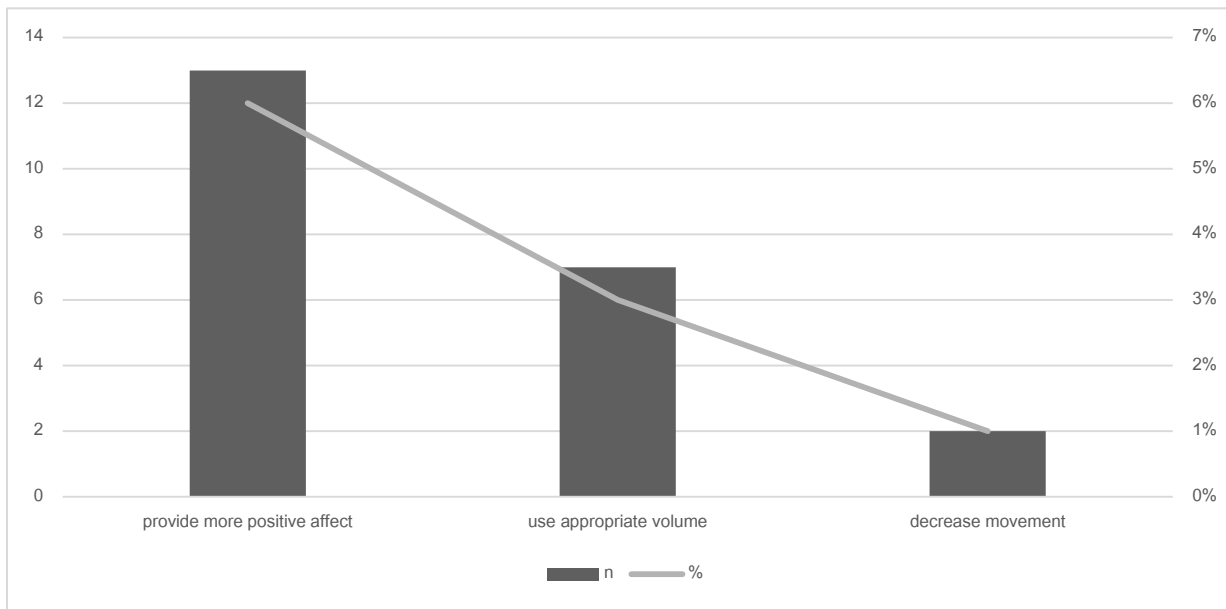


Figure 4. Student recommendations from the open-ended evaluation question. Self-presentation.

Finally, 14 students noted affect related to instruction. Nine responses align with affect levels associated with learning in *Bloom's Taxonomy: Affective Domain* (Clark, 2004). One student (7%) noted an awareness of having learned, aligning with level 1 (awareness/attention). Four students (29%) indicated satisfaction with instruction, corresponding to level 2 (responding/satisfaction in responding). Four students (29%) noted confidence as a result of instruction, indicating the fifth (highest) level in Bloom's affective taxonomy (self-reliance). Responses reflecting affect are displayed in Figure 5.

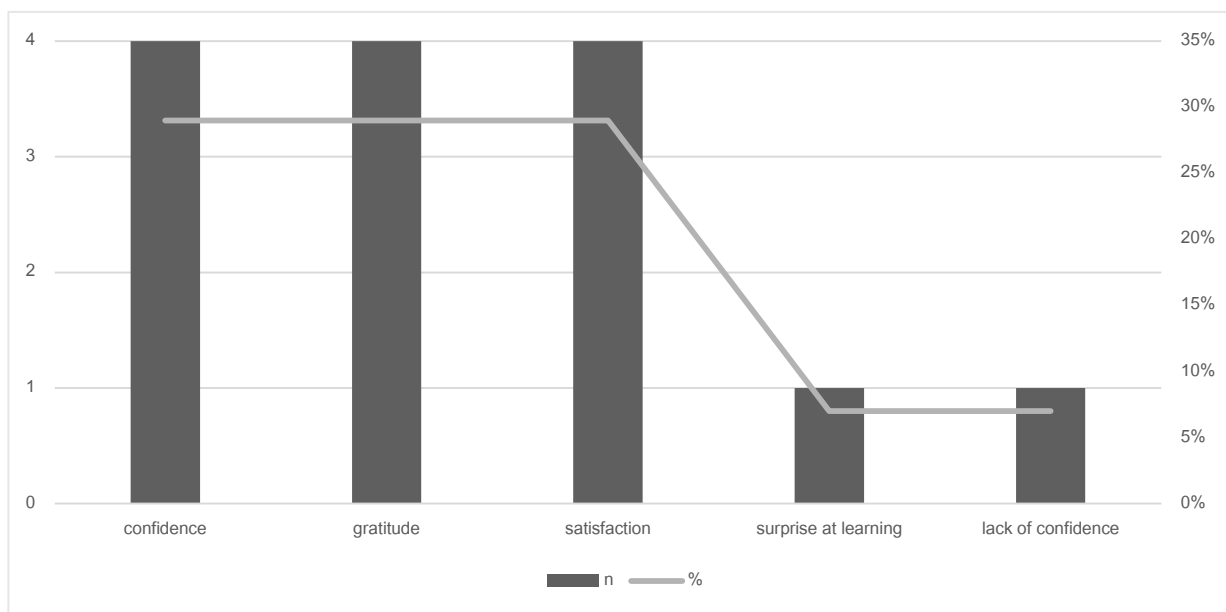


Figure 5. Student affect from the open-ended evaluation question.

Analysis

The high mean scores for Q1-4 suggest that RRIS members were providing excellent instruction. However, student responses to the open-ended evaluation question indicate a need for improvement. Given these seemingly contradictory sets of data, the Instructional Team had to address two questions. First, how could they analyze the quantitative responses, given the high overall mean scores and apparent lack of variability? Second, how could they use the quantitative and qualitative data to identify strengths and weaknesses in RRIS instruction? These questions informed the analysis.

Stratification of Data

The uniform mean scores across all sections led the researchers initially to consider a quartile analysis. However, they noticed natural break points in both the low and high mean scores for each question across the 40 sections that allowed them to meaningfully compare the lowest and highest 20% (quintiles) of mean scores for each question. This identified eight sections with the lowest and highest mean scores for Q1-3 and nine sections with the lowest and highest mean scores for Q4, including ties, respectively, for analysis.

To test the hypothesis that the lowest and highest quintiles for each question were statistically different from each other, One Way ANOVA with Independent Samples $k=2$ were performed. For Q1, the low mean score quintile ($M = 4.25$) was significantly different from the high mean score quintile ($M = 4.77$), $F(1,14) 308.71 p < .0001$. For Q2, the low mean score quintile ($M = 4.31$) was significantly different from the high mean score quintile ($M = 4.72$), $F(1,14) 184.04 p < .0001$. For Q3, the low mean score quintile ($M = 4.20$) was significantly different from the high mean score quintile ($M = 4.79$), $F(1,14) 172.07 p < .0001$. For Q4, the low mean score quintile ($M = 4.31$) was significantly different from the high mean score quintile ($M = 4.84$), $F(1,14) 184.11 p < .0001$.

Z Test Results

In order to perform statistical analysis comparing qualitative with quantitative data, the qualitative data has to be expressed in numerical terms. The qualitative comments had been coded into discrete categories (see Figures 2-5), and the number of responses for each category were summed across the low and high quintiles for Q1-4. These sums were expressed as proportions for each category, and a series of Z Tests was conducted to test the relationship of each proportion to the different quintiles of each quantitative question.

Instructors with sections appearing in the high quintile on Q1, “The librarian presented materials effectively,” were seen as being significantly more helpful (.07) than instructors in the low quintile (.01), $Z = -2.20, p < .05$. Many comments made by students on the open-ended evaluation question included specific recommendations for improvement. Instructors with sections appearing in the low quintile on Q1 received significantly more suggestions to provide more detailed explanations (.07) than instructors in the high quintile (0.0), $Z = 2.08, p < .05$. Instructors in the low quintile on Q1 also received significantly more recommendations to display positive affect (.11) than instructors in the high quintile (0.0), $Z = 2.59, p < .05$.

Instructors with sections appearing in the low quintile on Q2, “The librarian presented clear and accurate information,” received significantly more suggestions to provide appropriate pacing (.40) than did instructors in the high quintile (.14), $Z = 2.72$, $p < .05$.

Instructors with sections appearing in the high quintile on Q3, “The librarian answered questions completely,” were seen as being significantly more helpful (.10) than instructors in the low quintile (.01), $Z = -2.72$, $p < .05$. Conversely, instructors in the low quintile on Q3 received significantly more holistic positive comments (.75) than instructors in the high quintile (.58), $Z = 2.43$, $p < .05$.

Instructors with sections appearing in the high quintile on Q4, “Students could participate and ask questions,” were seen as being significantly more helpful (.07) than instructors in the low quintile (.01), $Z = -2.27$, $p < .05$.

Discussion

The consistently high mean scores on Q1-4 highlight the importance of including open-ended questions as part of the evaluation and assessment instrument. The student responses to the open-ended questions helped to interpret quantitative data that appeared to be skewed in a positive direction and were arrayed along a very narrow bandwidth.

The same instructors appeared consistently in either the low or high mean score quintiles. Those identified as either “low” or “high” performers in this analysis are instructors whose sections appeared in either three or four of the low or high quintiles, respectively.

Evaluation Results-Quantitative and Qualitative Data in Dialogue

Conflicting interpretations were strongly suggested by the data. This led the Instructional Team to put the qualitative data in dialogue with the quantitative data to get a more nuanced analysis that would help to understand this discrepancy and tease out differences in instruction among the low and the high performers.

The results of this study show that students attend to the instruction they receive. Helpfulness was significantly correlated with the high performers in relation to Q1, Q3, and Q4. Students seem to value detailed, effective explanations; opportunities for hands-on learning, and attentiveness from the instructor.

Low performing instructors on Q1 were perceived as needing to provide more detailed or effective explanations. These results reinforce the importance of planning so that the short (15-20 minute) research demonstration at the beginning of IL instruction addresses student assignments with adequate content and detail while leaving sufficient time for student active learning focused on searching.

Another interesting finding in response to Q1 was that students clearly orient to their instructor’s affect. Comments such as, “I think that the librarian could put a little more enthusiasm into it,” or “Be more engaging with the students,” show students attending as much to the relational aspect

of teaching and learning as they do to the instrumental or informational dimension of the librarians' research demonstrations and the facilitation of active learning. Conversely, helpfulness, which is both instrumental and relational, is associated with the high-performing instructors.

It is important to recognize and manage the affective dimensions of teaching, especially in the case of "one-shot" IL sessions, since affect can support or undermine cognitive activities like learning. Course instructors have an entire semester to develop relationships; the impact of an "off" day can be minimized. Librarians usually do not have the luxury of developing relationships across repeated interactions with students. Therefore, they should attend to, and manage, the relational dimension of instruction as much as they manage the instrumental aspects, if they are to experience success with students.

Another common theme across many of the questions was the abundant use of holistic positive comments by students in response to the open-ended evaluation question. While all instructors received holistic positive comments, low performing instructors received significantly more holistic positive comments than high performing instructors as identified by Q3. The percentage of holistic positive comments received by low performing instructors on Q1, Q2, and Q4, though not statistically significant, averaged 10% higher than for the high performing instructors as illustrated in Table 3 below.

Table 3.

Holistic Positive Comments Proportions and Z scores

<i>Holistic Positive Comments Proportions and Z scores</i>			
<u>Question</u>	<u>Holistic Positive % Low Scores</u>	<u>Holistic Positive % High Scores</u>	<u>Z test</u>
1	0.67	0.58	Z = 1.33 ns
2	0.7	0.6	Z = 1.48 ns
3	0.75	0.58	Z = 2.43, p < .05
4	0.74	0.64	Z = 1.56 ns

The researchers believe that the prevalence of more holistic positive comments for low-performing instructors is a form of relational repair work being done by the students. People in South Dakota specifically, and in the Midwest generally, often engage in "Midwestern Nice," a form of hyper-politeness manifested by a disinclination to provide negative responses even when they are called for. When assigning a lower rating on the quantitative scale to their instructor, students seem to compensate by providing a holistic positive response to the open-ended evaluation question. The positive tone of the response acts to minimize the potential damage of a lower quantitative rating and helps to repair the relationship.

The language of the open-ended evaluation question, "How could the librarian have taught this session better," also plays a role in generating these results, especially in the context of

Midwestern Nice. The question could be understood as implying that the instructor provided less than satisfactory instruction. Alternatively, students could interpret the question as an opportunity to offer helpful advice, which is permissible in accordance with Midwestern Nice and is evidenced by their recommendations.

Low-performing instructors received an average of 10% more holistic positive comments than the high-performing instructors. Proportions of holistic positive comments up to about 60% seem to reflect high-quality instruction. Instructors receiving holistic positive comments at a proportion higher than 60% tend to be in the low-performance quintile.

The one area of significance related with Q2 was pacing. Students who rated instructors low on Q2 made significantly more comments identifying pacing as an instructional-management issue. Recommendations included slowing the pace of presentation and allowing students more time to practice research skills. Students were also sensitive to receiving relatively equal amounts of individual attention from librarians.

Limitations of the Study

This study has several limitations. First, it focused on a specific group of instructors, members of the UL's RRIS, and their students. Because the goal was to examine the teaching of all RRIS members, and the number of library instructors is low ($N = 11$), randomization of the sample was not possible. Since one of the RRIS members did not contribute data, the researchers cannot generalize their conclusions to all RRIS members.

Second, personnel changes problematize the results. One librarian who performed more instruction than any other RRIS member except for the Instructional Team, has left USD. This person was perceived as a competent instructor who might have had scores in the high quintile, thus contributing to the overall high mean scores.

Third, the Instructional Team contributed seven sections of data to this study, amounting to approximately one sixth of the total sections taught. Since they are seasoned instructors, they might have skewed the results higher.

While acknowledging these limitations, the researchers recognize the benefits afforded by this instrument. It is efficient, utilizing minimal class time, while organizing the data set for easy retrieval. It allows for collecting rich natural-language data that can be quickly and easily coded. Its structure reflects the instrumental and relational aspects of instruction. The open-ended questions are inclusive and encourage students to reflect on both teaching and learning.

Recommendations

The researchers make the following recommendations. All participants should reflect upon and work towards improving their teaching using both the evaluation data from their sections and the conclusions of this study. Additionally, high-performing instructors should reflect upon their teaching to identify what they are doing well so they can (a) reinforce those behaviors or

techniques and (b) share their findings with other faculty members, including those in the middle quintiles where the teaching is adequate to good but still has room for improvement.

Students attend closely to instruction and value both the demonstration and active-learning portions of library sessions. Pacing, i.e., appropriate speed of delivery and allocation of time, is crucial for effective instruction. Instructors need to attend to how they deliver content (providing effective, detailed explanations using relevant examples) and interact equally with all students to support active learning. Students also attend to relational aspects of teaching. Instructors need to model enthusiasm for IL, teaching, and interacting with students. Furthermore, they should be cognizant of how their behavior affects students, learning, and the development of a relationship with the library.

Given the context of South Dakota and Midwestern Nice, all instructors should expect to receive holistic positive comments. However, receiving these positive comments at a proportion over 60% appears to be correlated with lower performance in teaching. Instructors with higher than 60% holistic positive comments should examine their evaluation results to determine if there are teaching issues that need to be addressed.

The list of student-generated teaching behaviors identified in this study can serve in the development of peer-evaluation metrics. Students are customers in the context of RCM. Incorporating student feedback in faculty evaluation criteria recognizes this role and empowers students. This benefits students, faculty, and the institution.

Conclusion

The UL deployed a hybrid evaluation and assessment instrument in ENGL 101 RBAA instructional sessions during the fall of 2015. The initial findings were very positive. However, the content and number of student recommendations suggested the need for further, more nuanced analysis. The researchers put the qualitative and quantitative data into dialogue, allowing the identification of both effective and less-than-effective teaching behaviors.

Incorporating open-ended responses gives students a clear voice in evaluation and assessment. Student-generated positive and negative teaching behaviors provide valuable input to the initiation of peer review of teaching, the next step in developing a culture of evaluation, assessment, and continuous improvement.

Future directions include analyzing the assessment data and putting them into dialogue with the quantitative evaluation results to identify the effect of teaching on student learning. Subsequently, the researchers will test hypotheses generated in this study with another iteration in which all current RRIS members will participate. Finally, further study is needed to describe and understand the role of hyper-politeness in evaluation and assessment.

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Ghosted by Faculty: When You Build It and They Don't Come

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Abstract

Have you ever built a great online module or LibGuide only to have the collaborating faculty vanish after it's finished? Moving face-to-face content into an online environment is a daunting task. This is especially true when the library takes on the task without prompting from the academic colleges on campus. The effort of producing engaging, interactive digital learning objects can make any librarian take pause, so when a faculty member requests it for a course, it can feel like half the battle is over. How about when you design an awesome student or faculty workshop only to have an empty classroom? When other academic support units include face-to-face library workshops as part of a campus-wide series, it can seem like a no-brainer to jump at the opportunity to reach patrons. However, the library needs to have a supportive culture and assessment plan in place for the times when labor-intensive projects fail due to outside variables. Faculty who are gone with the wind after the tutorial is created make assessment and feedback nearly impossible. Likewise, how do you gather meaningful data from just one workshop participant? Designing thoughtful and engaging curriculum should not be dismissed as a failure merely because students did not show up. Failures, whether current experiences or attempts by predecessors, should not hinder librarians from seeking best practices, implementing an action plan, and continuing to provide quality library interactions with faculty and students on campus. We will share our hard lessons on dealing with ghost faculty, impossible assessment strategies, and building an organizational culture that is not adverse to failure when seeking to improve library services. We will also pass on the smart steps we've taken to keep relationships strong both in the library and across campus.

Putting Constructivist Learning Theory into Practice: Using Educational Technology to Engage Students and Assess Their Learning

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Abstract

Over the years librarians have added “teacher” to their list of job duties. Most librarians have not had extensive training in instruction, including learning theory and pedagogy. This paper examines one theory, constructivism, and how librarians can put this theory into practice in information literacy instruction using educational technology tools that provide opportunities for student engagement and the assessment of student learning.

Constructivist learning theory ensures the student is front and center allowing the student to construct meaning from their own experiences. Adding educational technology tools as a layer to learning can enhance library instruction by actively engaging students and encouraging a participatory classroom. The librarian can see in real-time the students “performing” their learning, allowing them to authentically assess if the students “got it”.

Introduction

A careful reading of many current library job descriptions will reveal information literacy instruction as a key job duty with the requirement that the successful applicant have familiarity with or experience teaching at some level. Librarians are performing more instruction than in the past, and this instruction is frequently tied to a specific assignment, project, course, or curricula. Often librarians do not have formalized training in instructional theories, pedagogies, and technologies and may struggle with the question: How can I make information literacy instruction truly impactful for students, especially when confined to a one-shot instruction session?

In this paper, the authors will provide an overview of constructivist learning theory, explore its relationship to active learning, and illustrate ways in which the use of educational technology in the information literacy classroom can help librarians create a learning environment in which students are fully engaged in their own learning and librarians have the opportunity to assess that learning in a meaningful and manageable way. Constructivist learning theory grounds information literacy instruction in student-centered classrooms, where the librarian facilitates student construction of their own learning. It also includes metacognitive reflection where students reflect on what they’ve learned, which reinforces concepts - a crucial activity in one-shot instruction sessions. By making learning active, librarians can adhere to constructivist

principles, keeping students engaged and in charge of what and how they are learning. Technology can be used as a layer for active learning where students are learning with the tools, not from the tools. Technology shouldn't be used for technology's sake; rather it is a lens through which students explore, create, connect, and reflect on their learning. This technology also has the advantage of creating a digital record of student activity, which the librarian can use to assess learning during or after the instruction session.

Literature Review

Constructivist learning theory is a foundation on which technology-enhanced information literacy instruction that promotes active learning and assessment can be built. In "The Application of Learning Theory to Information Literacy," Johnson argues that in order for information literacy instruction to be maximally effective, its instructional design should be informed by and grounded in learning theory, particularly constructivism and behaviorism (2007, p. 103-117). Cooperstein and Kocevar-Weidinger detail how to structure lesson plans in order to effectively create a constructivist learning environment for students in their 2004 article. However, neither article addresses the use of educational technology in constructivist library classrooms. The most recent and thorough guide to incorporating educational technology into information literacy instruction is Hess's chapter "Using Theory and Practice to Build an Instructional Technology Tool Kit," published in *Distributed Learning*. In it, Hess provides an overview of the scholarship of active learning and illustrates how to build an instructional technology toolkit grounded in it. Applications of specific educational technology tools such as Poll Everywhere (O'Connor, 2015), Padlet (Fuchs, 2014), Kahoot, Twitter, Canva, Piktochart, and Bitstrips (Kirsch, Marlow, Pingley, Leonhirth, & Lownes, 2016), and visual mapping tools in general (Renfro, 2017) can be found in the library literature, as well. Cooperstein and Kocevar-Weidinger (2004) caution that librarians should remember that an instruction session backed by constructivist theory means that the activity teaches the students the concepts, the concepts are not taught to the students who then complete an activity. They continue: "active learning [...] more appropriately called constructivist or discovery learning, moves from experience to learning and not the other way around" (p. 141).

Constructivism

Constructivist learning theory is often described as a learner-centered theory where learners construct knowledge and understanding through their own experiences in conjunction with reflection on those experiences (Harasim, 2012, p. 60). Constructivists believe learning is not a passive endeavor in which students receive knowledge in pre-made packages; rather learning is a process of (oftentimes) messy construction in which students take charge of and responsibility for their own learning, and librarians facilitate knowledge creation rather than impart their wisdom. Learners actively construct new knowledge via the lens of their own experiences and existing knowledge in a community of learners.

Various epistemological camps diverge about what "true" constructivism is. Not one universal theory is agreed upon and many scholars argue as to which epistemology is "right" or "viable." Variations on the theory include radical, social, postmodern, cognitive, evolutionary, and

cybernetic, among others (Murphy, 1997, p. 5). Harasim describes two main camps that have emerged as the leading sub-theories within constructivism:

1. Cognitive constructivism (Jean Piaget): how the individual learner understands the world in regards to biological cognitive stages of development, or biology affects learning.
2. Social constructivism (Lev Semyonovich Vygotsky): meaning is constructed out of social interactions, or culture affects learning. (2012, p. 61)

Today, most educators incorporate various aspects of these two sub-theories to create a constructivist pedagogy that emphasizes the student taking an active role in their own learning, either individually or socially, with the educator supporting or facilitating this construction rather than communicating it (Harasim, 2012, p. 60).

Generally, there are five agreed-upon constructivist tenets that librarians must represent in the classroom:

1. A complex and challenging learning environment: the learning environment mirrors a real-world experience.
2. Social negotiation and shared responsibility: instruction goals are negotiated, not imposed.
3. Multiple representations of content: content is conceptually interrelated and multiple perspectives are represented, encouraging divergent thinking.
4. Understanding knowledge is constructed: tools are given to help students navigate and construct knowledge based off of multiple perspectives.
5. Student-centered instruction: learning is controlled by the learner, facilitated by the librarian. (Johnson, 2007; Jonassen, 1991)

Wiggins and McTighe discuss the theory in *Understanding by Design* and describe constructivist pedagogy as something that is taken on by the learner but “artfully designed” by the librarian (2005, p. 103-104). In order to successfully facilitate a constructivist learning experience, a librarian must intentionally plan for and design the instruction session. There are four ways to include constructivist pedagogy in the classroom: active learning, learning by doing, scaffolding, and collaborative learning. When two or more of these things work synchronously, learning is meaningfully constructed.

Wiggins and McTighe’s recipe for building a constructivist learning session includes carefully designed activities, tools that have been intentionally chosen, guided reflection, the learners’ efforts, and the librarian’s feedback (2005, p.228). The creation of this structure necessitates the following actions (Harasim, 2012, p. 69; Cooperstein and Weidinger, 2004, p. 143):

1. Perform a needs assessment prior to class in order to define the structure. What do the students need to know? Need to do? Need to find? Need to perform?
2. Identify a problem or pose a question and have students answer it and suggest resources.
3. Create a problem that is interesting and relevant to the student.
4. Describe to the students how the lesson authentically represents what practitioners actually do.

5. Provide students with an opportunity to reflect. (Harasim, 2012, p. 69; Cooperstein and Weidinger, 2004, p. 143)

It is important to note that experience happens first and learning follows, not the other way around. For example, in many lesson plans, librarians say “after explaining basic concepts” or “after a brief demonstration,” then students will work on the problem. This situates “learning” before the experience and indicates a learning environment in which the activity supplements the instruction. However, constructivist principles order that the experience is the learning, and concepts follow the activity rather than precede it (Cooperstein and Weidinger, 2004, p. 141).

Active Learning and its Relationship to Constructivism

Active learning is inherently constructive in that it is learner-centered, authentic, and collaborative. It calls on learners to make meaning by using current knowledge to construct new knowledge, experiment with new and changing mental models, and employ metacognition by reflecting on what learning means (Maybee, Doan, & Flierl, 2016, p. 705). When students are actively learning, they are completing meaningful tasks rather than passively learning via lecture or readings (Jonassen, 2003, p. 7). When a librarian utilizes active learning in the classroom, learners are able to articulate their own learning goals, decisions made, strategies used, processes undertaken, and lessons learned. Active learning is often authentic because activities can be intentionally designed to require students to relate learning to real-world applications, contextualizing how a concept would be applied in an authentic situation. Active learning can also be collaborative (social constructivism) in that students can work together to build off of each other’s existing knowledge to create new knowledge by working together, discussing, and being a part of a community (Jonassen, 2003, p. 7).

Integrating active learning into the classroom can require a role-reversal for librarians and students, alike. First, the librarian should relinquish intellectual authority in the classroom and become a “coach who helps students to engage in a larger community of scholars” rather than being an “arbiter of knowledge” (Jonassen, 2003, p. 14). Granting students the opportunity to take ownership of their own learning and construct their own knowledge necessitates that the librarian metaphorically step back in the classroom while learning is taking place. He or she will have already done the work of setting the stage for student learning to occur. The librarian will also relinquish authority in the management of learning. This means the librarian cannot control learning that happens in the classroom including *how* things are learned. While students are working and grappling with new concepts, the librarian will need to assist and provide explanations when necessary, but generally shift into assessment mode, evaluating evidence of student learning. The learners, on the other hand, must assume authority in the classroom and take responsibility for their own learning. They should develop skills in articulating, reflecting, and evaluating what they know and be able to regulate their activities and efforts in achieving these goals. The skills they require are constructivist skills: pre-existing knowledge, conversation, articulation, collaboration, and reflection.

Using Educational Technology to Enhance Student Engagement

The use of educational technology in information literacy instruction can help librarians create active learning environments in which students fully participate and actively engage in their own learning. It can support construction, social interaction, and reflection by providing robust outlets for students to be able to “represent” or perform what they know, what they are learning, and how they are learning it. It encourages whole-class participation, providing students who may not have been willing to verbalize their insights and contributions a virtual space in which to do so more comfortably. Student willingness to share thoughts and ideas may additionally increase if they are given the option to respond anonymously (Fuchs, 2014, p. 8). The use of technology in the classroom also gives librarians the opportunity to design dynamic learning activities that can, if constructed deliberately, double as mini-assessments. In using tools such as “wikis, blogs, online discussions, social software, and virtual worlds it is possible to assess and support the development of a much wider range of knowledge, skills, and attitudes than in the past” (Nicol, 2008, p. 2). Librarians can assess student learning in real time as students construct evidence of that learning in the classroom. The active participation of the entire class is valuable as it can give librarians a more accurate and complete picture of student learning than in the traditional classroom in which only one or two students might speak up (Fuchs, 2014, p. 8).

It should be noted, however, that the use of educational technology in information literacy instruction, particularly one-shot sessions, is not without its challenges. Time allotment is by far the most significant, both during lesson planning and within the classroom itself. It takes time for the librarian to learn new technologies and prepare him or herself to troubleshoot potential problems that may arise during instruction. It takes time to introduce students to any new technology, walk them through the creation of a new account or login process, and provide directions for use. Additionally, one of the realities of using active learning in instruction (with or without technology) is that it takes longer to authentically engage students and let them wrestle with new concepts than transfer information via lecture or demonstration. However, when librarians accept that they will be covering less information in an instruction session than before, but students will be learning what is covered more effectively, they will find the benefits far outweigh the challenges.

When developing a lesson plan that incorporates technology, librarians should make certain that the activity is properly aligned with student learning outcomes and assessment goals and that the technology tool selected supports both. Technology alone cannot help librarians and students achieve learning goals. Again, the librarian must intentionally design the instruction session and use technology to enhance learning (Sweeney et al 2017). Librarians should think about technology as tools students are learning *with* and not *from* (Jonassen, 2003, pg. 11). It’s imperative that librarians resist the urge to use technology for technology’s sake and critically assess whether or not a given tool will help students achieve stated student learning outcomes, create an engaging learning environment, and provide an opportunities for meaningful assessment.

Assessment

Assessment in information literacy instruction sessions is often only performed during the class session. This is known as formative assessment, or informal checks on student learning that can uncover the learners' understandings and misconceptions during the instruction session, allowing the librarian to provide timely feedback while making real-time adjustments to the lesson to improve understanding (Wiggins and McTighe 2005, p. 247). Using technology in active learning situations is one way to authentically assess student learning (Jonassen, 2003, 228). Technology is a tool that learners interact with, create with, perform with, and use to reflect on their learning. This tool can provide an interactive, digital record of student learning, allowing the librarian to not only provide valuable feedback on the learners' current performance, but also feed forward, giving constructive guidance on how to do better in future work (Nicol, 2008; Sweeney et al., 2017, 2). Assessment can improve performance by assessing skills and asking students to perform tasks that require those skills. The librarian assesses the product of the learning activity and the learner's performance in creating that product. Students also engage in performing tasks that are meaningful and directly related to real tasks that they need to perform in the future (Jonassen, 2003, 229). For technology-enhanced assessment to be effective, librarians must seek to understand the nuances of technology, including how technology can support assessment of learning. It is important for librarians to make informed decisions about the use of technology in the classroom and how technology enhances and transforms "learning and assessment practices throughout the assessment cycle, including developing authentic and engaging learning tasks, assessing performance and interpreting results, and using the information acquired to enhance learning" (Nicol 2008 in Sweeney et al 2017, 13). Indeed, the librarian must be intentional when choosing the technology and the assessment because "when learners are passive receptacles of technology, delivered messages to be consumed and regurgitated, they are not learning meaningfully" (Jonassen, 2003, 237). Finally, authentic assessment is a partnership between the learner and the librarian. Librarians should actively communicate with students about goals and expectations in relation to technology-enhanced assessment, including what counts as acceptable performance, and students should complete the formative activity according to communicated standards (Sweeney et al. 2017, 13).

Librarians can use technology as a substitute or replacement for traditional assessments. For example, activities that can be completed using "low tech" tools such as paper and pen can now be technologically upgraded using an online document creation tool such as Google Docs. This allows the librarian to monitor the work of all students in real-time, while providing a space for immediate feedback. According to Sweeney et al., "analysis shows that substitution most often comes with functional improvement, such as more efficient provision of feedback" (2017, p. 12). Use of tools that involve collaboration between students-students or students-teacher aligns with principles of good assessment and feedback practice related to interaction, dialog, and facilitating the development of self-assessment and reflection or metacognition (Sweeney et al., 2017, p. 12).

Technology can be effective in fostering metacognitive capabilities that are important for lifelong learning, and transferability of skills (Nicol, 2008, p. 3). Many tools allow you to monitor the progression of learning and have the potential of facilitating assessment of soft skills (i.e., communication amongst students) and higher order thinking skills that are difficult to assess in traditional settings. For example, using clickers or a poll-taking software such as Poll

Everywhere in the classroom is a technologically-enhanced way of assessing higher order thinking skills. Educators oftentimes believe these tools can only assess recall or recognition, but with thought, they can be used to assess conceptual understanding (Jonassen, 2008, p. 233). For example, a librarian can give students a real-world problem to solve and have them work on it in groups. The librarian can then pose questions on Poll Everywhere and have the groups respond, then dialogue to explain their answers. In order to truly assess the efficacy of these technology tools in fulfilling the requirements of constructivist pedagogy, the librarian should ask the question: Are learners active, constructive, authentic, intentional, and collaborative? (Jonassen, 2003, p. 237). The answers to these questions will enable the librarian to deduce if he/she is creating a constructivist technology-enhanced classroom.

Educational Technology Tools in the Information Literacy Classroom

There are many free, online educational technology tools that can be integrated into information literacy instruction sessions in order to encourage student engagement, participation, and provide opportunities for formative assessment. The authors have found particular success using the following tools: Poll Everywhere, Google Sheets, Google Docs, Bubbl.us, and Padlet. Table 1 includes brief descriptions of these tools as well as information about how they can be used for student engagement and assessment purposes.

Table 1.

Educational Technology Tools and Their Applications in the Information Literacy Classroom

Tool	Description	Engagement	Assessment
Poll Everywhere polleverywhere.com	Poll-taking software that accepts responses via phone, browser, or Twitter	Ask a question and students respond in real time or give students options in order to decide what they want to learn in the instruction session	Immediate student feedback allows librarian to cover content quickly, addressing incorrect answers or confusion as students answer questions
Google Sheets sheets.google.com	Collaborative online spreadsheet	Students record their engagement with the research process by answering specific questions on one row of a shared, labeled spreadsheet (research	Evaluation of student responses, often by commenting directly on spreadsheet

		topic, search terms, results, evaluation of results, revised search strategy, etc.)	
Google Docs docs.google.com	Collaborative online document creation and editing tool	Students engage with a secondary source text, highlight leads to primary sources, and add comments about where they may be able to access them	Evaluation of students' highlighted texts and comments
Bubbl.us bubbl.us	Brainstorming and concept mapping tool	Students create concept maps or citation maps that illustrate relationships relevant to their research	Evaluation of students' concept maps or citation maps
Padlet padlet.com	Collaborative online bulletin board	Students share found sources and evaluations of sources via notes on the board	Evaluation of students' notes

Conclusion

While the application of constructivist learning theory via technology-enhanced active learning does not completely solve the challenges librarians face in terms of information literacy instruction, particularly the one-shot session, it does serve to make these instruction sessions as meaningful as possible for students and librarians alike. Librarians who take the time to familiarize themselves with the tenets of constructivism and gain a basic understanding of how to create a constructivist classroom using active learning and educational technology will reap the substantial benefits that are genuinely engaged students, immersed in their own learning, opportunities for authentic formative assessment, and ultimately, the continued improvement of information literacy instruction.

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Information Literacy: A Cure for Infomania

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Abstract

The Infomania Journalism course at the University of Kansas is a good example of why an ounce of prevention is worth a pound of cure. Journalism faculty and the Libraries originally designed the course to help journalism majors cope with the debilitating symptoms of information overload. However, with the development of ACRL's Framework for Information Literacy and changing professional demands in journalism, it was time to concoct a new remedy. In this session, we will share how we paired with a Journalism faculty member and graduate student to co-design inventive assignments and assessments to foster critical information and media literacy among future journalists, advertising agents, and strategic communicators.

Launching a Web Archives Program at a Public University

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Abstract

Many organizations and institutions rely heavily on a web presence to disseminate information and to manage programs and policies. This tendency leaves library and archive professionals with a challenge: how best to capture and preserve web-based information and resources. Over the last few years, the proactive collection and management of web archives has gained traction across all types of libraries and archival repositories. This paper offers a synopsis of actions and initiatives conducted by a small team dedicated to creating a sustainable web archives program at the University of Nebraska-Lincoln Libraries. The authors discuss (1) how the project team formed and the complementary skill sets of the group; (2) the details of the project, including the project scope, objectives, and timeline; (3) the identification and selection process for web resources; (4) the approach for testing and implementing a web capture tool, using Archive-It as an example; and (5) ongoing efforts and challenges for web archives at the university. The write-up is geared towards a broad audience of information professionals in cultural heritage institutions that are interested in project management in libraries and web archives in general.

Introduction

On January 31, 1997, the Internet Archive first archived the main page of the University of Nebraska-Lincoln's (UNL) website (<http://www.unl.edu>) (Internet Archive, 2017). As a non-profit founded in 1996, the Internet Archive is undertaking what is likely the most well-known and ambitious project to save and provide access to websites as they appeared over time (Internet Archive, n.d.). Given the vastness of the World Wide Web, the Internet Archive takes a broad yet limited approach by archiving many websites, but not always frequently or deeply into the website's structure. As such, cultural heritage institutions have increasingly undertaken more curated archiving of websites that are important to their missions and the communities they serve.

UNL Libraries' interest in beginning a web archives program goes back several years. Thanks to the work of many individuals within the organization, the Libraries are now a member of

Archive-It, the Internet Archive's subscription web archiving service, allowing the institution to identify, archive, and preserve web content of historic importance to the university.

Review of Literature

Building a web archives program presents several challenges for any institution. Due to the changing nature of the web as well as the volume and complexity of digital objects, the process of web archiving requires measures beyond the scope of traditional archival practices and workflows. The National Library of Australia (NLA), for example, shared their difficulty in making preservation plans and decisions for web archives. These difficulties were due to (1) the inability to help guide or otherwise control the creation of original content and corresponding format, standards, or quality; (2) the methodological deficiency in collecting and rendering web archives; and (3) the inherent flaws of taking time-limited "snapshots" of dynamic content (Webb, Pearson, & Koerbin, 2013). These challenges pose a new threat to Libraries, Archives, and Museums (LAMs), and require meaningful discussion and iterative, creative preservation planning.

Staffing is another area of challenge expressed in several national and international surveys. In 2016, the National Digital Stewardship Alliance (NDSA) conducted a survey on web archiving in the United States. The resultant report showed that among the institutions that have web archiving initiatives (n=84), only 24% had one or more FTE dedicated to web archiving tasks and more than half devoted only 0.25 FTE (Bailey, Grotke, McCain, Moffatt, & Taylor, 2017). These numbers were similar to those presented in NDSA's 2013 report, which suggested that "research, development, and technical experimentation necessary to advance the archiving tools on these fronts will not come from the majority of web archiving organizations with their fractional staff time commitments" (Bailey et al., 2014, p. 22). In 2015, a similar survey by Harvard Library reached the same conclusion – namely, that the majority of institutions from across the world with established web archiving programs have no full-time staff dedicated to web archive projects (Truman, 2016). These reports suggest that as organizations increasingly invest in web archiving activities and initiatives, allocation for manpower is not increasing proportionally, which can often exhaust operational capabilities at the local level.

Lastly, variations of metadata application appear to be a recurring topic for discussions on planning and implementation of web archives. In response to a 2015 OCLC partner survey, OCLC Research created a Web Archiving Metadata Working Group (WAMWG) to address both metadata guidelines and the use of web archives (Erway, 2015). One of the early efforts of the working group included collecting and analyzing local documentation on metadata application. Seven guidelines from different organizations were compared, and the working group confirmed a lack of shared practices for metadata application throughout the professional community (Dooley & Bowers, in press; Dooley, Farrell, Kim, & Venlet, 2017). Different institutions are applying common metadata standards in different ways. For example, WAMWG's findings reveal that the *Date* field could potentially be expressed by the copyright date within the website, the date of capture within Archive-It, the beginning and end dates of the site's existence, or the origination date of the content displayed within the site (Dooley & Bowers, in press). In practice, non-uniform application of descriptive metadata standards will breed inconsistencies and (eventually) compatibility issues. As WAMWG describes it, "the need for sustainable practices,

in light of limited staff resources, poses an enormous challenge for metadata creation” (Dooley & Bowers, in press, p. 5).

While challenges in decision-making processes, staffing, and metadata application often complicate implementation, there are other, counteractive trends surfacing across LAMs as well. Local and regional collaboration and partnerships are forming to create efficiencies in several areas, including documentation during (and after) implementation. The successful consolidation of documentation and budgetary considerations by the Kansas Archive-It Consortium (KAIC) serves as an excellent example of overcoming such hurdles (Hight, Todd-Diaz, Schulte, & Church, 2017). Similarly, with support from the Andrew W. Mellon Foundation, the New York Art Resources Consortium successfully initiated a collaborative program of web archiving focused on specialist art historical resources (Duncan, 2016). One of the products of this grant included a public metadata application profile for online art resources, such as auction catalogues, catalogues raisonnés, and artists’ websites (Guenther, 2015). The Mellon Foundation also awarded Columbia University Libraries a similar grant for 2013-2015 with the explicit goal of fostering web archiving collaboration via the Web Resources Collection Program (Columbia University Libraries, 2017). Lastly, the California Digital Library, which is one of the most-successful collaborative web archiving programs in the country, has joined together 11 library systems to expand collective capacity to steward web archive collections (California Digital Library, n.d.).

The idea and practice of collaboration for web archives also extends beyond the scope of institution-driven projects. Many archivists and curators are partnering with a wide variety of users and community groups to help build web archives. Sylvie Rollason-Cass and Scott Reid (2015) discuss the profound progress that can be accomplished through institutional collaboration and community-based partnerships, especially web archives on social movements. There’s growing evidence to suggest that although recent surveys have shown little to no growth in staffing models across recently-launched and established web archives programs, there is an abundance of community-based working groups, partnerships, and inter-institutional collaborations forming to spearhead the many challenges on the horizon.

Project History & Planning

UNL Libraries Archives & Special Collections (UNL Archives) attempted to build and integrate a web archives program to adapt to the changing nature of publication methods at UNL. The effort to harvest, preserve, and provide access to websites created by the university is in accordance with policy outlined by the Board of Regents. Specifically, the university’s Records Retention Policy dictates that UNL “has a responsibility to preserve the history of the University for future generations” (UNL Business & Finance, n.d.).

Early efforts to address web archiving at UNL did not have the benefit of formal funding, staffing, or policies. The first major steps toward a web archiving program occurred in 2014 with the implementation of the Rosetta preservation system. Initial plans included use of the open source Web Curator Tool (WCT) software (which has an integration with Rosetta) to manage web archiving. Even with the well-documented WCT software and extremely supportive software developers, UNL Archives struggled to get the software running properly in a

production environment at the time. In late 2014, the Libraries prioritized using Rosetta to ingest current digital content rather than implementing web archiving, and put work on the WCT on hold.

In early 2015, a committee consisting of the data curation librarian, archivists from UNL Archives, and a library science graduate student developed a software-agnostic project to lay the groundwork for a web archiving program. Models developed by the University of Michigan and Indiana University guided the development of the project charter (Shallcross, 2011; Indiana University, n.d.). The charter focused on three main areas: (1) an inventory of domains and subdomains targeted for archiving, (2) the application of descriptive metadata standards, and (3) a review of staff and funding required to implement and sustain a web archiving program. Milestones for the project included identification of websites, guidelines on archiving frequency and depth, archiving non-HTML file formats, using specific standards, addressing intellectual property and copyright concerns, training, and access and delivery tools.

While retention guidelines from the university provided guidance on what web content to archive, UNL Archives focused generally on archiving three types of records: (1) administrative records that are kept for legal, financial, or long-term historical purposes; (2) faculty records where individuals own intellectual property and copyrights; and (3) recognized student organizations, owned by students as developers of organizational property. Using this as a starting point, the initial round of discovery revealed over 325 websites that would be candidates for inclusion. Specific sites were selected as examples of important and varied websites, including sites for administrative units, such as the Office of the Chancellor and academic departments, and websites of the broader University of Nebraska (NU) system. Other entities included the NU system Board of Regents, the Office of Vice Chancellor for Research and Economic Development, Student Affairs, and the Institute of Agriculture and Natural Resources. The review outlined the priority level for each site, its provenance, how frequently it should be archived, and considerations of providing additional metadata for access. This index of potential sites to archive was later repurposed during the implementation phase, mentioned below.

During the planning phase, UNL Archives grew interested in Archive-It. As a service of the Internet Archive, Archive-It provides an easy-to-use platform to manage web archiving activities. Many of UNL's fellow Big Ten Academic Alliance institutions were already using Archive-It and seemed pleased with the pricing and results. Whether UNL selected Archive-It or another tool, UNL Archives determined that additional resources would be necessary to implement a web archives program, including funds to pay for the selected tool and staff time to implement the program and manage it over time.

The web archiving project gained significant momentum in late 2016 when UNL Libraries hired a digital archivist. Among other responsibilities, this position was largely responsible for leading the web archiving program. Following a trial of the service, a new project to implement Archive-It received approval from the Libraries' administration on February 1, 2017. Shortly thereafter, in spring 2017, UNL Archives officially adopted Archive-It as an instrument for crawling, managing, and providing access to web data created by campus entities.

Implementation

Training and practical application drove the earliest stage of implementation. Using Archive-It's documentation and training videos, UNL Archives began learning about the features of crawling and archiving websites and started establishing broad groupings of sites, or "collections." Each collection in Archive-It represents a primary collecting area for Archives and Special Collections, traditionally known as either a record group or manuscript collection. In most cases, each collection in Archive-It represents an existing physical collection (UNL Libraries, Archives and Special Collections, n.d.). Sites, or "seeds," related to the Vice Chancellor of Business and Finance, for example, would be assigned to RG28 – the designated record group for UNL's Business and Finance records (see Figure 1 for Archive-It's account structure). As a result, a total of 30 primary collecting areas were initially created in Archive-It. Each collection has six metadata fields to represent the nature and scope of the collecting area (see Figure 1).

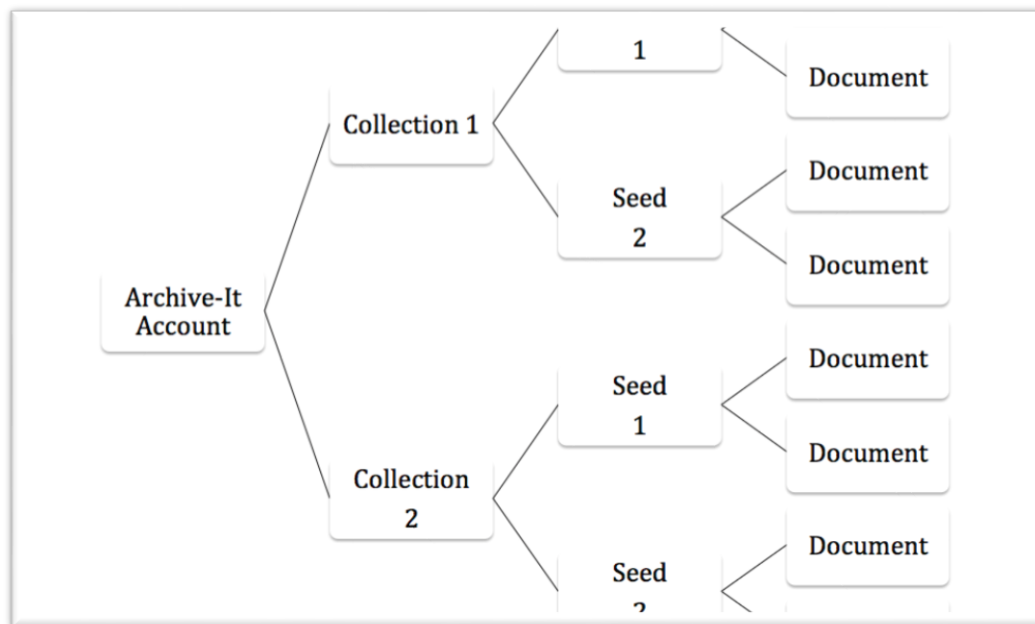


Figure 1. Archive-It's Account Structure for Collections (Praetzellis, 2017a).

College of Architecture

Archived since: Apr, 2017

Description: Archival collection of web data related to the College of Architecture.

Subject: Universities & Libraries, University of Nebraska--Lincoln, University of Nebraska (Lincoln campus). College of Engineering and Architecture, University of Nebraska--Lincoln. College of Architecture

Identifier: RG18

Collector: University Archives & Special Collections, University of Nebraska-Lincoln Libraries

Language: En

Figure 2. Screenshot of Metadata Fields for Record Group 18.

While setting the primary collecting areas for web archives collections, UNL Archives began repurposing an existing index of potential sites and forming a master spreadsheet of seeds. The columns in the spreadsheet were expanded to include: priority, collection, title, contributor, URL, source, and finding aid URL. In particular, priority, URL, and finding aid URL were the three fields needed for appraisal-related actions. Since each Archive-It member has a data limit, setting a priority for each seed enabled the team to sort seeds and impose data limits on lower-priority sites.

Sites were continually added to the master sheet using two methods: manually browsing the site structure of the www.unl.edu domain, and crawling and exporting a sitemap. The latter proved to be the more efficient method, but the sitemap generator began slowing down while attempting to create long indexes of inconsequential subpages. For example, if a single subdomain (e.g., <http://snr.unl.edu/>) contained thousands of subdirectories, then a sitemap generator would attempt to find every page structurally related to the subdomain. Unfortunately, many sitemap generators are truncated when the list exceeds several thousand pages. And, since UNL Libraries crawls primary subdomains and other valuable sites for UNL, a comprehensive list of all subdirectories was unnecessary. A small portion of subdomains were retained from the sitemap generator, but most new additions to the master list were created by manually navigating the www.unl.edu domain.

Once the master list was completed, the team copied and pasted URL's from the spreadsheet into a corresponding collecting area in Archive-It. Roughly 175 sites were carefully reviewed and placed within a designated collection. After transplanting the seeds, the team created seed-level metadata in bulk using the "Bulk Seed Metadata" feature. The team simply downloaded the csv template, and began populating fields using Microsoft Excel and OpenRefine.

In order to begin creating original metadata for seeds, the department chose to utilize two data dictionaries created by the New York Art Resources Consortium (NYARC) and the WAMWG as guides during the process (Guenther, 2015; Dooley & Bowers, 2017). The former guide is primarily based on MARC fields, with mappings to Dublin Core fields, while the latter is a

hybrid set of elements based on DACS, RDA, and Dublin Core. In a timely coincidence, the WAMWG released a preliminary draft of their data dictionary while the UNL Archives team was developing metadata for seeds. Using both as guides, the team attempted to create Dublin Core-based metadata records for most of the seeds, and upload the "bulk seed metadata" csv file into Archive-It (see Figure 3). It's worth noting that both Subject and Dates fields were largely ignored during this process. Subjects were postponed until after the implementation phase, and Dates were automatically populated in Archive-It during crawl sessions.



Figure 3. Screenshot View of Seed-Level Metadata in a Collection

After the seeds and collections were organized, the team began crawling each seed. Crawling – an operation in Archive-It that identifies materials on the live web to become archived content – and monitoring crawl results are recursive processes for any web archives program. Archive-It provides training videos, as well as a support ticket system, to better understand and troubleshoot crawling procedures, such as modifying crawl scope and data limits, bypassing robots.txt, and avoiding crawler traps (Praetzellis, 2017b). Most crawls are fairly straightforward; members enter a seed URL (e.g., <https://nebraska.edu/publications-and-reports/>), and the Heritrix web crawler then identifies and copies live content.

Once a crawl is completed, Archive-It generates a report to check crawl results and determine whether to perform a “patch crawl” if necessary to retrieve any missing content. As an example, a patch crawl would be needed if an institution sets the crawl scope to “standard” in Archive-It, and the site being crawled contains external links to other websites (e.g., YouTube videos); in this case, those external websites would be considered out of scope. If the external links are deemed important enough to include in the archived content, then crawling features can be enabled so the archived content can be patched and specific external links can be included. This crawl-and-report method proved incredibly valuable for the team, because systematically crawling all websites and external links would clutter the collections.

At the conclusion of the implementation phase, the UNL Archives team will shift focus to drafting metadata application guidelines, assigning subject headings for seeds, and conducting patch-crawling work for incomplete crawls. Beyond this work, the team is mindful of the fact that this new responsibility requires proactively monitoring web archives collections over time, which adds a new component to the department's existing responsibilities and services. While Archive-It will remain the primary tool for crawling, archiving, and providing access to archived websites, Rosetta will serve as the preservation system holding a copy of the Archive-It data. The WARC files generated in Archive-It will be downloaded locally on an annual basis at the end of the fiscal year, and then moved into a preservation environment.

Conclusion

One aspect of implementation that extends beyond practical application is integrating web archiving practices into traditional archival workflows. At UNL Libraries Archives & Special Collections, integrating web archives required a deep knowledge of existing skills among staff, tools used in different work areas, documentation and local practices, and the various conditions and processes that impact the workflow of creating and managing digital collections. As with many repositories, areas of the department are transitioning to meet the changing needs of both users and collections management.

Collaboration between individuals and departments in the UNL Libraries made the creation of a web archives program and the implementation of Archive-It possible. As the program continues to gain momentum, UNL Archives hopes to expand collaboration to other institutions, especially with colleagues at the three other NU system campuses.

Proper funding and staffing are essential for a successful web archives program. However, the initial lack of funding and staffing encouraged UNL Archives to focus on planning and laying the groundwork for future work. This early initiative ensured the team was prepared to implement the web archives program once staff and funding became available. Now, the adoption and implementation of Archive-It provides a method of archiving the web-based output of the university over time. Being able to preserve and provide access to this content has ensured UNL Archives is better able to fulfill its mission both now and in the years to come.

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Stop Lecturing, Start Teaching: An Activities-Based Approach to Library Instruction

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Abstract

This paper describes an approach to face-to-face library instruction that favors hands-on, structured activities over lectures or demonstrations. Though a class may begin with a brief lecture, the majority of class time is spent on activities designed to guide students through the process of exploring and thinking about information resources. Because activities are tailor-made for specific assignments, the activity content is meaningful and immediately applicable. Though this approach to instruction involves a significant amount of preparation before each class, there are a number of advantages, including improved student learning and engagement. The activities prompt students to take ownership of their own learning process. Students can work at their own pace and are more willing to ask questions and seek clarification when they do not understand the content. The research activities, designed so that students have to demonstrate their knowledge and skills during class, can also be a source of assessment data. This paper discusses the author's own experiences and classroom assessment data as well as prior research on how an activities-based approach to classroom instruction can benefit students.

Introduction

Librarians are always looking for ways to improve teaching and learning. Understanding why different approaches to teaching are effective, applying those approaches in the classroom, and then collecting data on the success of those approaches can help librarians to become more effective instructors. In the context of the one-shot library instruction session, librarians may feel pressured to cover large amounts of material during a single class session. When librarians feel there is too much content and too little time, they sometimes rely on lectures or demonstrations, instructional methods conducive to presenting large amounts of information in a short period of time. However, research about student learning suggests this approach may not be entirely effective. Some scholars and practitioners argue an approach to classroom instruction that combines activities with lecturing can be more effective.

This paper describes an approach to library instruction that favors hands-on, structured activities over lectures or demonstrations. Though a class may begin with a brief lecture, the majority of class time is spent on activities designed to guide students through the process of exploring and thinking about information resources. Librarians may perceive limited classroom time and increased preparation time as barriers to engaging students in classroom activities. However, understanding students learn more when they participate in focused active learning might motivate librarians to try new classroom activities. Collecting assessment data from these activities is way librarians can gather evidence about student learning in their own classrooms, providing positive feedback or indicators of where the teaching strategies should be revised.

Developing focused class activities and evaluating assessment data is time consuming, especially in the beginning. But practicing this approach makes librarians more adept at using it.

Literature Review

The Lecture Method

Though lecturing is the most commonly used teaching method in college classrooms, scholars and practitioners have been critical of the heavy reliance on lecturing in higher education (Major, Harris, & Zakrajsek, 2016; Mazer & Hess, 2017). The primary criticism of the traditional lecture method is this approach is not supported by evidence about how students learn (Stearns, 2017). One of the disadvantages of reliance on lecturing is students cannot focus their attention on a lecture for an entire 50 to 75-minute class period. Research shows adult learners can only stay focused on lecture content for 10 to 20 minutes at a time (Bonwell & Eison, 1991; Middendorf & Kalish, 1996). Another disadvantage of lecturing is instructors can easily present more information than students can absorb. Research suggests a person can hold around seven pieces of information in working memory (Svinicki, 2004). So even if an instructor or librarian can present a large amount of detailed information during a single class period, it is unlikely that students will be able to process or absorb all that information.

The most significant disadvantage of too much reliance on the lecture method is often this approach does not actively engage students with the material. To retain information, students need to think about new material and practice applying the new knowledge. During a lecture or demonstration, it is easy for students behave passively. However, active learning is associated with enhanced student learning (Stearns, 2017).

Active Learning

In the college classroom, active learning encompasses a variety of approaches. Some general characteristics of active learning strategies are less emphasis is placed on lecturing and more on helping students develop skills and students are engaged in learning activities (Bonwell & Eison, 1991). Bonwell and Eison (1991) proposed, in the college classroom, “strategies promoting active learning be defined as instructional activities involving students in doing things and thinking about what they are doing” (p. 5). Examples of instructional activities that could engage students in active learning are discussions, writing, peer teaching, or comparative organizers.

To be effective, instructional activities should be designed to help students organize new knowledge in a meaningful way (Ambrose, Bridges, DiPietro, Lovett, & Norman, 2010). Activities that allow students to think about and apply new information help students to incorporate information into new or existing knowledge structures. Applying information in varied ways helps students to move beyond memorization to a state where they fluently apply the information in different settings (Svinicki, 2004). In the context of library instruction, simple activities, such as grids that prompt students to identify the salient features of research tools, can help students begin organizing information in a meaningful way.

Combining Lectures and Activities in the Classroom

In the context of a one-shot instruction session, where all the information must be presented in a single class period, combining a brief lecture with a classroom activity can be an effective way to maximize student learning while keeping students focused. Research supports that learning improves when students participate in activities that break up lecture time (Major et al., 2016). Based on research about “attention span and how the mind works,” Middendorf and Kalish (1996) “suggest that lectures should be punctuated with periodic activities” (para. 7). Mallin (2017) stated, “Interactive lectures, interspersed with activities in which students directly engage with the material, enable students to frame new knowledge in terms of what they already know” (p. 242).

An Activities-based Approach to Library Instruction

This section of the paper offers advice for librarians who want to incorporate activities into their one-shot library instruction sessions. The activities presented are examples the author used in her own sessions. The examples are not intended to be a comprehensive list, but samples of successful activities. It should also be noted the featured activities are for business or economics classes; however, the author previously used this approach for art, communication studies, sociology, and journalism classes.

The ideal classroom set up is a computer lab. When a lab is not available, it also works well for students to use their own laptops. Example activities were created using a subscription tool called Qualtrics, but free tools such as Google Forms could be used instead.

Use Lecture Time Effectively

In the context of library instruction, a brief introductory lecture can be used to emphasize a few important points and build the common base of knowledge students need to begin classroom activities. Rather than delve into large amounts of detail during the lecture, present students with as much information as they need to get started, and then use activities to facilitate a more in-depth understanding. Classroom activities can help students to check their understanding of what is presented in a lecture and develop a deeper understanding by applying and analyzing the material (Mallin, 2017). For example, this activity was created for a lower-level undergraduate business class where students were researching specific companies. The introductory lecture included a brief explanation of how to locate the database and why the database was useful for the assignment. Then students immediately applied that information by locating a report for the company they were researching.

1. Find the IBISWorld database on the library website.
2. Search for your company by name.
3. Your company may be covered in more than one industry report. Choose the report that best matches your company's activities.
4. Download the report PDF and email it to yourself.
What is the name of your company?
What is the name of the IBISWorld report that best matches your company's industry?

An introductory lecture can also be used to foster a supportive classroom environment and to explain how the class activities help students to complete their research assignment. “When students find positive value in a learning goal or activity, expect to successfully achieve a desired learning outcome, and perceive support from their environment, they are likely to be strongly motivated to learn” (Ambrose et al., 2010, p.5). Students are more inclined to participate in a classroom where the instructor expresses enthusiasm and develops a rapport with the students. Students are more likely to see the value in classroom activities when they understand how those learning activities will help them to meet their goals.

Developing Effective Activities

When designing activities for the classroom, librarians should be aware that presenting too much detailed information about research strategies and library resources during a single class period will make it difficult for students to remember significant content. Rather than trying to cover a large amount of information in a single class period, develop a few main learning goals for the session. Use activities reinforce those main ideas.

Activity instructions should include brief text that prompts students to focus on significant information. Written prompts have been shown to be effective in focusing student efforts on skills they need to learn (Ambrose et al., 2010). For library instruction, this can be as simple as directing students to find and explore a specific information resource useful for an assignment. For example, this item from an activity created for a freshman-level business class reminds students about a type of strategic business analysis mentioned during the introductory lecture and then prompts students to examine the strategic analysis for information required for their assignment: “Look at the SWOT analysis section of the Company Profile for your company. A SWOT analysis is a framework for examining a company's strengths, weaknesses, opportunities, and threats. What does the SWOT analysis tell you about your company's major products and/or services, target markets, or marketing channels?” This focuses student attention on a few salient details and then allows students to explore the content on their own.

Try to create activities that require students to think about and engage with the material rather than just memorize the material. Thinking about and applying the material will improve students’ ability to recall information and apply it in new settings. For example, this item from a class activity for a senior-level accounting research course simply asks students to recall a particular resource: “Name the editorial resource in Checkpoint that is a good starting place for finding background information on a tax topic.” Recall items can be useful for reinforcing important information. However, items that ask students to think about the content of a resource are more effective in developing understanding. For example, this item for the same class asks students to describe content in their own words: “In the text of the IRS Notice 2008-40, you will see links at the top of the page to other resources. Follow the Citator link to see the history of IRS Notice 2008-40. What does the Citator tell you about IRS Notice 2008-40?”

Check Student Understanding

In-class activities give the opportunity for a librarian to provide immediate feedback to students. This can occur as a librarian walks around the room having discussions with students as they

work. It can also occur at the end of an activity. When an instructor debriefs an activity, students can further develop and reinforce their knowledge (Mallin, 2017). A lecture follow up is a good opportunity for librarians to check students' understanding, correcting misconceptions before students leave class.

Though a librarian delivering a single one-shot instruction session does not always have the opportunity to provide immediate feedback about student misconceptions, collecting assessment data can help librarians identify patterns in student understanding of a topic, offering the opportunity to try to correct that issue in subsequent sessions.

Class Activity Examples

Example A. Figure 1 is a class activity for an introductory entrepreneurship class with an assignment that required market research for a feasibility analysis. The goals of the activity are to educate students about two information sources, American FactFinder and Mintel Academic. There were two learning goals for this activity. At the end of the class, students should be able to:

- Use the resources to find demographic or consumer information.
- Articulate the basic differences between the types of content available in the two resources.

Item 1.

Find demographic information, such as age, race, and gender, for a specific geographic area.

1. Go to American FactFinder
2. Use the Community Facts box to search for a state, county, or city
3. Select the 2014 American Community Survey

What is the geographic area you selected?

How many people between 20 to 24 live in that area?

Item 2.

How many households in your geographic area have an income of \$200,000 or more per year?

Item 3.

Look at Mintel Reports (a library consumer market research database).

How does the content available in Mintel differ from the content in American Factfinder?

Figure 1. Activity text: demographic/consumer research activity

Figure 2 is an example of one method for assessing student responses. The assessment tool is a simple grid that allows the librarian to tally whether the student met one of the learning goals for the activity. Assessment data was collected from four classes.

<p>Item 3. Look at Mintel Reports (a library consumer market research database). How does the content available in Mintel differ from the content in American Factfinder?</p>		
<p>Learning goal: The student can articulate the basic differences between the types of content available in the two resources (American FactFinder and Mintel Academic).</p>		
<p>Yes Student articulated salient features of both resources accurately.</p>	<p>Partially Student articulated some salient details but not all of the details were correct.</p>	<p>No Student did not articulate salient details and most of the details were incorrect.</p>
85	23	8

Figure 2. Assessing student responses.

Here are a couple examples of good student answers to this item:

“In American Factfinder the information is along the lines of race, age, population, and income. Mintel is different because they offer consumer preferences in different markets. For example, American Factfinder could help me find how many people make more than \$200,000 on average and Mintel could tell me how many people like the idea of wearable technology.”

“American FactFinder is essentially U.S. Census Bureau data specifically on demographic data. Mintel Reports content is market research for consumers of the US and UK. Mintel Reports deal with market analysis, trends, attitudes, behaviors, and preferences. Overall Mintel Reports are geared towards market analysis research while American FactFinder is demographic data.”

Example B. This class activity (see Figure 3) was designed for sophomore/junior economics seminar intended to introduce students to economics as a science and profession. The students did not have a specific research assignment, so the activity focused on introducing them to research tools and strategies appropriate for economics majors. There were two learning goals for this activity. At the end of the class, students should be able to:

- Identify appropriate library resources for economic-related research.
- Articulate appropriate strategies for finding information on economic-related topics using the resources introduced in class.

<p>Welcome to the sophomore/junior economics seminar library activity.</p> <p>Item 1.</p>

Please select all the resources you had used before today.

EconLit
Google Scholar
Search It
ABI/INFORM

Item 2.

Do you have questions or frustrations about library research? If yes, please share.

Item 3.

Look at the following research tools: ABI/INFORM, EconLit, Search It, Google Scholar. What source types (books, newspapers, scholarly journals, trade journals) can you find using each research tool. Check all that apply.

	Books	Newspapers	Scholarly Journals	Newspapers
EconLit				
Google Scholar				
Search It				
ABI/INFORM				

Item 4.

Scenario

You are writing a paper on Brexit for an economics class. Your professor requires you to use 3 scholarly journal articles as references. Where is a good place to begin your search? Please explain why?

Item 5.

Scenario

Your economics professor has asked you to write a summary of recent developments (January 2017 or later) related to Brexit. Describe how you would find resources using the library website.

Item 6.
Scenario
One of the sources for your Brexit paper must be a book. Describe how you might find a book on Brexit. Is the book you found available at K-State or will you have to request it through interlibrary loan?

Item 7.

Please provide feedback about today's library session. Thanks!

Do not submit the form yet. We will go over the answers together.

Figure 3. Activity Text: Economics Research Activity

Figure 4 is an example of one method for assessing student responses. The assessment tool is a simple grid that allows the librarian to tally whether the student met the learning goals for the activity.

Item 4. Scenario You are writing a paper on Brexit for an economics class. Your professor requires you to use 3 scholarly journal articles as references. Where is a good place to begin your search? Please explain why?			
Learning Goal: Student identified appropriate library resources.		Learning Goal: Students articulated appropriate strategies for finding information.	
Yes	No	Yes	No
10	1	10	1

Figure 4. Assessing student responses.

Here is an example of a good student response:

“EconLit would be a good place to begin my search because it narrows down my search more than Search It. Also EconLit mainly contains scholarly journals and books. Google Scholar would also be a good place to being because they also mainly focus on books and scholarly journals.”

Conclusion

Trying an activities-based approach to library instruction involves risk, especially for librarians who are teaching one-shot instruction sessions in another professor's classroom. The other professor may view lecturing as synonymous with teaching. Students may not participate, or they may find the activity confusing. However, active learning requires librarians to relinquish some control over the classroom environment to allow students to develop skills and knowledge. "Active learning means that learners take increasing responsibility for their learning, and that teachers are enablers and activators of learning, rather than lecturers or deliverers of ideas" (Cambridge International Examinations, 2015).

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Committing to Customer Service: Valuing and Measuring Reference Customer Satisfaction

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Abstract

In 2016, the members of the Learning and Research Department at UMKC Libraries decided to focus collectively on improving customer service for the users of our reference services. A year of exploring student feedback and best practices followed, culminating in the creation of six customer service values to guide our reference efforts. In 2017, we developed a workshop on values to share with the Public Services Division, as well as a survey to measure our users' satisfaction. This presentation will outline customer service values and highlight their development, subsequent training, and assessment.

From Trapped and Bored to Interested and Informed: Library Instruction That Engages Students in Active Learning

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Abstract

Is your library instruction engaging or are your students bored? Do your students feel like they are your captive audience and do you feel trapped along with them? The presenter's first library instruction sessions back when she was a first year librarian were horrendous. After just a few weeks, the presenter got tired of hearing herself speak, trapped in a dark classroom for 50 minutes with no windows and only one presenter workstation trying to convey a ton of useful library information to uninterested students.

The presenter was a newly minted librarian hired at a school that had no formal information literacy program or any kind of plan in place. As she developed an information literacy program and looked for ways to provide information literacy across the curriculum at her institution, she began to find ways to actively engage students with everything from self-guided 'mystery' tours and 2-day Library Open Houses to in-class research team group activities, peer-to-peer class assignments, and flipped classroom instruction via LibGuides. The information literacy curriculum departed from lecturing the entire class time to having students teach and learn from each other whether in a computer lab or not. She found that actively engaging students not only made the time spent together more enjoyable for everyone, but the students were able to demonstrate that they were actually learning.

The presenter will share program goals, how they fit into the university's strategic plan, and how each of the student learning activities developed fit into the program framework to reach students at different levels. This session will be useful for librarians looking to develop an information literacy program or more engaging learning activities to use in one-shot library instruction sessions.

Best Practices for Creating a Welcoming Environment for Transgender and Gender Non-Conforming Individuals in Libraries

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Abstract

The purpose of this paper is to share recommendations and best practices on how library staff can create a welcoming environment for library users who are transgender and gender non-conforming. This user population often encounters barriers such as language usage, accommodations, name and pronoun usage, and identity disclosure when using libraries. A focus will be on the practical aspects of assisting transgender and gender non-conforming individuals in instructional settings, during reference transactions, at outreach events, or in mentoring students and student employees. Nine recommendations are given to help library staff build cultural competency and confidence in serving this user population.

Introduction

The American Library Association's *Interpretation of the library bill of rights*, in the section "Intellectual freedom principles for academic libraries," states that "a service philosophy should be promoted that affords equal access to information for all in the academic community with no discrimination on the basis of race, age, values, gender, sexual orientation, gender identity, cultural or ethnic background, physical, sensory, cognitive or learning disability, economic status, religious beliefs, or views" (2017, p. 25, #10). Libraries and library staff have a professional obligation to not only provide equitable access to resources and library services for all members of their community, including transgender library users, but also to promote a service philosophy that includes this population. Often library staff with little or no experience with the transgender community can feel uncomfortable when approached for research assistance by a transgender library user. Inaccurate representations of transgender people in the media do not help the situation. But librarians have always sought to understand and educate themselves on the user populations they serve either through professional development, reading library literature on a specific user group, performing community analysis, or through direct experience with a community. In addition, librarians are knowledgeable about the student populations at their institutions and have experience tailoring their service approaches to specific user groups. Similarly, academic libraries in many ways serve as extensions of the classroom. Many of our teaching colleagues are learning about and implementing methods to create safe and inclusive classroom environments for transgender and gender non-conforming students. Our libraries should follow suit.

Many people in service professions have fears of inadvertently offending a transgender person by saying the wrong thing or stumbling over pronouns. The author believes that it is common to make mistakes with this user population and acceptable as long as you acknowledge the mistake

promptly and your intent is compassionate and not discriminatory. Many transgender library users can discern a compassionate approach and willingness to learn.

It's the author's hope that the best practices and recommendations described in this paper can be considered and implemented to begin to create a welcoming and inclusive library experience for transgender and gender non-conforming library users.

Definitions

It is helpful to define a few terms and concepts that will be used throughout this paper. "Transgender" will be used as an umbrella term to include gender non-conforming persons who might identify as gender expansive, gender diverse, androgynous, transsexual, intersex, or gender creative. In other words, transgender describes people whose gender identity and/or gender expression differ from what is typically associated with the sex they were assigned at birth. Transgender is often shorted to "trans." The author acknowledges the variety of terms that transgender and gender non-conforming people use to describe themselves and seeks to be inclusive rather than exclusive. For many years now the term LGBTQ (Lesbian, Gay, Bisexual, Transgender, and Queer/Questioning) has been used to describe or emphasize a diversity of sexuality- and gender identity-based cultures. Originally the acronym had no T or Q, and it has become common practice to add letters to the acronym as our understanding of gender and sexual orientation has expanded. A longer acronym is LGBTTIQQ, Lesbian, Gay, Bisexual, Transgender, Transsexual, Intersex, Questioning, Queer. There is considerable variation with these acronyms, and the author has chosen to use LGBTQI to encompass the entirety of sexuality- and gender identity-based cultures because this is what is commonly used on his campus and in his local community.

Review of Literature

Library literature written prior to 2017 has mainly focused on the information needs and information seeking behavior of transgender library users (Marquex, 2014; Schaller, 2011; Taylor, 2002). However, outside of library literature, professional literature for academics that addresses the needs of transgender students in higher education has grown substantially, offering a variety of articles on creating safe and inclusive classroom environments for transgender and gender non-conforming students. *The Chronicle of Higher Education* issued a special report in 2015 (including a highly informative video) that gave transgender students a platform to state explicitly what their needs are to help them thrive in their academic pursuits. In 2017, there was a conference paper delivered at the annual meeting of the Association of American Colleges & Universities and subsequently published in the journal *Liberal Education* that outlines the primary concerns of transgender students on college campuses (Stolzenberg & Hughes, 2017). In addition, there are blogs that address library service to this user population (Pearce, 2015; Thompson, 2012), as well as an ACRL conference paper that has helpful information for serving transgender users at academic library service points (Marrall, 2015).

Recommendation 1

Refrain from making assumptions about the gender of a library user. One of the first things people do when meeting someone for the first time is attempt to identify that person's gender (usually limited to male or female) and then assign pronouns and titles to that person, such as Sir, Mr., or Ma'am. One should never guess at a person's preferred pronoun. When it comes to pronouns, it's better to allow users autonomy over their identities rather than impose your own preconceptions. Instead of using pronouns when referring to the library user, use terms such as "student," "instructor," "library user," or "researcher." It is quite common at service points to refer a user to another staff member, such as a student employee or a librarian with subject expertise, where it would be easy to default to a preconceived pronoun. Library staff may need to practice interactions or referrals where pronouns are avoided altogether. Once you have established a professional relationship with a transgender library user, ask them what pronoun they prefer and remember their pronoun for future interactions. Pronouns are not only "he" and "she;" it is becoming more and more common for students to use "they, them, their" as gender-neutral singular pronouns. The gender-neutral pronouns "ze" (sometimes spelled "zie") and "hir" are also used by some transgender people. Library staff can add their own pronouns to e-mail signature files, name tags, office doors, or documents to establish this as routine practice. When discussing a transgender person among colleagues, if the person is misgendered or misnamed, politely provide a correction whether the person who was misgendered or misnamed is present or not.

Recommendation 2

Use the name that the library user prefers. University photo ID cards, class rosters, and other university documents will often have the legal, but incorrect, name for transgender library users. Ask the user what name they prefer and, if your ILS allows for it, enter the name in the "preferred name" field or note in any additional information or comments field that "user goes by the name ____." Some circulation systems have the capability to add a field to a library record that would prioritize a student's preferred name over their legal name. In library instructional situations, only call roll or read the class roster aloud after providing students with an opportunity to self-identify the name they go by and their pronouns. Record the preferred name of the student and use it in all course correspondence. Set a tone of respect the first day of class as part of the course expectations and connect this discussion with honoring one another's requested names and pronouns. If you are teaching a semester-long research methods or bibliography course, include an inclusion statement in the syllabi which explains your desire for an inclusive classroom experience with an explicit reference to respecting gender identity and expression. Use this statement as a conversation starter about expected behavior and conduct of all classroom participants. Avoid dividing students into groups by male or female during group activities or active learning exercises. Since transgender students are not largely represented in a student campus population, it can be easy to tokenize them. Remember that no one person can speak for the entire transgender community, and the student may not want to discuss this issue at all, should it come up in instructional activities. Instructors can use transgender people as part of case studies or when describing various segments of our population in an effort to acknowledge that transgender and gender non-conforming people exist in all segments of our population.

If your library recognizes student awards and accomplishments using social media, publications such as newsletters, or digital signage, check to be sure that the student's preferred name is listed correctly. Acknowledge when you've made a mistake about someone's name and make the correction. If you know that a person has changed their name, don't ask about their former name or mistakenly use a former name.

At outreach events, if nametags are used, encourage use of pronouns on the nametags and allow attendees to write their preferred name rather than creating pre-printed name tags.

Recommendation 3

Remove gendered language on signage, library forms, web forms, or surveys. It is very common for library surveys, card applications, and forms to inquire about a person's gender using a male or female check box. This reinforces the binary thinking of our culture and forces a transgender person into the uncomfortable position of making a binary choice or not responding at all. Ask yourself how important this information is to you and how you will use it. Instead of using a check box system, consider allowing a person to write in their gender on forms and surveys. For example: I identify my gender as _____ (fill in the blank).

The most common gendered signage is used to designate bathrooms. If there is a bathroom in your library, consider whether or not it really needs to be designated male or female. If the bathroom is a single stall, consider changing the signage to indicate it is an "all gender" bathroom which can also serve families with small children or adults that are accompanied by a differently gendered care-taker.

Recommendation 4

Be a role model for other library staff and persons who are not familiar with this issue. Model language and respectful treatment of transgender people in all your professional interactions. Encourage discussion of these issues either by holding a training for library staff on this topic or devoting time in a library staff meeting for discussing best practices on this topic. Staff meetings are opportune times to discuss this user group and to practice reference interactions and techniques for avoiding pronouns. It is natural for people to be curious about the lives and experiences of transgender people, but it is not appropriate to ask personal questions of gender non-conforming people that you would not ask of others. Such questions include inquiries about a gender non-conforming person's body, medical care, or former name; why or how they knew they were gender non-conforming; their sexual orientation or practices; their family's reaction to their gender identity; or any other questions that are irrelevant to the library context. These questions can seem invasive unless the student explicitly invites them or voluntarily offers this information. In addition to being a role model, strive to have a library staff that is diverse and includes transgender and gender non-conforming people. Employ staff who reflect the diversity of the university community and are trained to work with and serve diverse communities. If library users know that a staff member is transgender, they are more likely to seek out this person and ask for assistance.

Some people have political, cultural, and/or religious objections to someone being transgender. Being professional and respectful to a transgender library user does not require abandoning these beliefs. It does, however, mean that one may not act upon them in the workplace and instead requires upholding common workplace values of dignity and respect for all people you encounter. It is important to separate private values from workplace conduct. No library would want to be identified as the most insensitive, discriminatory, or hostile place on campus for transgender and gender non-conforming people.

Recommendation 5

Become familiar with the language and concerns related to the transgender and gender non-conforming community. As our knowledge and understanding of gender identity increases over time, the language used by and to describe transgender people evolves. In the last decade, this language has evolved very rapidly. The National PFLAG (Parents and Friends of Lesbians and Gays) *Glossary of Terms* web page (<http://www.pflag.org/glossary>) says, “The power of language to shape our perceptions and understanding of other people is immense. Precise use of terms in regards to gender and sexual orientation can have a significant impact on demystifying many of the misperceptions associated with these concepts.” When writing about transgender people, use C. Jacob Hale’s guide (2009). To gain additional fluency related to the language of the transgender community, in addition to the PFLAG glossary, the author recommends consulting the GLAAD *Glossary of Terms – Transgender*, which is frequently updated. The GLAAD *Glossary of Terms* includes a list of terms to avoid and that are considered defamatory and gives recommended terms to use instead. Terms to avoid include transvestite, sex change operation, transgenderism, tranny, and hermaphrodite.

It is still fairly common for people to mix-up or misuse the terms “sexual orientation” and “gender identity” as well as “gender” and “sex.” Sexual orientation describes how people position themselves on the spectrum of attraction and identity to another person. It is distinct from gender identity or gender expression. Transgender people exhibit the full range of sexual orientations, from homosexual to bisexual to heterosexual. Sex is typically one’s assigned sex at birth based on a child’s visible sex organs, including genitalia and other physical characteristics, while gender is the “set of social, psychological, or emotional traits, often influenced by societal expectations, that classify an individual as male, female, a mixture of both, or neither” (PFLAG, n.d.). Gender identity is a person’s internal, deeply held sense of their gender, which can include male, female, both, or neither. It is important to note that one’s gender identity does not always correspond to their biological sex. A term to describe a person for whom they do correspond is “cisgender.”

The term transgender is a statement of identity, not just an adjective, so, like “lesbian” or “Latino,” it should not have an “-ed” added to the end. When referring to transgender people, do not use the term “transgendered.” For example, one would say “many transgender people were marching for equality.” (not transgendered people or transgenders). Using terms that are offensive or archaic contributes to an unwelcoming environment for transgender people. When a library staff member uses offensive language to describe transgender people, trans people quickly notice this and they are less likely to visit the library, consult with staff, or use library resources.

It is also common for people to use “LGBT” as an umbrella term to describe only one segment of this community. Keep in mind that the “T” in LGBT is distinct from the “LGB,” and there are times when one would want to specifically single out one of these groups. This paper is a good example of how separating out transgender issues from LGB issues can be important and useful for specific purposes.

While many LGBTQI people face similar issues of discrimination, it is helpful to know the specific issues that are faced by transgender people. The *Report of the 2015 U.S. Transgender Survey* (James, Herman, & Rankin, 2016) highlights issues currently faced by transgender people. These include pervasive mistreatment and violence, severe economic hardship and instability, harmful effects in physical and mental health including psychological distress and attempted suicide, and homelessness.

Our culture is overly concerned with whether a transgender person “passes” as male or female. “Passing” refers to a transgender person's ability to go through daily life without others making an assumption that they are transgender. How a person is perceived by others is entirely dependent on how the people making the determination understand gender, their ideas of what males and females should look like. The term passing is problematic because it implies “passing as something you're not.” Embedded in the term is the idea that a transgender person is pretending and or intending to deceive someone. When transgender people are living as their authentic selves they are not being deceptive or misleading. It is best to avoid this term and concept altogether.

To continue building cultural competency with transgender library users, develop an understanding of the issues surrounding the transgender community. Many campuses are expanding their professional development opportunities to enable faculty and staff to more competently and effectively support the needs of transgender students. Library staff wishing to increase their understanding of transgender students can contact a Center for Teaching and Learning on their campus to learn about resources and workshops (Harbin, 2016). One can also be directly or indirectly involved in the transgender community. One popular event held annually in all major cities is the Transgender Day of Remembrance (TDOR). Consider attending this event to learn more about the community. Staff may already be involved with social justice causes that intersect with the transgender community such as homelessness, community violence, employment inequality, teen suicide prevention, or the Black Lives Matter movement.

Oberlin College has developed an effective document for exploring cisgender privilege, *Non-Trans Privilege or Cisgender Privilege List* (Oberlin College, n.d.). Before engaging colleagues in this issue, make sure you're doing your best not to contribute to the problem. You may need to first explore cisgender privilege within yourself before you encourage others to work on this issue.

Recommendation 6

Be knowledgeable about support systems at your college or university that assist transgender people. Many library staff are in the position of mentoring students, especially library student employees and those who are heavy users of the library. Knowing when and to

whom to refer a student for helpful resources on campus can be very beneficial. Most university and college campuses have an LGBTQI resource center. Some campuses have stand-alone centers, while others work in collaboration with other student services departments or diversity centers. Staff and faculty working with college students should know where the LGBTQI center is located and be knowledgeable about what it offers. LGBTQI centers provide a safe space for students as well as access to resources and services designed specifically to promote LGBTQI presence and participation on campus. More importantly, the resource center works in dual directions, for the university and for the student, bridging the gaps that can make college life difficult for LGBTQI students. These centers frequently offer trainings on creating welcoming environments for transgender people that can be helpful in proactively educating library staff members to be sensitive to gender identity issues. Likewise, be familiar with mental health support systems on your campus and refer students to them as needed. Transgender students who have experienced harassment and discrimination might benefit from mental health and wellness centers on campus.

Recommendation 7

Work collaboratively with others on campus to provide accommodations and protections for transgender people. Many transgender people realize their gender identity at a very young age, even prior to attending college. Some will experience acceptance by their communities and families of origin, but others may not. Students who identify as transgender may conceptualize college as a place where they can be their authentic selves for the first time, only to later become disillusioned and frustrated when they aren't affirmed by their university's policies. Transgender students lack important legal protections that would ensure their inclusion in our colleges and universities. At the federal level and in most states, nondiscrimination laws do not protect transgender people. At institutions of higher education that strive for diversity and social justice, library staff can work collaboratively with campus partners to support the success of transgender students. For example, if your campus does not have a non-discrimination statement that includes gender identity and gender expression, work with faculty senate or similar groups to add these terms. Collaborate with campus partners to provide gender neutral bathrooms in residence halls, libraries, and other buildings on campus. Libraries can provide maps or a link to a map that has the location of all campus buildings with gender inclusive bathrooms. In your mentoring activities, if a student expresses a need for a service or accommodation, ask around to see if that service is offered on campus and if it is not, collaborate with others to create it.

Recommendation 8

Develop or update resources at your library that would be helpful to transgender people. Considering creating a LibGuide on the topic of transgender or transgender studies to guide researchers at your institution to relevant resources. Most libraries have library materials on the topic of transgender but check to be sure these materials are up-to-date. Simply having an up-to-date collection on this topic contributes to an inclusive library environment and sends a message that this user group is important to the library. Consider making virtual reference desk / chat available in your library if it is not offered already. Many transgender library users have had negative experiences with being misgendered or mistreated in public spaces and prefer to avoid public interactions. Offering an online chat service can be a first step in gaining the trust of

transgender people if they have positive experiences with it. In addition, libraries can create programming that addresses the needs of the transgender community, such as collaborating with a university department or student organization to bring a transgender author to campus.

Recommendation 9

Be careful about “outing” or disclosing information about transgender library users.

Library staff are well-trained in the importance of confidentiality around patron library records, but not necessarily with the sensitive issue of protecting the identities of library users. Especially in academic institutions where library staff develop mentoring relationships with students and student employees, it's critical to always obtain consent before sharing information about a trans person's identity. Some transgender people feel comfortable disclosing their identity to other people, and some do not. A transgender person's identity is personal information, and it is up to them as to when and where to share it with others. There can be negative consequences when a transgender person is “outed,” ranging from awkwardness in social situations, loss of friends or family, loss of a job or family financial support, difficulties with housing and in residence halls, and other forms of discrimination. There are simply many spaces that are not as safe as the one you are trying to create.

Conclusions

Creating a welcoming library for transgender and gender non-conforming library users is not something that can happen overnight, but any of the above recommendations are a step in the right direction and will improve a transgender person's experience in a library. Employing staff members who understand this user community and are willing to take time to explore and educate themselves on this issue will contribute to the overall success of transgender students and all library users. Anyone new to this issue and this user population should expect to make mistakes along the way but should not be discouraged from the work of creating a safe and inclusive library environment. Academic libraries not only have the obligation to provide equitable access to resources and library services for all members of their community, but are also important campus partners in creating a diverse and supportive campus climate for all users.

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Making Dibner Library a Happy Place: What Disney Taught Us about Improving Library Services

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Abstract

Many components of the modern academic library environment are outside the library's direct control. But major overhauls of facilities, infrastructure, electronic services, and other large projects are not the only means of improving the user experience. This paper describes the attempt of a busy academic library, challenged by limited space and facilities control, to employ Disneyesque techniques to make the library a more welcoming and happier place for library users. In practice, the attempt focused not so much on the bigger picture, but the ordinary everyday things the user does not even think about, but invariably contribute to a feeling of comfort in the library and quiet satisfaction with library service. Adjustments and service additions were driven by user feedback. Dibner Library made every attempt to listen to user input and make easy adjustments based on that input.

The Disney Magic

The authors of this study viewed a presentation by Amy Rossi at ALA Annual 2016 and were impressed by her overview of the Disney customer experience philosophy. They also enjoyed another viewer's thoughts that helped refresh their memory - Drew Bordas post on OCLC.org, "What Disney taught us about great service" (Bordas, 2016). They saw echoes of their own outlook and practice in this and wanted to detail some of the things they did in the Dibner Library and how they relate to this philosophy.

Bordas summarized presentation themes noted in his post:

- Over manage the details, little things the customer might not notice, but might feel something is missing if they were not part of their experience.
- Define the customer experience; this is a way of working with what you can affect to overcome negative stereotypes and problem areas, to focus on your users the on good things rather than any negative points.
- Manage beyond the obvious. Rossi gave the example of little things, perhaps not associated in your users' mind with your service. She mentioned parking lots, highlighting an important final touchpoint in the user experience, but one that is not

generally something that comes to mind when someone thinks of the Disney experience. Something analogous in the academic library might be the finals period (a library can provide stress relieving activities and services).

- Another important point made in the presentation is to start with what you can control. This can lead to greater interest by management in making more changes. In this paper the authors focus on the many small things within the control of the Dibner Library and presumably other academic libraries.
- The Disney program is characterized by practicality. One is recommended to define and list touchpoints, then rate them as a service and every month to do something within an area of control to alleviate the problem; not necessarily to fix it, but slightly improve the situation.

In a literature review, the authors also explored the concept of customer service, customer satisfaction, touchpoints, and the “small changes” concept found in the broken windows theory.

The Dibner Situation

The Bern Dibner Library of Science and Technology is located on the New York University (NYU) Tandon School of Engineering campus in Brooklyn. The library supports the teaching and research needs of the faculty and student body of the NYU Tandon School of Engineering, formerly known as Polytechnic Institute of NYU. Dibner Library’s relationship to the larger NYU libraries system and the NYU Tandon School of Engineering is somewhat unusual among academic libraries. Physical changes are largely funded by the school of engineering, not the division of libraries. Personnel and services fall under the NYU Division of Libraries purview.

In the Dibner Library, some problem areas are easily identifiable. Issues include noise, limited space, and food consumption. Behind the scenes are management and training challenges. The unavoidable situation of students as employees presents challenges, leading to a concern with proper training of student workers in an attempt to ensure they engage sufficiently and properly with the user and provide a high level of service.

The library becomes aware of user perceived service failings in a variety of ways. The most direct methods include observation of noise level and space limitations by library staff and personal user complaints to library staff about the noise and lack of open seating. There was a more formal, university wide venue for feedback and assessment, a LibQUAL+ survey. Dibner users gave lower marks in some areas, mostly facilities related problems such as noise and seating. The Dibner Library strove to apply some of the Disney Magic in the Dibner situation.

Review of the Literature

The literature of many disciplines analyzed the concepts of *service quality* and *customer satisfaction*. Consideration for both is important for libraries (Hernon, Nitecki, & Altman, 1999). One can find analogies to the library experience in retailing, marketing, and customer services. Many have difficulty, as Frow and Payne (2007) noted, grasping what customer experience actually means. Frow and Payne (2007) provided a thorough summary of the retailing literature in customer experience and customer satisfaction, writing about goal related activities and

experiential activities. In the library, many users are engaged in goal directed activities, but the aim of the Dibner Library was to have some influence on their experiential consumption. Libraries must have users who keep returning in order for libraries to continue to be viable spaces. Why would users keep returning to the library if they have 24-hour online access to information and alternate study areas? The reasons relate to their total experience of the library. The Dibner Library used to be more transactional, a business service. This has changed. Now, the Dibner Library is not quite in the leisure category, but shares some characteristics with the leisure industry, such as creating a comfortable, inviting space in addition to providing goods and services. The characteristics of leisure combined with the research materials and reference services of the traditional library. Frow and Payne (2007) also discussed touchpoints and small changes, with an emphasis on what is possible financially by weighing the balance between expenses and impact. Touchpoints help build an experience.

Many things affect the customer experience. An example from the retailing literature is Verhoef, Lemon, Parasuraman, Roggeveen, Tsiros, and Schlesinger's (2009) statement, "examining the social environment we must not only focus on the more traditional interactions (customer to employee, company to employee, and company to customer) but also examine how customers interact and affect one another, as well as how the interaction between employees may affect the customer experience" (p.35). Many things are outside the control of a university library, with limited budgets and occupying a place in a much larger organization. However, the library can play some role in how users feel inside the library and how they affect each other. Customer service experience improves with small changes, such as seating arrangement, efforts towards noise management, and increased final period monitoring.

Customer service is very important; most librarians try their best and supervisors make the effort to train students to a high degree. Still, there is a tantalizing idea from a study on an Indonesian library where customer service did not directly affect customer loyalty, although it did indirectly via customer satisfaction. However, as the article notes, many variables affect customer satisfaction (Bakti & Sumaedi, 2013). We infer small changes and a focus on touchpoints have a role to play in customer satisfaction.

Most academic libraries share some degree of similarity; libraries are places where students go to research, study, and find resources. In the internet age, there are places outside of libraries where a user can engage in these activities. Why go to the library instead of another location? Another example from retailing might provide guidance to libraries. Bacon (2004) wrote eliminating something subpar is easy; however, many places are very similar in price, facilities, and service - how do you differentiate them? The answer is in making superior customer service an operational initiative. Bacon (2004) stated everyone represents the company to the customer; everyone is a touchpoint. Customer service to this degree would be difficult to replicate in an academic library. Indeed, it would even be difficult to find a student with the engaging traits exhibited by the cable car conductor described by Belcastro (2005). However, as noted above, superior service is not the only route to customer loyalty. A library can keep the idea of touchpoints, but in addition to the librarian and student staff serving as the touchpoint, one can also incorporate the Disney sense of the term, all the places where the user comes into contact with something that speaks to their experience of a place.

Businesses, and libraries, need customers to be loyal, even becoming advocates, but sometimes instilling a sense of loyalty takes more than customer service. In the last several years, retailing literature included much about the total customer experience. Small changes, an intrinsic part of the broken windows theory, have a big impact upon user satisfaction. There are many little things within the control of most academic libraries analogous to Disney touchpoints. Levine (2005) stressed the outsized impact of small changes. It is essential to manage the little details because, "A messy reception area might lead customers to believe that the company doesn't care about cleanliness or quality" (Levine, 2005, p. 13). This is complementary to the Disney touchpoints and will be discussed within the context of the Dibner experience.

The Disney experience is a model for many institutions. The Valparaiso University information technology (IT) department presented a paper at Association for Computing Machinery about how Disney principles led to a dramatic improvement in customer service (Klein & Steele, 2014). Disney training services are much sought after by healthcare (Hosford, 2004); even Porsche has hired Disney to help raise their customer satisfaction rankings (Wilson, 2017).

Nature of the Work and Space

As Rossi mentioned in her presentation, both Disney and libraries are in the service industry. There will never be an absolutely perfect experience, and users will indubitably experience some periods worse than others. However, one can aim to reduce problem areas as much as possible, so problems in the areas one can control become the rare exception.

The library aims to provide a service, and this service must always be a work in progress. Dibner librarians are perpetually either implementing a service or striving to improve a service. Discovering and upgrading the touchpoints, the areas where users come into contact with a part of the service, helps to identify and smooth out any rough edges in the user experience. As the literature review demonstrates, small changes can have outsized impact. The Dibner Library listened to its users and tried to make feasible changes with potential to render a better user experience. Below are recent examples the following touchpoints areas: virtual space, physical space, and service. The examples are of small changes made in the Dibner Library, aimed to have an outsized impact on customer service.

Dibner Library Touchpoints: Virtual Space

Some touchpoints are easily identifiable. A key area where the user comes into contact with a service is the library website. The Dibner Library used to be in charge of its own separate website. Recently, an overhaul of the NYU Libraries website incorporated several independent websites under one home page with standardized banners and frames. If a library has direct control of a website, keeping important information like library hours up to date and as detailed as possible is imperative. Many libraries subscribe to Springshare Libguides. Libguides is a platform that makes it easy to convey information to the user about access, services and resources. The platform also allows for direct local control of FAQs.

Circulation information and document delivery should be easy to find, understand, and use. One relatively simple service to make available, with the potential to yield immense dividends, is an

online support option in a prominent position. At NYU Libraries, an Ask-A-Librarian icon is on the upper right of the library website. Clicking on the link loads a page with the option for live chat, email, phone, or text messaging support. A link to an email with quickly answered requests may go a long way towards alleviating any unintended difficulties in the website or areas outside the library's control.

One virtual Dibner Library touchpoint proven exceptionally effective is the room reservation page. The page experiences a large number of hits every day and can thus be leveraged for publicity, announcements, outreach, and feedback. This a potent means of conveying information to the user.

Dibner Library Touchpoints: Physical Space

The physical area of a library may or may not be more difficult to control, depending on the library. In the case of the Dibner Library, one can make a distinction between IT services and furnishing, managed by library personnel, and much of the physical space and its features - rooms, walls, climate control, and plumbing - are outside the library's direct control. Likely, the case with many academic libraries, physical space has many issues largely outside their control. The best one can do is notify facilities of areas that fall short of expectations, such as blown light bulbs, challenging temperatures, or lack of supplies like paper towels. There are some areas related to facilities the library was able to affect, such as arranging for extra cleaning during the finals period when open 24 hours.

Signage is an important touchpoint. The Dibner Library undertook a major signage overhaul in an attempt to make signs clear, visually appealing, and positioned in the best places. Librarians walked through the libraries and examined all signs, eliminated some, repositioned others, adjusted content, and added new ones. Signage is something relatively easy to do with potential to benefit the user in many places.

Library staff determined by observing the locations where students sat and by user comments on insufficient numbers of power outlets. Installing power outlets is an area difficult to require the buildings facilities management provide the desired resource. Dibner IT staff purchased long power strips and secured them to the tops of contiguous study carrels without going through building facilities. Small, moveable whiteboards were another item where it is not necessary to go through facilities management to procure and install.

Library staff noticed chairs frequently moved to some areas and study rooms. In the face of this evidence of student preference, the library did not stick to its original arrangement, but redistributed seating to match user preferences. Library staff removed extra chairs from the study rooms and created chair stacks in areas of high use.

Dibner Library Touchpoints: Service

The Dibner Library has considerably more control over library service areas, but even this presents challenges. One challenge is a very small staff at the Dibner Library and services are concentrated in the main service desk at the entrance to the library. The library cannot support a

cadre of highly trained service representatives, such as one finds in Disney or retailing, who constantly walk the floor seeking users to assist, and thus ensuring high quality service touchpoints at all areas at the time of immediate need. The upside to the relatively small library space is the ease for the user to find assistance.

Another service touchpoint challenge is the great majority of times the user comes directly into contact with a service representative, that person is a student assistant. There is a vast difference in experience between different students, with many of them being relatively new. However, every staff person that comes in touch with a library user is a touchpoint. With this in mind, student workers are trained to the highest degree possible. It is essential student assistants have a baseline knowledge of rules, policies, and processes throughout the organization and some reference knowledge. Student assistants undergo thorough training and a variety of procedures to help them provide quality service. A key tool in training, Qualtrics quizzes, cover a variety of topics, are presented in a humorous way, and are administered every semester. The quizzes serve to not only gauge student knowledge of library procedure, but also identify material needing further clarification. One thing the librarians always stress is the student assistant should never send anyone away without some kind of answer. Student assistants, instructed to always try to find someone who knows the answer, refer the user to someone with contact information or take the user contact information so someone can get back to them. The most responsible and knowledgeable are made student leaders. With the understanding a happy student worker helps to make a happy workplace, student assistants are much appreciated. Goodies are brought in on their birthdays and graduating students are given cards and gifts, a group lunch at a restaurant, and library staff attend their graduation. Graduating student assistants who worked in the library at least two years receive cords. Staff attending the graduation ceremony were gratified to observe the graduating library student assistants proudly wearing their library cords.

A goal of the Dibner Library is to be friendly and welcoming to the student body. This is the approach even when the immediate objective is obtaining feedback. The Atrium desk is a mobile desk set up once a week during the semester. The desk serves as a reference, assistance, and engagement area where the librarians frequently present games and challenges of interest to engineers. Examples include such activities as building the tallest tower of pasta, making a paper airplane that flies the furthest, solving equations to get a piece of a puzzle to reveal a picture. Any survey distributed at the desk is formatted for students to quickly and easily complete using a touchscreen computer. Dibner librarians attempted to limit the number of questions per survey, sometimes to just three.

Library rules, policies, and events are also publicized in this manner. Free cookies are distributed with librarian faces, specialties, and contact information pasted on. Lollipops are given out with library facts taped to them. The library obtained swag from vendors, such as multi-tools and planners, affixed labels containing information like library hours to them, and distributed them to students.

Special events with free food are a good way to draw students who may need information or have a project to discuss. The library hosted a graduate breakfast the last two semesters with the entire graduate student body invited. Students can come and go as they please, enjoy free

breakfast, and discuss any questions with library representatives. Library staff from the larger NYU Community, not just the Brooklyn Campus, attended.

Finals period is a great time to demonstrate support for the student body and make the library experience a pleasant one. A partnership between the library and student affairs provides stress relievers such as visits by puppies, massages, meditation breaks, and donuts. The library schedule expands to 24 hours, except Friday and Saturday when it closes at midnight. Overnight student assistants prepare free coffee. The library invested in a popcorn machine and provides free bags of popcorn during certain periods. Finally, a special Spun Chair is moved in front of the service desk for the students to have some fun and unwind as they enter and leave the library between taking and studying for finals.

During the finals period, the library took steps to address student complaints about noise and lack of seating. Some of the scarcity of free seating was caused by what we called "parking," students leaving personal items for extended periods in order to save a seat while they were not actually in the library. Set periods were scheduled throughout the day when a library staff member or two would walk around and issue parking tickets, leaving friendly and politely worded notices that unattended items might result in theft and also deprives a fellow student of a seat. These walks and the tickets were performed in a friendly manner and framed as a service to the library users.

Many academic libraries provide workshops on different topics. The Dibner Library saw the workshop schedule as an opportunity to offer the school of engineering community a variety of beginner and advanced classes on topics outside the standard library workshop spectrum.

User services is one area all academic libraries share, and an area where small changes may have outsized impact. The Dibner Library has one service desk at the entrance to the library that serves as the location for circulation, access services, librarian referrals, course reserves, and IT support. Every effort is made to keep the service desk clean, well ordered, and well supplied. Staplers historically were frequently an issue with jamming and lack of staples. Now there are an abundance of staplers. A pencil sharpener is screwed to the front for the large number of students who need it. Large plastic pencil cases were purchased, loaded with an eraser and whiteboard markers to be lent out.

Just as in the public areas, other items the library purchased and easily installed without going through facilities management. One is a small mobile charging station placed outside the desk on which students can create a temporary combination to securely charge their mobile devices.

User-friendly changes were made to the course reserve system. The Dibner Library had long attempted to keep at least one copy of any book being used as a textbook in class on course reserve. Recently the library made a decision to allow course reserve books, laptops, and chargers to be available for overnight use. The library cut back hours based on occupancy counts; however, allowing these items to circulate overnight was a way of serving some users that might be inconvenienced.

Conclusion

Small changes have the potential for outsized impact. This is an idea used in the business world the Dibner Library attempted to incorporate into its environment and services. Complementary is the Disney practice of using touchpoints, areas in which the user comes into some degree of contact with a service, and making any possible improvements so the user is likely to remember the goods parts of the experience, not experience or dwell on any negative aspects. The changes made by the library were within the library control and were either inexpensive or could be leveraged from relationships with the larger institution. A relatively small staff implemented changes. The ideas presented may be of use to libraries with limited staff, space, and financial resources.

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More Than Just a Job: Student and Supervisor Perspectives on Mentoring

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Abstract

What can the experiences of undergraduate student employees and their supervisors in an academic library tell us about libraries as mentoring communities? What are the most rewarding and challenging aspects of supervisor-student interactions? To what extent do both parties see their relationship in terms of mentoring? How do mentors help undergraduate student employees develop their skills, interests, and confidence? How does the mentoring relationship change over time? This presentation will highlight the findings of interviews and surveys of students and library support staff at the Gustavus Adolphus College Library. Attendees will have an opportunity to share and learn from each other's experiences. The session will be useful to supervisors and mentors of undergraduate student employees as well as the broader audience of those interested in developing libraries as mentoring communities.

What Do We Need? Information Criticality! When Do We Need It? Now!

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Abstract

The proliferation of “fake news” and “alternative facts” in our current political culture has prompted librarians to ask themselves what more they could be doing to combat misinformation and encourage information criticality among their students and patrons. In this paper, the authors share practical, actionable ideas inspired by the ACRL *Framework for Information Literacy for Higher Education* frame Authority is Constructed and Contextual and the work of innovative librarians around the country. Examples include information literacy lesson plans grounded in the landscape of current events, social media activism campaigns, and responsive programming ideas, such as displays on newly controversial topics.³

Introduction

Concern among librarians about our patrons’ abilities to locate, evaluate, and apply information is not new. The Association of College and Research Libraries (ACRL) Presidential Committee on Information Literacy asserted in its 1989 final report, “information literate citizens are able to spot and expose chicanery, disinformation, and lies” (para. 14). New challenges continuously present as the 24-hour news cycle accelerates because digital sources of information become both increasingly varied and almost ubiquitously accessible. An online source may be shared before being read thoroughly, and information proliferates at unprecedented speed. Among the general public, a perception is growing that fake news is causing a great deal of confusion about the basic facts of current events (Pew Research Center, 2016). Evidence exists demonstrating fake news has very real consequences; take the case of Edgar Welch for example. Welch, a North Carolina man, opened fire in Comet Ping Pong, a Washington DC restaurant, in December 2016, motivated by false rumors of children being sexually exploited there (Fisher, Cox, & Hermann, 2016). How can librarians, individually and collectively, begin to address this situation?

³ The authors would like to recognize the intellectual contributions of Rebecca C. Hyde, Associate Professor at Saint Louis University, who helped to shape the ideas and themes presented here.

Literature Review

After 18 months of field research with thousands of middle school, high school, and college students, the Stanford History Education Research Group reported in 2016, “overall, young people’s ability to reason about information on the Internet can be summed up in one word: *bleak*” (p. 4). This finding was not mitigated by school funding or other socioeconomic factors. This conclusion, rightfully, caused ripples of consternation throughout the teaching professions; however, concern about information literacy and the public’s ability to critically evaluate media sources is by no means confined to the library or education literature. Contributors at publications as mainstream as Forbes asserted “the rise of ‘fake news’ is first and foremost a sign that we have failed as a society to teach our citizens how to think critically about data and information” (Leetaru, 2016). Even President Obama commented on the proliferation of misinformation, saying

An explanation of climate change from a Nobel Prize-winning physicist looks exactly the same on your Facebook page as the denial of climate change by somebody on the Koch brothers’ payroll. And the capacity to disseminate misinformation, wild conspiracy theories, to pain the opposition in wildly negative light without any rebuttal - that has accelerated in ways that much more sharply polarize the electorate and make it very difficult to have a common conversation. (Remnick, 2016, pg. 57)

Saying we have entered a cynical new age where facts are no longer objective is tempting. Oxford Dictionaries declared “post truth” to be the 2016 Word of the Year due to an extreme spike in usage across a broad range of media, coinciding with British and American political events. In an April 2017 cover story, TIME queried “Is Truth Dead?” However, despite these concerns, acknowledging misinformation and fake news do exist on a spectrum is important. While we cannot deny or ignore some pieces are completely fabricated, a great many more are biased, present factual information devoid of context, or distort facts in order to mislead. One well-publicized example is a geocentric blog declaring “60 million Americans know that the sun revolves around the Earth,” interpolating from a Gallup poll which found 79% of Americans correctly answered that the Earth revolves around the sun, therefore the remaining 21% believe the reverse (Olcott, 2012, pg. 116). While correct at a surface level, the presentation of this fact is still misleading because the statement does not explicitly acknowledge the four-fifths of Americans who are aware or the entire body of scientific evidence indicating the Earth revolves around the sun. True information criticality involves an appreciation for nuance, an understanding of context, and the ability to parse out the intended motivation or purpose behind a particular presentation of information. It is a dangerous and slippery slope to cynicism when information evaluation ceases to be a holistic, multi-step process and instead becomes a binary rubber stamp, where we dismiss any information challenging us or creating dissonance. Arendt (1973) commented, “in an ever-changing, incomprehensible world the masses had reached the point where they would, at the same time, believe everything and nothing, think that everything was possible and that nothing was true” (p. 382). If everything is fake, and all facts are subjective, it could seem almost nothing matters much at all. With such high stakes, realizing librarians are poised at the intersection of responsibility and opportunity to address these issues is encouraging.

Trust in Libraries and Librarians

Critical thinking and information literacy have been topics of interest for library professionals, and the American Library Association (ALA) Core Values espouse a commitment to education, lifelong learning, and support of the public good. Fortunately, librarians are poised to advance these issues. Director, Lee Rainie (2017) disseminated preliminary findings from research conducted by the Pew Research Center's Internet, Science and Technology group in a keynote address at an Innovative Users Group Conference. The findings revealed people tend to like librarians, place a high level of trust in library resources (78% of respondents agree libraries help them find trustworthy information), and "express a clear hope" librarians can help in the struggle to find and evaluate credible information (Rainie, 2017). Regardless of professional setting, all librarians have a shared role as educators and, therefore, opportunities to help guide our respective patrons toward improved information criticality. Centering information literacy as a durable and transferable set of skills essential to all aspects of civic life is increasingly important for librarians in higher education (Head & Whibey, 2017). Centering the skills as a conceptual understanding of the information ecosystem, rather than an artifice of academia emphasized during instruction sessions on database mechanics. ACRL adopting the *Framework for Information Literacy for Higher Education* and rescindment of the *Information Literacy Competency Standards for Higher Education* in 2016 supports the shift from skill to concept-based information literacy instruction.

Authority is Constructed and Contextual

The ACRL *Framework for Information Literacy for Higher Education* frame Authority is Constructed and Contextual and its threshold concept directly relate to librarians' growing concerns about the consumption and sharing of misinformation.

Information resources reflect their creators' expertise and credibility, and are evaluated based on the information need and the context in which the information will be used. Authority is constructed in that various communities may recognize different types of authority. It is contextual in that the information need may help to determine the level of authority required. (ACRL, 2015, p. 4)

In order for information consumers to begin to differentiate between credible and non-credible sources, they must first learn to recognize and assess information in terms of its authority, a process more complex and nuanced than one might imagine. For example, how should information consumers make sense of authority with information written by someone who holds a position of political power, but who does not have subject expertise the topic addressed in the source? Over time, those who comprehend the above threshold concept develop the ability to differentiate and define different kinds of authority. For example, "subject expertise" or "societal position," recognizing authority is not set in stone and can be "tempered" by other factors (ACRL, 2015, p. 4).

Adding an additional layer of complexity within this threshold concept is the constructed nature of authority. Disparate groups of people recognize authority differently, based on their own beliefs, backgrounds, and political leanings. For example, the Pew Research Center *Political*

Polarization and Media Habits (2014) study reported for the United States, very little overlap between the political news sources trusted by liberals and conservatives. “Almost no information can be considered uniformly authoritative for all people in all times and in all circumstances” (Bauder & Rod, 2016, p. 253). With this in mind, information consumers simply must use outside research tools to confirm the credibility of sources, particularly in situations in which a higher level of authority is required, such as those attached to decision making.

Ultimately, those who comprehend the threshold concept contained within the frame Authority is Constructed and Contextual will begin to consume information with an open, but critical mind, synthesizing differing and even conflicting sources of information. They will recognize and acknowledge their own biases and those reflected in the information they are consuming. They will also realize they are “developing their own authoritative voices,” “recognize the responsibility that this entails, including seeking accuracy and reliability,” and demonstrate appropriate constraint when sharing information, particularly on social media (ACRL, 2015, p. 4).

Combatting Misinformation and Inspiring Information Criticality

The grasping of threshold concepts requires multiple instructional exposures. Librarians have worked to address this by developing instructional content in different forms, including best practices for news evaluation, lesson plans, credit-bearing course curricula, tutorials, videos, LibGuides, infographics, social media campaigns, and responsive programming within libraries.

In 2017, Candice Benjes-Small, Head of Information Literacy and Faculty Outreach at Radford University, shared news evaluation best practices developed with her colleague Dr. Scott Dunn, Associate Professor of Communication, on ACRLog, a blog for academic and research librarians. The information centered on the evaluation of the quality of news content itself, as opposed to external factors and checklists, and included the practice of not judging the credibility of news based on the source *alone*. Authors recommended looking within news content for evidence of the principles contained within the Society for Professional Journalists Code of Ethics. Recognizing the difference between editorials, commentaries, and news stories in terms of purpose, finding the original source of any story, and fact checking news content inciting one’s passion, seeming too good, terrible, or crazy to be true (Benjes-Small & Dunn, 2017).

The most progressive of news literacy lesson plans, research activities, and tutorials eschew the use of binary evaluation checklists such as the C.R.A.A.P. test, standing for currency, relevance, authority, accuracy, and purpose, in favor of more nuanced methods of evaluation. Librarians share these plans, activities, and tutorials via the ACRL Framework for Information Literacy Sandbox (<http://sandbox.acrl.org>) and Cora: Community of Online Research Assignments (<https://www.projectcora.org>). To find quality instructional materials serving as practical applications of the frame situated within the context of current events librarians can easily search either of the aforementioned open access collections by the ACRL *Framework for Information Literacy for Higher Education* frame Authority is Constructed and Contextual.

Another common thread among forward-looking instructional content is the commitment to do more than teaching how to recognize fake news using superficial identifiers such as unusual

URLs and other peripheral attributes. Rather, this content places emphasis on teaching students and other patrons how to recognize credible journalism, in keeping with best practices recommended by Benjes-Small and Dunn. This approach is likely to be more effective long-term as fake news purveyors change their deception tactics and has the added benefit of underscoring the fact credible journalism does exist. In their zeal to stress the importance of information criticality, librarians must make sure they do not inadvertently lead students to believe they cannot trust *any* media. In 2016, Becker expressed his concern about the changing role of skepticism within the information evaluation process, “After being inundated with reports of fake news, it’s much easier to dismiss any information as fake news, allowing skepticism to be the last step in questioning information’s validity” (p. 189). Fister (2017) notes, “a large percentage of our population has lost faith in the very idea that there is a shared reality and a common set of tested methods we can use to understand it” (p. 76). This should concern all librarians. Unfortunately, labeling content information consumers disagree with as fake news is easier than challenging their own beliefs (Becker, 2016).

In order to address these concerns and help University of Michigan students learn how to critically evaluate news media, librarian Doreen Bradley collaborated with the University of Michigan College of Literature, Science, and the Arts to develop a credit-bearing course entitled “Fake News, Lies, and Propaganda: How to Sort Fact from Fiction” offered in fall 2017. This course addresses the ways student social media feeds impact their worldview and how to tweak said feeds to be more representative of the views of others with whom they do not agree. The course does not endorse any particular news sources, but help students recognize the political leanings of various publications (Hawkins & Piñon, 2017). While not all academic librarians are able to implement news literacy centered credit bearing courses at their institutions, advancement of this kind is encouraging and may provide inspiration and future direction.

Librarians also developed LibGuides and infographics supporting instruction on these complex issues. The most engaging news evaluation LibGuides incorporate student-generated content. Examples of engaging student-generated content include definitions of fake news (Cornell University, 2017), videos and corresponding classroom discussion starters like those found on *Fake News and the Post-Truth Era* (Columbia College, 2017), and active learning assignments can be integrated into information literacy instruction, such as those shared on the Indiana University East *Fake News* LibGuide (2017). Many LibGuides also feature infographics making content more easily digestible, visually appealing, and shareable. The International Federation of Library Associations and Institutions (2017) infographic *How to Spot Fake News*, based upon the FactCheck.org article of same name (Kiely & Robertson, 2016), has been shared by librarians. The infographic is notable in particular because of its clarity, ease of reuse, and availability in more than thirty languages, making outreach to diverse patron populations easily achievable. Select LibGuides under Creative Commons licenses can be copied or adapted by librarians seeking to add news literacy content to their local LibGuides systems, including the aforementioned guides from Cornell University and Indiana University East.

Although librarians can only hope to capture a sliver of their patron social media attention, using the same medium that so often perpetuates the rapid spread of fake news to champion the importance of fact-checking and information criticality makes sense. Some organized hashtag campaigns, for example #DayofFacts or #FactCheckIt, are annual events presenting

opportunities for libraries to join other knowledge organizations, like museums, science centers, cultural organizations, and journalists, in pushing back against the premise alternative facts exist and highlighting strategies for confirming sources. An annual campaign, #1Lib1Ref, fosters the idea if every librarian committed to adding a single reference to any Wikipedia article during the January event, the overall quality of Wikipedia improves. More generally, hashtags like #NewsLiteracy and #MediaLiteracy aim to continue highlighting the importance of criticality in media consumption throughout the year. Some libraries created their own campaigns; #VetYourSources, created by the Virginia Commonwealth University Libraries (McNeill, 2017) is a notable example focusing on empowering people to think about the information they consume. Searching with these hashtags can also be an excellent way to discover lesson plans and other inspiration regarding the work done in this arena.

Likewise, librarians can capitalize on themes emerging in the public discourse in order to plan timely programs and highlight existing collections. When scientific facts and historical narratives seem open to dispute, reminding our patrons that libraries have always provided access to credible, reliable sources is useful. In many libraries, putting together a display is fairly fast and easy. The authors observed display examples from public and academic libraries highlighting materials about Islam in response to proposed travel bans; immigration and refugee narratives; protest, civil rights and social activism; science and environmental sustainability; women's rights and reproductive rights; kindness and tolerance (especially noted in displays intended for children); Black Lives/Black Stories Matter; the American Civil War; and other topics as they are spotlighted in national policy debates. Current events and trends in the public discourse also naturally inform collection development decisions. Librarians acquiring materials covering important historical and policy events enable patrons to make informed consumer decisions, reflecting the diversity of both local communities and the wider world.

Scheduled programs can include traditional speaker series, where an expert shares their knowledge on a topic of interest in a lecture format or more participatory facilitated group discussions. Toward that end, the Libraries Transform Communities initiative of the American Library Association recently began training library workers to lead dialogue and deliberation efforts in their communities. Providing training tracks tailored for those working in academic, rural, and urban settings (ALA, 2017). Librarians are able to leverage their positions as trusted information experts into action by facilitating important conversations about issues, rather than debating "facts," and helping patrons make informed choices about advocacy, political action and leading change at the local level.

Conclusion

There is much librarians can and should do to address the spread of misinformation and its widening impact in our culture. The authors hope to provide inspiration in coverage of the dedicated work of librarians across the country as well as in the ACRL *Framework for Information Literacy for Higher Education* frame Authority is Constructed and Contextual. As librarians move forward, working to educate and inspire information criticality within their students and patrons, they must recognize the opportunities for librarianship at this particular time in our culture and history. As Howard Schneider, Center for News Literacy executive director at Stony Brook University, warned in the spring of 2017, "The greatest danger for

college students and even non-college students, is not that they will be fooled by fake news, but that they are beginning to doubt real news” (Jazyanka). Needed now more than ever are librarians and true information criticality that does not end with skepticism, but inquiry.

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What Do Your Library Chats Say?: How to Analyze Webchat Transcripts for Sentiment and Topic Extraction

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Abstract

Chat reference is popular at academic libraries, where most of the users are digital natives who incorporate IM (instant messaging) software as a daily part of online life. But reference can be complicated when you are not meeting face-to-face. Are we answering our patron's questions? Are all the librarians answering the questions the same way? Are the interactions positive or negative experiences? And how much effort is actually put into chat interactions? Library reference chat transcripts give us a unique opportunity to find out all of this information from chat reference interactions.

Rockhurst University's Greenlease Library looked at two years of library chats and used simple natural language processing techniques to explore user behavior and learn about the most popular topics. This presentation covers the process used, and what was learned from the data. In addition, the presenter will discuss how she used code to map each chat to the READ (Reference Effort Assessment Data) scale in order to determine the effort, skills, knowledge, teaching, techniques and tools utilized by librarians during each reference transaction.

Introduction

The Greenlease Library at Rockhurst University integrated chat into its library services in 2011. The library uses LibraryH3lp, and this service is embedded into the library website, the online catalog, library databases, and Libguides. Chat reference is available on a 24/7 basis. While the library is open, chat is staffed by Rockhurst Library staff, but once the library is closed, we rely on consortial librarians (AJCU- American Jesuit Colleges and Universities) and then LibraryH3lp staff, also called Chatstaff, to answer reference questions.

With all these chat transactions, how do we know that we are providing a consistent level of service? What are the chats about? Are they easy to answer directional questions, or more traditional reference questions? Library staff record all reference transactions, including chat, but those encounters are filtered through the lens of staff member's experience and patience for recording the transaction. Chat transcripts offer the chance to look at actual exchanges between library staff and patrons. This project seeks to explore user interactions and identify patterns as it examines library chat transcripts through topic extraction, sentiment analysis and READ scale mapping.

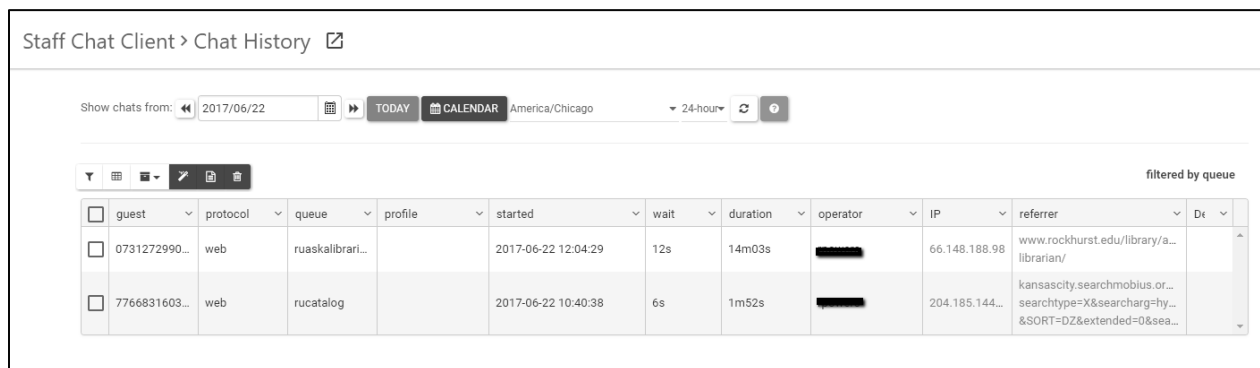
Purpose

The purpose of this study was two-fold. In the first phase, the goal was to mine the library's chat transcripts to explore user behavior. The study sought to find out if the library staff had a continuity of responses to chat questions, or if each staff member responded differently to similar research questions, with an eye towards providing better service to patrons. The library hoped to find the most common kinds of questions asked through chat and whether the interactions were positive or negative.

In the second phase, the study attempted to train a model to map chat transactions to the READ scale in an attempt to know how much staff effort was put into chat interactions. Ultimately, the library hoped to use the information from this study to gain a greater understanding of reference chat behavior from both sides of the computer in order to improve the service.

Methodology

Although it is possible to export transcripts from the LibraryH3lp from their website interface in the Staff Chat Client Chat History, the actual transcript text is only available as a text file, an xml file, or an html file. It would have required an extraordinary amount of pre-processing to shape the file to begin to be able to work with it. It was fortunate, then that obtaining chat transcripts for two years (FY15 and FY16) of Rockhurst University Library chats in a CSV file with accompanying tabular metadata, was as simple as contacting LibraryH3lp and requesting it. The library obtained 1079 chats from various queues, including chats originating from the online catalog, libguides, the library homepage and various databases.



Staff Chat Client > Chat History

Show chats from: 2017/06/22 TODAY CALENDAR America/Chicago 24-hour

filtered by queue

<input type="checkbox"/>	guest	protocol	queue	profile	started	wait	duration	operator	IP	referrer	Dt
<input type="checkbox"/>	0731272990...	web	ruaskalibrari...		2017-06-22 12:04:29	12s	14m03s		66.148.188.98	www.rockhurst.edu/library/a...librarian/	
<input type="checkbox"/>	7766831603...	web	rucatalog		2017-06-22 10:40:38	6s	1m52s		204.185.144...	kansascity.searchmobius.or...searchtype=X&searcharg=hy...&SORT=DZ&extended=0&sea...	

Figure 1: Screenshot of LibraryH3lp chat history.

NLTK

Text is unstructured data, and requires a structural framework before computational analysis to take place. This process of turning unstructured text into structured data is called text mining, and data mining is the analysis performed on that data (Bernhardt, et al., 2015). In order to create that structure, this study uses the NLTK, the Natural Language Toolkit, which is a suite of

Python modules providing many natural language processing data types, processing tasks, corpus samples and readers (Bird, Klein and Loper, 2009).

This study utilized Python to implement the NLTK. The Python programming language is a dynamically-typed, object-oriented interpreted language (Madani, 2007). Python has a relatively shallow learning curve and an excellent online learning resources. Although Python already has most of the functionality to perform simple natural language processing (NLP) tasks, it is not powerful enough for most standard NLP tasks. The Natural Language Toolkit (NLTK) bridges that gap. It was created for symbolic and statistical natural language processing and written using Python. The toolkit allows students to learn and conduct research in NLP. The NLTK website contains excellent documentation and tutorials for learning to use the toolkit (NLTK Tutorial).

Data Pre-processing

The first steps to prepare the corpus included transforming to lowercase, stripping excess white spaces, and removing numbers from the text exchanges. The next step was to remove stopwords, or words that occur frequently, but have little lexical content (Bird, Klein and Loper, 2009). The presence of these words in a text, such as “the,” “to,” and “and,” doesn’t distinguish it from other texts. There are standardized stopwords included in NLTK, that include determiners, articles, conjunctions and other parts of speech, but it was also necessary to remove other words as well, such as polite introductions and exits (e.g. “hello” “thank you”) and because every exchange was timestamped, all time combinations.

Next, it was important to identify terms that would be useful to map together. These are terms that appear fairly frequently, and are important to the understanding the types of responses that librarians have to chat questions. For example, “ebook” can also be written as “e-book”, and it makes sense to represent both words with a single token: “ebook”. The issue of “EBSCOhost” is also similar. This is a vendor that carries several databases, and shows up in various forms: “Ebsco”, “ebSCOhost”, “EBSCO”, “ebSCO-host,” and “ebSCO host”. Although many of the issues with capitalization can be solved by moving all words to lowercase, these all convey the same meaning and can be represented with the same token, “ebSCO.” This type of replacement, allowed the feature space to shrink, as there were less unique words within the corpus.

Normally, at this point, when dealing with unstructured text, the next step in the process would be stemming, which reduces each word to its root using a stemming algorithm. Because the purpose of this study was exploration, not prediction, a count vectorizer was used instead. This allowed the removal of words that appeared 1% of the time, or single use words. This helped to remove unique identifiers from the dataset to preserve patron privacy.

Running Algorithms

Once the data had been pre-processed, the next step was to run the topic extraction algorithms which included fitting non-negative matrix factorization (NMF), latent dirichlet allocation (LDA), and latent semantic analysis (LSA). Utilizing each model, ten general topics were found using up to 5 descriptive words to show the general gist of each topic. The NMF model was

chosen as the winning topic extractor, taking into account the evenness of the distribution of the clusters, and the clarity of the topics descriptors.

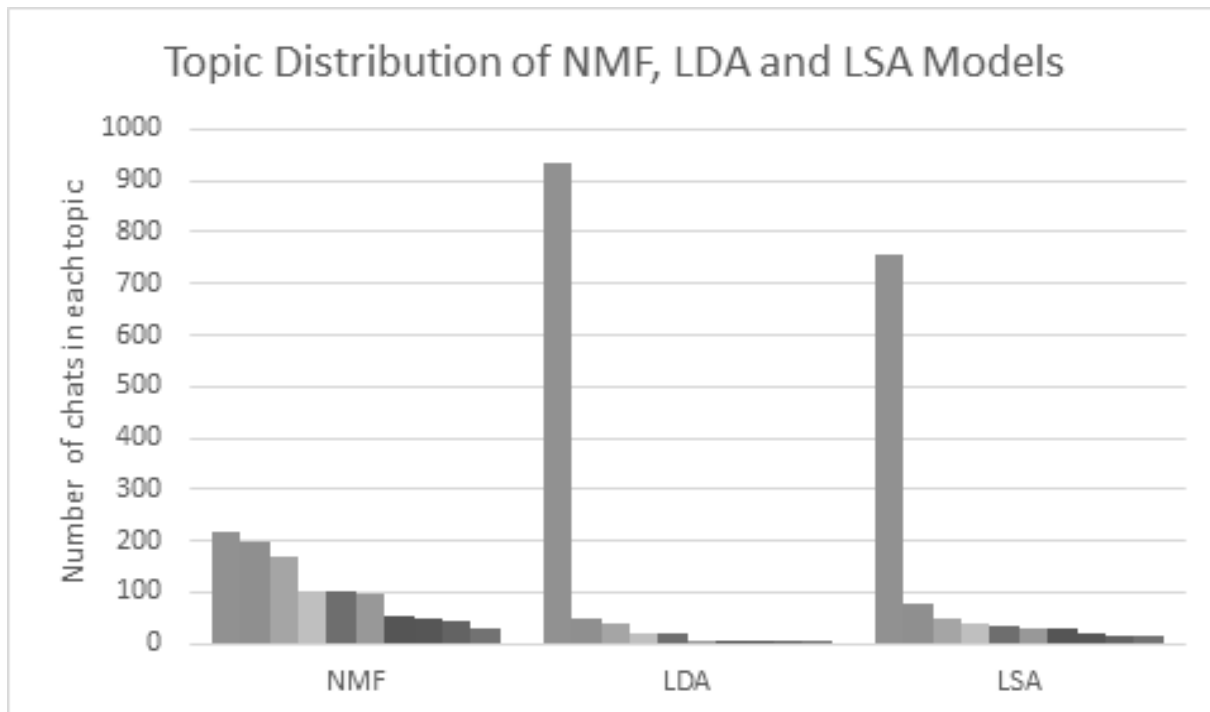


Figure 2: NMF model has the most even distribution among the chats.

Creating a Word-Centered Repository

In order to map the library chats to the READ Scale algorithmically, it was first necessary to create a word-centered repository. Usually these word-centered repositories are called sentiment dictionaries, and are structured so that it assigned values to assorted words. The total in each document is then added or subtracted in order to get an overall value for each session. The intention of creating an academic library-focused word centered repository was to assign a number for key word or token values that identify the complexity of the chat on the READ Scale.

This repository was made by taking a list of all the remaining distinct tokens after the removal of stopwords, in the dataset and weighting them according to library and academic meaning. Therefore, words such as “research” and “keyword” had a weight attached while “bathroom” or “okay” did not. These weights were assigned by library staff using their domain knowledge of the subject.

Findings

Initial Observations

Language during chat interactions, especially staff language, is more casual than in other reference settings. This is a practice that the library should encourage, as studies suggest that patron satisfaction increases as librarians use less formal language (Waugh 2013) (Zhang & Lan 2015). It seems that library staff and people asking questions attempt to convey pleasantness by exclamation points, and sometimes emoticons. While more informal than other interactions, library staff responses are still much longer and more detailed than the questions. The level of detail and responsibility for research given to the questioners varies with each librarian. It is clear that the responses are not standardized, even though some of the questions, such as “What is my unique id?” are frequently repeated.

Topic Extraction

There were several interesting topics that came out of the extraction algorithm. As stated before, although several different topic extraction algorithms were tried, the NMF algorithm had the best results for the purpose of this study. In Table 1 below are chat topics, along with possible interpretations of what that topic actually entails.

Table 1

NMF Topics and Distribution

NMF	Possible interpretation	Chats
help librarian one let good	General help on various topics	216
database search academic complete	Database searching using academic search complete	198
article journal request loan interlibrary	Interlibrary loan requests	169
book searchmobius org kansascity	Catalog searching (consortial and local)	103
campus access log library password	Login information	103
id book account renew code	Online renewal (of accounts or books?)	95
business industry database work great	Business database searching	52
owl cite mla purdue citation	Citation assistance	48
class today problem help hope	Last minute research	46
login db ebsco search link	Article research/database searching	31
	Dropped chat	18

Interestingly, in both the LDA and LSA models the topic with the largest amount of chats assigned to it, had the exact same descriptive words: article, database, library, help, and search. While this does let us know that the vast majority of our chats were library and research-related, it does not provide much depth.

Sentiment Analysis

A sentiment dictionary was structured to assign value to assorted words, using what is known as the AFINN-111 dictionary. This dictionary consists of English words rated for valence with an integer between minus five (negative) and plus five (positive) (Finn 2011). The total in each chat is then added (or subtracted) in order to get an overall positive, negative or neutral value for each chat session.

The result was overwhelmingly positive: 83 percent. This was a very pleasant and unexpected outcome. On the outset, the author would have predicted that there would have been more neutral statements than positive or negative statements, and that there would have been a more even balance between positive, negative, and neutral statements. However, there is an overwhelming amount of politeness in the chats both from the requestors and the librarians. Many, many, many polite phrases (thank you, you're welcome, happy to help, etc.) are all throughout the chats and make an impact on the score.

Library staff are trained to avoid an outright “no” where possible, and instead focus on alternatives if there is a negative outcome. In addition, while internet communications can cause interactions to be more negative, such as on twitter or in semi-anonymous reviews, in this case there are real people having a real dialogue in real-time. The people who use the chat service are all part of the same academic community, which has an effect on the language that is used.

Table 2

Sentiment Distribution in Number and Percentage

Sentiment	Number of Chats	Percentage of Chats
Positive	899	83%
Neutral	126	12%
Negative	54	5%

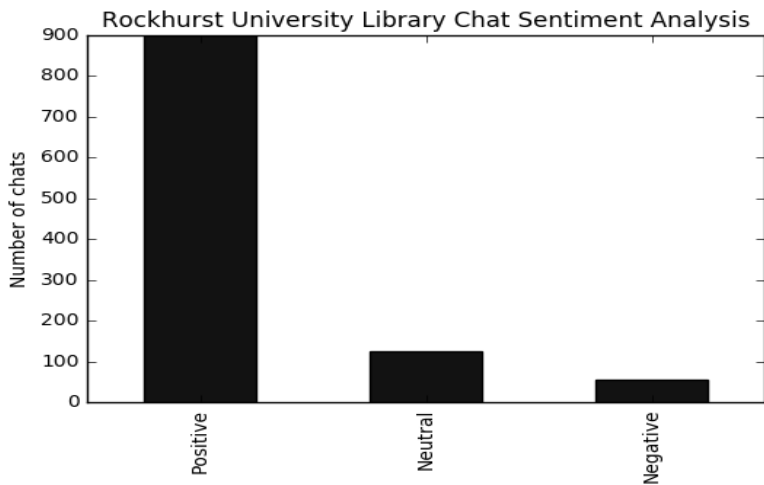


Figure 3: Sentiment analysis graph.

Read Scale Mapping

The Reference Effort Assessment Data Scale (READ Scale) is a tool that uses a six-point scale in an effort to quantify the qualitative interactions where reference librarians assist users with their inquiries or research-related activities. This scale emphasizes the effort, skills, knowledge, teaching moment, techniques and tools utilized by the librarian during a reference transaction (Gerlich & Berard, 2010). In the scale, a designation of one requires the least amount of time and effort and a designation of six requires the most amount of effort. More information about the READ Scale can be found on the READ Scale website: <http://readscale.org/read-scale.html>. The Rockhurst University Library uses this scale when recording all reference transactions.

This simple mapping system was surprisingly effective. The program mapped the following READ Scale classifications with the majority of chat instances distributed through difficulties 2 and 3 (Table 3). There was an addition of new difficulty category, that of 0. This was at first an area of concern, because even including a small amount of dropped chats, 7.1% of chats did not register on the READ Scale, yet were long enough to have topics assigned. After an examination of these chats, however, approximately half of the exchanges were chat demonstrations between an instruction librarian and library staff during freshman instruction classes, and others were odd exchanges such as the following:

Chat Transcript

12:38 PM Patron: Hello
 12:38 PM Library: Hello
 12:39 PM Library: How can I help you?
 12:39 PM Patron: Thank You
 12:39 PM Library: You're welcome, come back if you need anything!

This particular chat fell under the “help librarian one let good” topic from the earlier topic extraction sequence.

Table 3

Results from READ Scale Mapping Program

READ Scale Difficulty	Number of Chats
0	80
1	166
2	366
3	456
4	35
5	6
6	0

The mapped results were compared to the overall distribution of webchat transactions recorded in Gimlet, a website used to track all questions in all formats received and answered by library staff and students. Chat information is recorded into Gimlet by library staff members and given a READ Scale score, however questions that are answered by our consortial partners or by Chatstaff are not included into the system, making an incomplete record. The distribution of chats scored by the library staff versus chat scored by the mapping program were very similar except for the scoring designations of 2 and 3. After review of the chats and looking at what made up a category 2 of difficulty versus a category 3, it was discovered that the library staff had a tendency to underscore the difficulty of their chats, as well as face-to-face reference transactions.

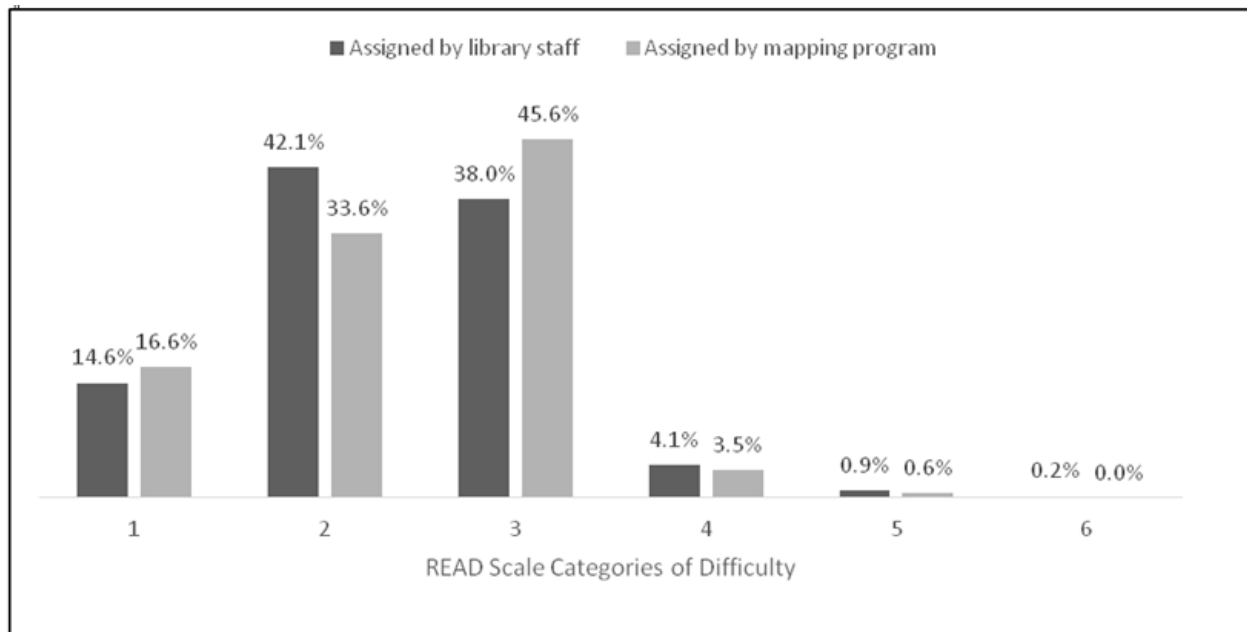


Figure 4: Comparison of READ Scale results.

Where this exercise gains in analytical power is to look at the topic extraction when combined with the READ Scale mapping. The distribution of the READ Scale designations across topic areas gives a greater picture of the difficulty level of each type of topic interaction (Figure 5). Both treatments were independent of the other: the topics were extracted without the READ Scale information, and the READ Scale mapping was done without consideration to the topics that had been extracted. It is interesting then that the two different methods have some agreement when compared with each other.

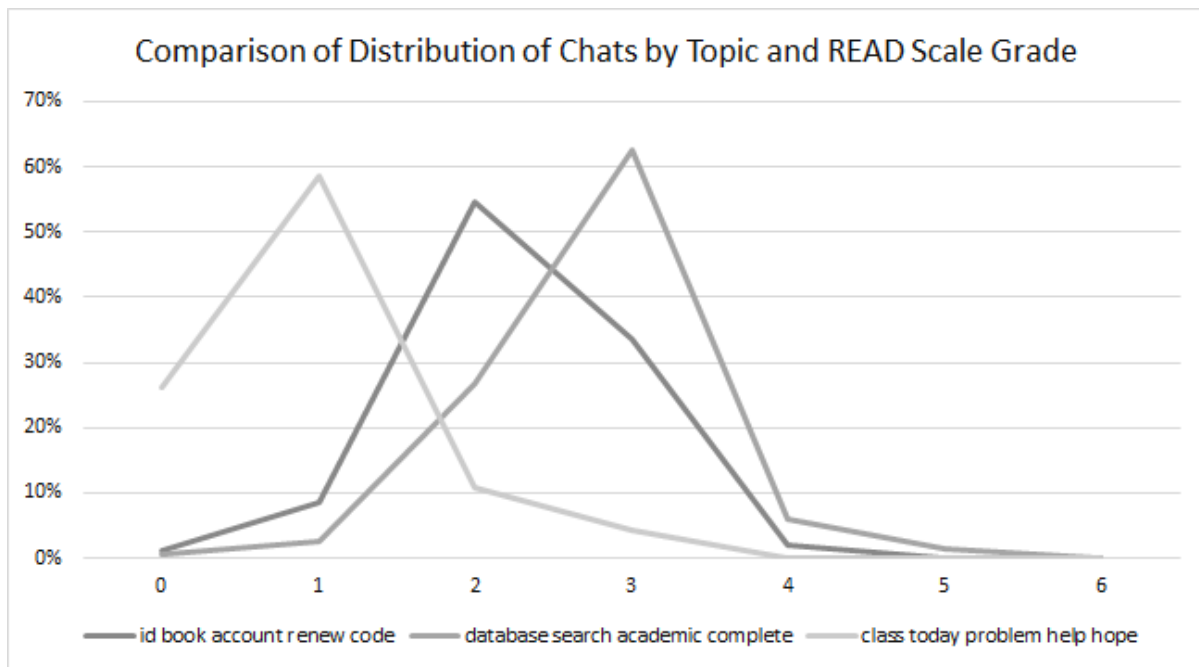


Figure 5: Extracted topics across the READ Scale.

Discussion

Limitations of the Data

When gathering data for the study, it was discovered that there was missing data in the dataset. Within the chat service, some queues were not set to record transcripts, resulting in missing data. This has since been rectified, but some generalizations about types of questions coming from certain queues could not be made due to accuracy concerns. Another limitation of the data was the overall small size of the dataset. The only way to grow the dataset is over time, and through the vigorous promotion of the chat service.

The medium of chat itself caused some issues as well. While it would be nice to identify a patron with a body of chat interactions, all chat transactions are deliberately kept anonymized. This makes the service easier to use, but also prevents the ability to tie chat interactions to student success except in a correlative way. Without even including consortial members and Chatstaff, there were a number of library staff responding to the chats. These staff members had varying

degrees of training and familiarity with the library and library sources, as well as different ways of communicating with patrons.

Further Analysis

This initial study was exploratory in nature. By testing the limits of what Natural Language Processing could do for library chat analysis, the library began to create a story of the level of difficulty and impact of our chats. The next steps are the more practical ones, and consist of including the times and dates of each chat into the mix in order to start predicting what kinds of chats are more likely to occur at different times. This has practical implications for both staffing and training.

Recommendations

A sentiment analysis indicates that most chat interactions are positive experiences. It would be beneficial to explore how that translates into chat user's actual perceptions of their experiences using chat. This study is one indicator, but should be combined with other information to gain a robust picture and not create false complacency.

In order to encourage consistency of responses, the author recommends the use of "canned" messages where possible. These pre-written messages are available but rarely utilized by library staff. This would make further analysis more clear and consistent, as well as save time and effort by library staff.

The output of this study offers a wealth of data for training opportunities. By examining negative chats, the library can create a discussion about the interactions by asking why the staff thought the chats were branded as negative interactions, and how it could be changed into positive ones. One could also take two chats of the same READ Scale designation and the same topic and compare the chat styles. Ultimately this could lead to a guideline of best practices as they fit the Rockhurst University Library.

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From the Inside Out: Creating an Emotionally Intelligent and Inclusive Culture

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Abstract

Librarians at the University of Houston used a discussion group to build emotional intelligence skills and increase awareness of diversity and inclusion issues. As part of a departmental focus on emotional intelligence, a voluntary discussion group reviewed and discussed readings on the topic. The successes of the group led to expansion into a campus area of focus, diversity and inclusion. This session will discuss how to start such a discussion group, key components for success, and the perspectives of both the organizer and a participant.

Emotional intelligence is a valuable set of skills in the workplace. The skills which comprise emotional intelligence are not set at birth and can be built through carefully structured readings and discussions. It is also not easy to hold difficult conversations on important topics like diversity without first establishing trust and a culture of communication on a personal and vulnerable level. Discussion groups, which can be open to all or limited to a specific department depending on size of the library and the needs involved, are a fantastic way to grow emotional intelligence skills and hold conversations on difficult topics. The discussion group model is one that both builds skills and allows for difficult conversations. Attendees will learn how to adapt the model to fit the needs of their own institution.

Beyond ‘If You Build It...’: Iterative Design for an Academic Library MakerSpace

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Abstract

Capitalizing on a campus movement toward active learning initiatives, a small private academic library started small, buying tools to allow students to film better video on their smartphones--one universal project across all sections of the first year experience. As more faculty adopt active learning projects, often in collaboration with librarians, the library has shifted funding to support these projects. Using the framework of iterative design, the speaker will discuss strategies for creating and growing a makerspace--including building a funding stream--developing supportive faculty and departmental relationships, and marketing these new services & technologies to faculty, staff, and students to build capacity alongside demand.

Collections Decoded: Reflections and Strategies for Anti-Racist Collection Development

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Abstract

How are collections processed and presented regarding race and ethnicity? What is *not* collected and why? Who gets to say what is worth collecting? Operating from three distinct but interlocking perspectives, the authors will discuss their experiences navigating collection development and collection development policies as a Black woman archivist, a White woman anti-racist public librarian, and a Black woman academic librarian. The authors will look at the ways in which Black women as collections professionals face invisibility, coded language, and increased mental and emotional labor while operating in a profession that is majority White. The authors will offer practical strategies for developing an anti-racist agenda at your institution, specifically how to be an agent of change at the administrative level. The authors will also discuss how anti-racist accomplices can both support and follow the lead of Black women librarians and archivists as well as strategies for developing anti-racist collection development practices.

In the July 8th, 2017 edition of the New York Times, an article titled “Racism is everywhere, so why not move South” considered the movement of Black⁴ millennials to southern America. This article proposes Black folks can launch their careers and build community in these spaces. While this has little to do with libraries, the first few words in the title resonate as both anti-racist librarians and collection development information workers. This title is a declarative statement: Racism *is* everywhere. (Allen, 2017). The ways in which race and racism continue to be present in every facet of libraries and librarianship is reflected in the statement that racism is everywhere. Much like the structural institutions in the United States, the library is a microcosm of society and is fraught with power dynamics, inequality, and oppression. These issues inform what is visible and what is discounted in our collections. Operating from the premise that racism

⁴ The authors have chosen to capitalize the word Black to denote its use here as representative of people of African descent. In the case of a direct quote, Black is written exactly as the original author wrote it.

is everywhere, the intent of this presentation is to facilitate a conversation that will equip information workers with the necessary tools to reflect, examine, and build anti-racist collections at their institutions. More specifically, it will address contemporary issues in collection development including confronting bias as an information worker and in our institutions as well as the ways in which libraries inhibit anti-racist work in information organizations.

Current Issues in Collection Development

In a Tweet to the Los Angeles Public Library, Michellesnarks wrote:

Hey @LAPublicLibrary: why 138 people on the ebook waitlist for 1 copy of *Hunger* by @rgay, but 49 copies of Al Franken's book for 196 people? (Michellesnarks, 2017)

Both Roxane Gay's *Hunger* and Al Franken's *The Giant of the Senate* are current New York Times best sellers (2017, July 16). However, unlike Franken, Gay is a contemporary literary icon and a New York Times best-selling author of the highly acclaimed book, *Bad Feminist*. Although many people joined in on the conversation to justify why this might have happened, no one mentioned the only plausible reason why the Los Angeles Public Library (LAPL) purchased one e-book version of Gay's *Hunger* but pre-emptively purchase 49 copies of Franken's *The Giant of the Senate*: Gay is a Black woman writing about fatness and fatphobia whereas Franken is a White man writing about his experiences in the Senate.

The Los Angeles Public Library has since responded to Michelle K and Roxane Gay via Twitter: "Thanks for letting us know about the holds list for *Hunger*. We purchased more copies after seeing the tweet last night." (L.A. Public Library, 2017). The fact that it took getting called out on Twitter for the Los Angeles Public Library to "correct" the issue points to a deeper problem with collection development practices within librarianship: racism and racial disparities in collection development practices.

Librarianship and collection development practices, along with the publishing industry, work in tandem to marginalize Black and other non-Black people of color by not publishing Black and non-Black creators of color *and* by not collecting materials by Black and non-Black creators of color. Additionally, both professions are overwhelmingly White and overwhelmingly female. The American Library Association's Diversity Counts statistics list the number of credentialed White librarians as 85.2 percent of the total number of credentialed librarians and White women librarians make up 82.8 percent of the total number of credentialed librarians (2009-2010, p.1-2). As with many institutions in the United States libraries and librarianship has a history of segregation and discrimination (Wiegand, 2015). Challenging the overwhelming whiteness of librarianship is at the very core of collection development. Collections should reflect those unique perspectives of the patrons engaging with them as well as the reality of our society. As librarians, the responsibility to invite, and reinforce, inclusion in our institutions begins with us as frontline information workers. Our personal biases and perspectives, racist and poor presentation of materials, and unfulfilled diversity statements and policies can inhibit or discourage users from entering, using our collections, and returning to our institutions. It is the responsiveness to the community and reflection of contemporary issues and histories that makes collection development so valuable and shows our true power as information workers (Cook,

2011, 180-181). The Eurocentric beginnings of libraries, archives, and museums did not concern themselves with the needs of their visitors; some were places for oddities and unique items stolen from foreign lands. The days of awe are over for information institutions. Users of the collection want and need a unique experience that empowers them to diversify their perspective and inform their daily lives.

Examining and Confronting Bias

A key part of consistently battling racist collection development practices is examining personal perspective and biases and acknowledging the ways in which these biases influence collection practices. Much dialogue about biases mentions “unconscious bias”, defined as quick judgements or assessments of others and situations that we may be unaware which is influenced by past experiences (Moule, 2009, p. 321-322). While many have adapted the use of the term “unconscious or implicit bias” to explain bias, terms like these insulate White information workers from racial stress. “Unconscious” implies that White information workers are not responsible for their actions and thoughts; that society has pushed these ideas on to them and they have no agency (Kegler, 2016). This, especially in the case of collection development, is untrue. Librarians must acknowledge their role in the ways in which their organizations build collections and should become experts and active agents in their organizations’ commitment to civic engagement (Dilevko, 2008).

Like libraries, there are no neutral librarians; opinions are valued but require cultivating, education, and critical reflection. As Stacie Williams said, “Neutrality becomes a way to avoid questions or ethics that are wrong or make people uncomfortable” (2017). Librarians will most certainly face challenges to the collection, and, in preparation for these instances, librarians must be ready to confidently challenge wrongs and work to defend truly inclusive collection practices and materials (Williams, 2017). This charge is not one to be taken lightly. Excuses of small budgets, displeased supervisors, and disruptive patrons should not discourage information workers from collecting more inclusive materials (Ebertz, 2005). Whether that be re-prioritizing other areas or finding smaller bookstores, publishers, and presses, information workers must be aware of what is available and act in support of marginalized voices and oft ignored perspectives. According to Lee and Low’s *Diversity Baseline Survey*, which includes responses from 8 review journals and 34 publishers, the publishing industry is 79 percent white/Caucasian and 78 percent Woman/Cis-woman (2015). The *PW Publishing Industry Salary Survey, 2016* show that 88 percent identify as White/Caucasian (2016). As author Bernice McFadden put it in an interview:

Publishing is a small part of the larger white-dominated construct — so it makes all the sense in the world that it would more or less operate under the guidelines that have oppressed black people for centuries. The racism is often quite blatant. Look at the prestigious literary awards; how many people of color have won them over the past 30 or so years? Same with the end of year “Best of” lists. (Francis-Sharma, 2014, para. 22).

Since libraries, particularly public libraries, depend heavily on “Best of” lists, if Black and non-Black creators of color are not being included in “Best of” lists, this is another way in which collection development practices lead to racial disparities. It is these practices of “selective forgetting” and normative collecting practices that led information worker to their white-centered

collections (Mason, 2002). As supporters of the public and gateways to information, librarians must recognize that maintaining the power structures of whiteness over all voices in the society is complicity in white supremacy.

Every Month is Black/Pride/Asian/Native/Disability History Month

Special collections exhibits, library galleries, and the library's own catalog may also contribute to the racist perpetuation of collection materials. Public displays can be used to promote visiting collections and unique materials while encouraging use of gallery spaces and blank walls. Many organizations consider exhibits and displays the optimal way to share materials from marginalized groups and usually during their assigned month (Buchanan, 2002). However, only focusing on these materials during their month of choice reinforces the ideas of whiteness as the normative and dominant culture in society. It communicates to users that the celebration, acknowledgement, and encouragement of marginalized groups should only occur on a calendar as dictated by White society and strips non-White and disabled folks of their importance to the shared narrative and realities. As Moore (2017) states,

What we do is promote and preserve culture—not just a dominant white culture—but a shared culture. When communities of color do not see equal representation of cultural heritage in our exhibition schedules and programming, we send the message that museums are founded upon a dominant culture's values. We imply that visitors of color are invited to participate and reinforce the notion that they somehow exist outside the dominant system.

To combat this sense of “otherness” perpetuated by designated monthly exhibits, information workers can integrate work by marginalized groups at every opportunity. Author events, exhibit talks, and programming should reflect the creators in your collection, especially those in your community. Again, empowering the public to engage with the library collection at every level (oral history and memory archiving projects, book clubs, programs, exhibits, etc.) provides pathways for future advocacy and combats the oppressive societal structures these groups experience every day.

The process of cataloging, particularly terms that appear in the public catalog of library materials, can also have a detrimental effect on the ways in which materials are communicated to library users and society at large. Similar to the issue of items by and about Black and non-Black creators of color being “othered” compared to White society, catalog subject headings can also “other” materials. While using the subject heading of African American is okay, it becomes problematic when that very item is only searchable and accessible via the African American subject heading. Cataloging can also be another component of reifying that materials by and about Black creators are only for Black people. It then becomes an access issue when Black and non-Black creators of colors' work are not easily accessible to the public. In turn, this affects circulation and usage and can lead to works by Black and non-Black creators of color being weeded due to low circulation. This can also lead to the justification for not purchasing more materials by and about Black and non-Black creators of color.

Diversity Statements and Intentional Collection Development Practice

While there has been a push within the field to include diversity statements in collection development policies, they are not a requirement. As Tracie D. Hall notes, “To be sure, diversity—in its quest to achieve equitable representation and participation is a fundamental goal—but it is a concept that has been increasingly co-opted by systems that use it as a smoke screen for disingenuous efforts that serve to reify racism” (Hall, 2012, p.198). In other words, diversity statements in and of themselves do not mean there is a commitment to institutional racial justice in collection development. Furthermore, White librarians, especially those in positions of power and in majority White areas, can use the racial demographics of their community to not collect works by or about creators of color, citing reasons such as “Black people are not our key demographic” or “We know what our patrons want and they do not want books about police brutality. They do not circulate.” Comments like these are counter to the Library Bill of Rights, which stipulate:

I. Books and other library resources should be provided for the interest, information, and enlightenment of all people of the community the library serves. Materials should not be excluded because of the origin, background, or views of those contributing to their creation.

II. Libraries should provide materials and information presenting all points of view on current and historical issues. Materials should not be proscribed or removed because of partisan or doctrinal disapproval. (Library Bill of Rights, 1996).

However, while they run counter to the Library Bill of Rights, the majority White community can be used as leverage to dictate what is purchased, particularly when the people in positions of power are also White.

This rationale also “others” Black and non-Black creators color because it assumes that Black and non-Black creators of color are only for Black and non-Black people of color. It also assumes issues that disproportionately affect Black people due to systemic racism, such as police brutality, are “Black issues” and not issues for White people to contend with or learn about. Whereas White creators are for White patrons and are assumed to be the default experience even if the content does not reflect the experiences of Black and non-Black people of color.

Conclusion

All librarians and information workers contributing to collection development must acknowledge that the societal issues of racism impact decision-making processes of collection development. The centering of whiteness in mainstream society combined with the personal biases, unconscious or otherwise, of information workers can cause information workers to exclude and misrepresent materials by and about Black and non-Black creators of color in libraries. Organizations that develop collection development diversity policies and statements, while well-intentioned, cannot depend on these statements to improve their collections. There must be an intentional commitment to racial justice and anti-racist collection development practices and policies as well. It is only through intensive self-education and intentional collecting, including

the integration of small presses and self-publishing, prioritizing authorship, and providing pathways for community contribution that information workers can combat prejudice against Black and non-Black people of color. Finally, libraries and other information organizations must continuously challenge and innovate the ways in which materials are displayed; whether in the gallery case or in the catalog. This includes strategies for fostering inclusive representations of collections and transparent conversations with the community to consider the inclusion of heritage and unpublished materials, alternative subject tagging, and rotating materials that have not been used for some time.

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Where the Old Meets the New: What Does the Next Generation Really Expect from Librarians?

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Abstract

The paradigm of librarians who continue to follow the “traditional” behavior of sitting behind a Reference Desk expecting students to come to them is shifting. A literature search reveals a variety of strategies librarians are embracing that represent “new” ways to connect with students. They are going where the students hang out: in the classroom, in residence halls, food courts, and student lounges. The reader of this paper is given a brief overview of literature searches that were conducted by the writers but the primary focus of the paper is on the library’s program of “Librarians in The Residence Halls (“LRH”),” where librarians set up weekly, lunch time “Help” desks outside Residence Hall Dining Rooms. The paper authors will share takeaways that were observed by the librarians as they evaluated the conclusion of the program. The paper authors will share what was good, what was challenging, and what could have been done better in the LRH program.

Purpose and Background

In 2014, the Public Services Department which includes the Circulation Services and the Reference Instruction Services at Indiana State University’s Cunningham Memorial Library (CML), abandoned the traditional reference desk model. Eight librarians who were scheduled at the Reference Desk eighty hours a week, Monday through Sunday, in addition to monitoring an instant message/chat service, were now free to pursue other means of service to students. The University’s accreditation process of which information literacy and student success were important pieces, coincided with the librarians’ realization that their approach to information literacy needed to change to counteract declining user statistics. Monthly reference statistics which were divided into general information questions and research-based queries revealed that one component, the research-based queries, were down. At the same time, the Circulation services reported that gate counts were also down, leading librarians to the assumption that among those decreased figures, student visits to the library had decreased. The millennials whom the library served were obviously employing other methods to get the information they needed to satisfy class assignments. What were the other “new” methods that the students were using? And more importantly, what could the Reference and Instruction librarians do to make themselves relevant and useful to the students, many of whom seemed to have had minimal experience using academic library sources? This is not a new problem or unique to CML, as shown in a 2009 article by Lizah Ismail, “What net generation students really want: Determining library help-

seeking preferences of undergraduates.” The author states “Reference service in academic libraries is experiencing a tumultuous time that is both exciting and challenging. The internet explosion and the introduction of Web 2.0 and other new technologies are seen as the main cause for the decline of traditional in-house reference statistics” (Ismail, 2009).

The old system of having librarians staff the reference desk was replaced with a triage system wherein Circulation staff and their student workers referred all student research requests to reference librarians. The reference librarians additionally promoted their availability by scheduling office hours, encouraging faculty to bring their classes to the library for bibliographic instruction, taking full advantage of invitations to go into the classroom, and by embedding their services in classroom BlackBoard pages. Although these steps placed emphasis on actively working one-on-one with students away from the library, truthfully, these methods were not department-driven. It was up to individual librarians to forge their own liaison relationship with their departments and the students. Some departments were more willing to take advantage of this concentration of attention from their librarians than others which meant that some librarians were more successful in their endeavors than others.

There was very little formal assessment of the effectiveness of these actions. Librarians felt the students were learning what they thought that they should know; the teaching faculty and the students may or may not have agreed. CML librarians began to look outward by conducting a literature search to determine examples of other libraries’ experiences with diminishing library use. They were primarily interested in students’ research habits and some methods employed by other librarians to help strengthen students’ research skills. Article after article documented that at the heart of helping students was the need to be where they were—food courts, commuter lounges, the student union, and residence halls—providing them with effective information literacy instruction geared to their particular research need.

A 2011 study done at Pima Community College (PCC) East Campus in Tucson, Arizona, provided perspective on the research habits of millennials. The study cited the students’ belief that after years of using technology and searching the Internet they had proficient research skills. Students’ were confident they knew how to find answers and therefore didn’t need the librarians’ help. Sadly, their entertainment-based search skills did not match the level needed for academic-based searches. The study concluded, “We find that, in their quest for efficiency, they are many times duped by familiarity, common sense, and time constraints; an environment where the one competitive advantage of the library and librarians can be the affinity and empathy created by good service coupled with user education. . . . The research shows that one way to increase library use is by providing meaningful and integrated information literacy instruction across the curriculum.” (Becker, 2012)

Through personal observation and talking to ISU students, CML librarians found that they could relate to PCC students’ research habits and that they agreed with the observations of Van-Kampen-Breit and Cooke in their 2015 article, “Do they think we’re the frenemy?: Examining student anxiety and service perception in today’s academic libraries.” Van Kampen-Breit and Cooke (2015) referred to two problems: library anxiety and research anxiety. The authors theorized that a student’s library anxiety might have stemmed from a prior negative experience with a stereotypical, unapproachable, librarian. Students might have been frustrated by the

difficulty in locating materials in an academic library which used the Library of Congress classification system, a system they were completely unfamiliar with, since they had likely grown up using libraries that employ the Dewey Decimal classification system. Research anxiety was defined as reflective of a student's disappointment with the library's resources when a catalog search might not have yielded the materials the student deemed necessary to their research.

Students continue to need assistance but are reticent in asking for help; most students indicated that they visit the library for scholastic pursuits but very few responded that they were visiting the library specifically to get help from a librarian.... One should explore opportunities to engage and support students face-to-face and online in a manner they find to be most helpful, convenient, and non-threatening. It is time to open a dialogue on how to make every interaction with students a personal and positive one, whether it be in the library, the classroom, or the student union. (Van Kampen-Breit and Cooke, 2015)

The literature search for alternative outreach reference services revealed that librarians established specialized "point of need" libraries over a half century ago. In their article, "Purposes and Uses of Residence Hall Libraries," Oltmanns and Schuh (1985) describe the services provided in eleven residence hall libraries that were established in 1941 at Indiana University, Bloomington, Indiana. The modern day evolution of this residence hall service is the Michigan State University Librarians' practice of the presentation of bibliographic instruction programs to Residence Hall Directors and Assistants who in turn help students with their research when librarians are not available (Barnes and Peyton, 2006). Although for training purposes only, this brief physical presence in the Residence Halls encouraged the CML librarians' development of a method for reaching out that was reminiscent of Lucy from Charles Schultz's Peanut cartoon strip. (Lucy sits in an information booth, puts up a "Psychiatric Help 5¢. The Doctor Is In" sign and proceeds to dispense advice.) The idea of the "Librarians in the Residence Halls" project had begun.

LRH Program Design and Implementation

Choosing the location that would better serve the students had to be considered during the "Program Design" phase of the project. As described in an article by Barnett, Bull, and Cooper (2016), "the 'Pop-Up Library' has to be set up in different locations across the campus and be able to serve over the lunch period of 11:45 am – 2:15 pm." On October 5, 2016, the CML Reference Services Librarian who served as the organizer of the "Librarians in the Residence Halls" project met with the Associate Director of the Residential Education program in the Office of Residential Life and Housing to coordinate the library's proposed project with the Residence Halls' Area Coordinators. LRH began in the fall 2016 semester and was repeated during the spring 2017 semester. As noted, there were eight reference instruction librarians who were engaged in the need to reinvent themselves with students but who were also actively engaged as subject specialists, selectors, and liaisons to their assigned departments in six University Colleges. Busy and frequently over-committed librarians adjusted their schedules to participate in the staffing of two "pop-up" reference desks that were located outside the two dining rooms of the Lincoln Quad Complex and the Sycamore Complex which are physically

located at opposite ends of the campus but that together serve ten residence halls. (Cunningham Memorial Library is in the middle of campus.) For the fall semester, the table staffing schedule was determined by the librarians and was based on their availability. The four week schedule was from 11:30 am - 12:00 pm, every Tuesday between November 8, and December 6. (There were no tables set up during Thanksgiving break.) Residential Life supplied the tables and chairs and the librarians used their own laptops. "Grab and Go" tote bags containing office essentials (paper, pencils, hand sanitizer, etc.) for the librarians were prepared and made available during duty shifts. A librarian sign-up sheet was prepared that included a back-up librarian who could be called on to replace the scheduled librarian, should the need arise.

Publicity plans for the LRH program fell short. Promotional flyers that were to be taped next to the elevator on every floor of the Residence Halls were designed but turn-around time for their production proved to be impossible for them to be produced. This was also true for a banner that was designed to promote the librarians' service but that was never made available. The Resident Halls' Residence Assistants ("RAs") agreed to promote the service during their meetings with the students who were living on their floors. Word of mouth of the librarians' availability did not generate much student participation. During the four scheduled sessions, only two students received face-to-face help with their research questions.

On January 19, 2017, the Reference Services Librarian again met with the Residential Life and Housing team to evaluate the fall semester's project and to discuss the continuation of it into the spring 2017 semester. This time, the scheduling of the sessions was chosen by the Residential Life and Housing team. They chose Mondays, from 11:30 am – 1:30 pm, beginning February 6, and ending April 24, 2017, for eleven sessions with no session being scheduled during the week of Spring Break. A more aggressive promotional campaign was initiated. Promotional flyers were prepared and posted next to the elevators. New telescopic floor signs promoting the program were purchased. They were used at the sites during the sessions and then stored behind the Residence Hall's reception desk when not in use. An automatic tweet promoting the librarians' availability was posted weekly to the library's Twitter account, messages were posted to the library's FaceBook page, and a promotional ad appeared in the students' monthly global announcement newsletters during the program. Resident Assistants were again asked to promote the service during their meetings with each other and with their students. The project began and eleven weeks later, ended. There were sixteen students who asked for and received help with their research.

Evaluation

Why did CML librarians start the "Librarians in the Residence Halls" program? Were they attempting to overcome the loss of face-to-face attention between the student and the librarian, when the Reference Desk was eliminated? Or was it a reaction to students' changed behavior of not coming to the library as often as in the past? Change is always difficult to accept by all and brings out the "we've always done it this way" feeling. After learning the results that only two students took advantage of the fall semester's program, some of the librarians voiced reluctance to devote their time to staff a remotely located "pop-up" reference desk which they perceived as a "doomed for failure" project. However, consensus was reached that the project would be given another try. Although the spring 2017 session numbers were higher with sixteen logged helps

during the eleven sessions as compared to the fall 2016's four sessions with two helps, the students' reception of the service was decidedly lukewarm.

The Future

In a department meeting held after the program ended, CML librarians agreed that the "Librarians in the Residence Halls" project should be dropped. This meant that the librarians returned to the drawing board to brainstorm ideas that would effectively help students in their educational pursuits. Ideas that are being considered are a limited return to staffing a renamed "Research Desk" during "high needs" times such as mid-semester and during a couple of weeks prior to finals, when research papers are usually due. Another library service under consideration for modification is that of the instant message/chat service, which is monitored by all of the Reference Instruction librarians and the Circulation Service's support staff people and their student workers. Currently there is no established schedule for who will answer chats. It is a catch-as-catch-can situation where at times, the requester might have their research query answered by a librarian if one happens to be available or by a Checkout Services support staff person or student worker. This "no librarian available" situation is increasingly more likely to happen as librarians find themselves working with faculty who are being asked to teach additional classes in departments that develop new curriculums. This practice is especially true of the distance learning program which is one of Indiana State University's biggest growth areas. It is hoped that the establishment of a schedule where librarians are assigned to be responsible for answering chat for a predetermined block of time, and which becomes a part of their work related duties, will result in a more productive experience for the requester by putting them in direct contact with a librarian who is an expert in the student's field of study.

CML Reference Instruction Librarians are indeed mindful of the "need for providing meaningful and integrated information literacy instruction across the curriculum" (Becker, 2012). They continue to use content management systems such as LibGuides and E-Learning tools and technology like SoftChalk to develop online literacy instruction tools, while monitoring the next best practice for helping the students who are enrolled in Indiana State University to successfully pursue the achievement of lifelong information literacy.

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Bite Sized is the Right Size: Strategies for the Brief Information Session

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Spencer Art Reference Library, Nelson-Atkins Museum of Art

Abstract

The Spencer Art Reference Library at the Nelson-Atkins Museum of Art is a non-academic library which serves a variety of researchers. To address the needs of a dedicated user group, the presenter developed brief information literacy sessions that highlight individual art and design resources - particularly relevant to users' research. These researchers are free choice learners and the sessions are a result of their request. During sessions, the patrons learn how to better navigate aspects of the library's research tools.

This lightning round session will address strategies for developing and presenting engaging but brief, one-shot sessions that provide just-in-time instruction. The session will also include strategies for combining these bite sized information literacy sessions to create custom introductions for researchers with diverse information needs.

On Point: Collaborating with Students from Various Academic Disciplines and Organizations to Revitalize Library Spaces and Services

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Abstract

Universities are full of incredibly talented students. Why not collaborate with those students to revitalize library services and spaces? Have a great architectural and design department? Team up with them to design and renovate a library space. Need a new perspective on marketing? Information literacy sessions becoming a little dull? Tap into the campus improv organization to help introduce new scenarios for more exciting instructional sessions. Working with students to revitalize services and spaces is a win-win. Libraries maintain a high standard of practice and students get to add successful projects to their portfolios and resumes. Tapping in to student abilities helps students feel a great sense of ownership and pride. It also serves as an excellent marketing tool. Students involved in these projects will most definitely spread the word to their peers about the new spaces and services that they helped to design and create. This is the perfect marriage: Help them, help you.

Using 360-Degree Cameras for Self-Assessment in Skills-Based Courses

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Abstract

The proliferation of digital photography, which can capture and process high-resolution images with low-cost consumer cameras, brought panoramic imaging technology to the mass very quickly. Today's 360-degree cameras are capable of capturing the entire surrounding environment and provide an immersive experience to the viewers on web-browsers and virtual reality headsets. While these new cameras are often advertised to sport and outdoor enthusiasts, their functionalities, portability, and price make them an ideal tool to capture interactive and high-paced exercises in a learning environment setting.

In this paper, the author shares his experience using 360-degree cameras for self-assessment in legal education. Skills-based courses such as Advocacy Trials, are often hard to capture using regular cameras. Having a panoramic video of a student interaction in the courtroom can provide an unprecedented viewpoint for critique purposes and self-evaluation.

The University of Missouri – Kansas City School of Law is located in the middle of a vibrant legal community with close ties to multitude of court systems in the Kansas City metro area, including administrative tribunals, Missouri Circuit Courts, the Missouri Court of Appeals Western District, and the United States Courts for the Western District of Missouri. Students enrolled in the Advocacy Emphasis learn the skills and practical knowledge necessary for today's litigation, including administrative, pre-trial, trial and appellate work.

In addition to the courses provided, the school offers students the opportunity to take part of multiple externships, clinics, and a Mastery Advocacy course providing them with real word cases in a commitment to train advocates ready for trial work upon graduation.

Another aspect of this commitment, to improve the experiential learning of the students, is manifested in the achievements the UMKC School of Law continues to accomplish in regional and national negotiation and advocacy competitions. The school advanced to the national finals of the American Bar Association Law Student Division Negotiation Competition 20 times out of the past 26 years. The advocacy team has also made it to the final four four times and placed third in the nation twice. In addition, the school ranks 12th in the nation in the National Jurist's

“Best Schools for Practical Training” published in the magazine’s spring 2016 issue (The National Jurist, 2016).

Self-Assessment for Skills-Based Courses

Prior to each competition or Mock Trial, students spend extensive time researching and preparing for the cases they are presented with. In addition to their understanding of the legalities surrounding the cases, which most the students learn as they practice, they are also required to demonstrate a high level of communication and persuasion skills. Students are expected to complete several practice sessions with their instructors as well as additional sessions outside of the structured class time.

Videotaping practice sessions for critique purposes and self-evaluation in skills-based courses such as trial advocacy, counseling and negotiation has long proven its utility (Johnson, 1987). Self-assessment, using videotaping or any other form, provides students with an opportunity to reflect on their performances to help them recognize their strengths and weaknesses and to take more responsibility and ownership over their learning outcomes (M.S. Yoo, 2009). Self-assessment using video is especially effective in that it allows students to see things that cannot be conveyed by the written word such as behavior and non-verbal communication that students have developed but are unaware of. The realistic presentation of video and its immediacy is an excellent preparation for law students as they are expected to be familiar with video and other audiovisual media which are highly used in deposition and trials (Kovach, 1996). The other benefit of using video as self-assessment tool is the dramatic increase in learning and retention of material when it is seen, 85 percent, compared to ten percent when it is heard and only five percent using other senses (Johnson, 1987).

Educators have relied on video and other multimedia forms to supplement their teaching for decades. Kimberlee Kovach (1996) used videotaping for self-reflection and evaluation of her students to provide a realistic learning experience, which she described as “Virtual Reality”. Her goal was to provide students with a constructive one-on-one feedback based on positive reinforcement as students are more willing to listen if they see an opportunity to improve (Kovach, 1996).

Video in Advocacy Classes

At the UMKC School of Law, Professor Michaelle Tobin-relies on videotaping to prepare her students for competitions by improving their communication and public speaking skills. For Trial Advocacy courses, Professor Tobin uses videotaping as a self-assessment tool only, as self-assessment is not part of the final grade. However, students are encouraged to review their

presentations to identify unconscious activities and mannerisms that might affect their communication skills.

When preparing for competitions, Professor Tobin uses videotaping of entire mock trials and watch it with her team while they review and identify their weaknesses and work toward improving their persuasive and advocacy skills. While the video camera is often focusing on the speaker only, their teammates, quickly learn that they also need to remain focused on their role as it may negatively impact the entire team performance. In addition, being able to observe the audience reaction during a Voir Dire for example and quickly adjust the delivery if needed, is very important.

So far, the Advocacy team at the UMKC School of Law relies on a single camera placed on a tripod to record mock trials and other learning activities inside the courtroom. A camera operator is always needed to be able to follow the student advocate or to switch the scene between the student and the audience when needed. Usually, students take turn to record each other and the course assistant is in charge of collecting, storing, and sharing the video footage.

While the courtroom, where all advocacy courses take place, is equipped with a multi-camera recording system, students and instructors alike find it difficult to operate and it doesn't provide an immediate way to play back the recorded sessions as they need to be processed first. Students also often rely on their own mobile devices or personal video recording devices to capture their practice sessions outside of the classroom. In the past, the law school also experimented with Google Glass to record a role playing exercise. The experience was successful as it provided the students with the possibility to capture a first-person-perspective reaction of their clients during an end-of-life decision making assignment without being distracted by a full-size camera. However, due to other limitations of the wearable device such as its low battery life, heat generated during long recording sessions, and its discontinuity by Google, the author resumed his search for a better alternative that can allow us to record multiple scenes at once while also being easy to operate.

Today's Panoramic Imaging

Panoramic imaging is not new. However, the proliferation of digital photography which can capture and process high-resolution images with low-cost consumer cameras brought the technology to the mass very quickly. Today, most smart phones are capable of capturing panoramic images out of the box. This advance is also driven by commercial applications for which panoramic imaging is worth the investment such as entertainment, interactive TV, real estate, and virtual tourism (Duke Gledhilla, 2003).

Today's 360-degree cameras are capable of capturing the entire environment surrounding them using multiple cameras facing different directions, or using an omnidirectional camera. Video

recorded can then be played on regular screens with the added capability to move the scene around or through dedicated Virtual Reality goggles to enter an immersive experience.

For this purpose, which is providing Advocacy students with an ideal solution to record their practice sessions from both perspectives’ of the student advocate and the audience while also being able to easily review the videos for self-assessment and critiques purposes, a 360-degree camera seems to be a good device to investigate. Recently, different 360-degree cameras became available to consumers. They differ in term of image resolution, number of lenses, size, compatibility, complexity, and price. Figure 1 represents characteristics and price comparative of several 360-degree cameras available in the market as of 2016.

Table 1.

Characteristics and Price Comparative. List of 360-degree Cameras Available to Consumers as of 2016. (Fowler, 2016)

Brand	Price	Pros	Cons
Ricoh Theta S	\$350	Slim stick format; easy to use	Limited to 8GB internal storage only; image quality is just OK; low-resolution video
360fly 4K	\$500	Just one lens, so no stitching required; waterproof body	Single lens can't see what's underneath; image quality is just OK; one-button operation can be confusing
Giroptic 360cam	\$500	Video from three lenses stitched in real time; waterproof body; removable battery	Lower-resolution final images; slow response on hardware; stitching sometimes misaligned
Insta360 4K	\$600	Highest-resolution 4K video	Hard to see and operate the screen in outdoor settings; bulky; low 15 frame-per-second rate at highest resolution
Kodak PIXPRO SP360 4K (duo pack)	\$900	4K-resolution video; great color and image quality	Must use computer to stitch video; no included app to stitch photos
LG 360 Cam	\$200	Slim stick format; easy to use; compatible with Android and Apple devices	Image quality is just OK; video is only 2K resolution
Panono	\$1,500	36 lenses create super-high-res still images; throw into sky to shoot automatically	No video; stitching problems on up-close objects; bulky
Samsung Gear 360	\$350	Great photo (26 megapixel) and video (nearly 4K) image quality; easy to use; compatible with Samsung Gear VR headsets	Companion app only works with Samsung smartphones; awkward shape and weight for pockets

After reviewing several alternatives, the author settled on Kodak PixPro SP360 Action Camera due to its design, features, and price. The PixPro SP 360 provides a 360-degree view angle, 16 Mega Pixels CMOS for still photographs, 1080p HD video, Wi-Fi connectivity, and remote control capabilities from mobile devices or computers. Its cubic design enables it to stand securely on flat surfaces without the need of a tripod (figure 2) The raw video recorded in most 360-degree cameras is spherical (figure 3). It needs to be processed before it can be used and shared. The Kodak PixPro SP360 software, available for Windows and Mac, can be used to convert spherical videos to different modes such as panorama, quad, ring, dome, or as segmented mode as it is illustrated in this experiment (figure 4). The software also provides some basic editing and video enhancement tools to trim the video, adjust orientation of the image, or brightness and colors. 360-degree videos also require specific viewers for playback. Recorded video can be played directly on the Kodak PixPro SP360 software. However, in order to share the video online, metadata representing various characteristics of a spherical video is needed. Metadata can be embedded in the video using tools such as Google's 360 Video Metadata App or the built-in feature that comes with the software.



Figure 1: Kodak PixPro SP360. This figure illustrates a Kodak PixPro SP360 camera standing directly on any flat surface.



Figure 2: Spherical video. This figure illustrates a raw frame as capture with a 360-degree camera.



Figure 3: Unfold mode in the Kodak PixPro SP360 software. This figure illustrates different output options available in the Kodak PixPro SP360 software.

Immersive Video in Legal Education

Equipped with the new Kodak PixPro SP360, the author started a short experiment recording the Voir Dire portions of the final exam for a Trial Advocacy II spring 2016 class. Voir Dire is the preliminary examination of prospective jurors by a judge and attorneys in court. It is used to determine if any juror is biased and/or cannot deal with the issues fairly, or if there is cause not to allow a juror to serve (Gerald Hill, 2016). The goal was to use Kodak PixPro SP360 camera to record both the student advocates and the jurors at the same time. Sessions recorded were between 7 and 30 minutes each. The author recorded 32 students in 7 sessions over 4 days. A single full-charge of the Kodak PixPro SP360 can record approximately 160 minutes of high definition video at 1080p/30fps. But the camera will only support Micro SDHC cards which are limited to up to 32GB of storage space. When all recordings were done, the author used the Kodak PixPro SP360 software to trim and cut the videos, adjust the contrast and generate a segmented MP4 file for each student. The author used the segmented view as it provides a 360-degree view of the room without the need of a special viewer or device (figure 5). 360-degree-ready video files that can also generated using Kodak's software to share the videos on YouTube, Facebook, or other online platforms.



Figure 4: Segmented view. This figure illustrates a split-screen view of a 360-degree image.

The goal of this experiment was not to study the effectiveness of 360-degree camera over regular ones. It was more to have a real experience with the device in the classroom. A new technology needs to add value to the learning process and not become a distraction or an obstacle to it. Both the students and their instructors were satisfied with its ease of use and the quality of the video shared with them. The students were more impressed when they watched their Voir Dire sessions using a Google Cardboard (Virtual Reality) headset. Professor Rafe Foreman, who teaches Trial Advocacy at UMKC School of Law responded to a curious student:

“It’s a camera ... it’s filming everybody in the jury and it is also filming the lawyers. We can see instantaneously your reaction to the lawyer’s questions. I think’s it’s going to be fantastic for future employers. Nobody has been able to send that to a potential law firm seeking a job.” (R. Foreman, Trial Advocacy II, April 25, 2016)

Final Thoughts

The 360-degree video will certainly have its place in skill-based education. But as with any new technology, there is still room for improvement. For the Kodak PixPro SP360, it is the fact that it has a single lens which means that the area below it will not be recorded. Kodak has a dual camera mount, to obtain a full spherical view by combining two identical cameras, along with a

program to stitch the two videos together. But if there is a real need of recording a spherical video, maybe choosing a different camera equipped with dual or multiple lenses is a better alternative. Another challenge the author faced during this experiment is the time needed to render each video. Due to the large amount of data needed to create a spherical video, often dealing with large files (approximately 4GB for each 30 minutes of video). The large size of video is negatively impacting the encoding process. In fact, the ratio is 1 to 1. It takes one hour to process one hour of video footage. But, if the goal is to play back the video immediately after it is recorded, it can be done directly from the software and in this case there is no need to wait for the video to be processed.

After this short experiment during spring 2016, the school purchased two additional 360-degree cameras for the Trial Advocacy class. Students and instructors had the option to choose the panoramic camera instead of the regular one to record their practices. However, the simplicity of a regular camera, although it provides limited features, seemed more appealing to the instructors. Going through the rendering difficulty after each recording and the need for a specialized player or device to review the videos is certainly an obstacle for an already over-stretched curriculum.

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