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Winter 2016

# Got a Minute? Instruction Tune-Up for Time Pressed Librarians

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# Got a Minute? Instruction Tune-Up for Time Pressed Librarians

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# Got a minute?

## Instruction Tune-Up for Time Pressed Librarians

LIS Students, University of Denver

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# Welcoming: The next generation of instruction librarians

## Alison Hicks

"So, how about we turn your final papers into an open access book?" I scrunched up my eyes as I threw this idea out on the first day of semester, hardly daring to see what the reactions of the class would be. Yet, as I paused to give the students time to think about their responses, the sound of surprised excitement that suddenly bubbled up made my eyes snap wide open. As I looked around the room I sensed a quiet thrill and realized that maybe, just maybe, this crazy idea might work out. In my daily work as a practitioner instruction librarian, I had always been a big fan of student publishing- it frustrated me to see how much effort, passion and expertise students brought to their final assignments, only to find these same essays languishing in a empty printer paper box in a professor's office a couple of weeks later. However, it was quite a different matter when it came to teaching my first class in a library program. Would the students of the newly formed LIS 4330 Library Instruction class at the University of Denver be as excited as I was about this project? Would students see peer review from real librarians as a way to get authentic and constructive criticism about their work, or would it be ridiculously terrifying for learners who had only been in school for a couple of semesters? What about the idea of publication- would students see this project as an opportunity to become more integrated into instruction librarian landscapes, or would it be interpreted as just one more task in what was already a very short quarter system? It was these questions, amongst others, that made me hesitate before I tentatively threw out the idea of a class publication one snowy night in January. Yet, as I swiftly came to realize, these students were more than capable of meeting these challenges as they threw themselves gamely and enthusiastically into *Got a minute? Instruction tune-up for time pressed librarians*.

Replacing their final paper, the students' brief for this assignment was to provide a short and pithy overview of an instruction, education, or information literacy topic that a busy librarian could make time for on a hectic day. Taking the shape of an essay, an annotated bibliography, a zine or a digital story, this paper then went through a double blind peer review process with practising librarians before being deposited as this Open Access class book in the school repository. In this respect, the assignment would meet many of the principles that I admired in publishing pedagogy; the opportunity to write for an authentic audience, an immersion in the complex practices and processes of knowledge construction, and the disruption of top-down power or control of what is seen to constitute "legitimate" knowledge (Miller, 2013).

More significantly for the purposes of this class though, this paper would also serve as a way to integrate students into instruction librarian communities of practice. As a loosely knit group, instruction librarians share a number of common interests, values and vocabularies- from Think-Pair-Share and "The Framework" to IL, CATs and the wide range of acronyms that we may bandy about unthinkingly. In other words, and drawing upon Lave and Wenger's sociocultural theories of learning (1991), instruction librarians form a specific social configuration with our own overt rules and perspectives, as well as more tacit ways of thinking about and, often, critiquing these experiences. The unique nature of these practices and understandings can be seen as what binds us together as instruction librarians, albeit loosely, informally and rarely

exclusively. Most importantly, though, and especially for the purposes of this Library Instruction class, these activities can also be seen as helping to form a living context where shared histories and ongoing negotiation produces instruction librarian experience and regulates instruction librarian competence, as well as providing a framework for engagement and development in the field (Wenger, 1999). In effect, when we reframe instruction librarian practices as shared and negotiated within a specific social environment, learning about instruction cannot be conceived as the acquisition of decontextualized or generic skills. Instead, this learning must be re-centered around the notion of participation in and engagement with authentic community activities (Rogoff, 2003), as well as the construction of identities or personal histories in relation to these group activities and practices (Wenger, 1999).

More expressly, these ideas spoke to the importance of designing an assignment that mirrored authentic and typical instruction librarian activities. Both publishing, as well as professional development or the need to keep up with educational developments are vitally important for many instruction librarians. This assignment would therefore engage students with common practices in the field, as well as providing a space to explore an area related to library instruction in far more depth, an issue that was particularly important given the varied nature of student interests and the limited time frame of the class.

At the same time, while engagement in these typical librarian activities is important, it does not automatically mean that ensuing student learning would transfer unproblematically from a school to a workplace setting. If learning is situated and contextual, then it is clear that it cannot necessarily be easily portable. In addition, the complexity of modern information and educational landscapes means that it is impossible to predict what challenges new professionals may encounter and, in fact, whether experts actually possess the knowledge that novices may need to develop for the future (Tuomi-Grohn, 2003). The notion of participation in a community's activities could not therefore, be simply structured as the unidirectional transfer of knowledge from expert to novice. Instead, the assignment would also have to be designed around the active interpretation and reconstruction of knowledge practices, or through a multi-directional, collaborative project of mutual interest where workplace and school can learn from each other (Konkola, Tuomi-Grohn, Lambert & Ludvigsen, 2007).

In effect, these ideas led to a restructuring of the assignment around a broader consideration of what students could bring to this assignment that instruction librarians could not. While students may not yet have the practical experience of instruction librarians, the nature of the instruction class in which they were enrolled meant that, unlike many practising instruction librarians, they did possess the time to reflect on and explore instruction issues in detail, as well as the benefit of fresh eyes and a wealth of experience from other fields. As a practising instruction librarian, it was very clear to me that we are often pressed for time, as well as hard pushed to keep up with all the changes that are taking place in this field. Student essays would thereby serve as a useful introduction or overview of a topic that a librarian may have been meaning to learn about, as well as functioning as a pointer for future reading. A publication assignment that matched these students' advantages of time with the librarians' need to keep up would thereby constitute a mutually beneficial activity where students are actively negotiating, contributing to and participating within established communities of practice, rather than merely processing its knowledge.

**What to expect!**

So what can you expect from this book, beyond 19 well crafted, well argued essays?! The breadth of topics in this book means that unlike many publications, this book is designed to be dipped into- while some topics may be very familiar to you, others may be completely new, or may serve as a refresher.  Whatever your interest, students have taken a number of different approaches to explore a wide range of instruction topics.

Some students have helpfully rounded up research into ideas that you may not yet have got round to implementing in your instruction program- whether this is integrating the library into the Learning Management System (Cyndi Landis), creating an instructional Youtube channel (Saleh Aljalahmah) or visual literacy (Brittiny Tirapelle). Others have scoured the literature looking for and presenting best practices for technologies such as LibGuides (Meghan Damour) or for working with special populations such as transfer students (Chelsea Heinbach), English Language Learners (Joanna Stankiewicz) or Seniors (Renate Robey). Students have also uncovered a number of new instruction techniques and technologies that may be of interest, including the idea of visible learning (Meghan Ecklund) or new citation managers (Andrea Copland).

Another group of students set out to challenge conventional ways of thinking, whether this is about the educational theory of connectivism (Michael Bovee), the notion of scholarly authority in the classroom (Paul Worrell), or the need for asynchronous learning opportunities (Kate Wimer). Others have taken a deep dive into the connections between theory and practice, whether this is digital media and literacy programming (Cortnye Rusch), multimodal learning and Youtube (Joe Richard) or new and emerging trends in school libraries (Kerena Burns). In fact, topics that go beyond academic library issues are well represented, with a group of students focusing on approaches to teaching intellectual freedom (Rachel Reddick) or health literacy (Tiegan Ziegler) in public libraries, as well as the use of primary sources within school libraries (Rebekah Thurston). The instruction librarian herself is not forgotten either, with Kathryn Bodnar's paper rounding up advice about how to deal with burnout.

Whether you read the book from cover to cover, or dip in and out as your semester lets you, the papers that are gathered here represent both the students' exertions to write a paper that will be useful for busy practitioners as well as an important contribution from the next generation of instruction librarians. In her recent post on the ACRLog, Elizabeth Lieutenant (2016) highlights the need for practitioners to become more involved within LIS education, pointing out that "while it may be easy for practitioners to dismiss the relevance of LIS education to our profession's needs, it is those dismissals that contribute to LIS failing the future of our profession." It is in this spirit of mutual engagement and exchange that this book was written and I hope that the importance of continued reflection on and application of these ideas will become clear as you read through these LIS students' valuable contributions to the field.

**Alison's Acknowledgements**

First and foremost, I would like to say a huge thank you to the anonymous peer reviewers who were so generous with their time, expertise and feedback. Hailing from five states within the US,

as well as from Canada and the UK, this project would not have been possible without their energy and support as well as their generous willingness to meet the tight deadlines I set... Thank you for your help!

Lastly, thank you to the students of LIS4330, who have explored the complex and intricate world of information literacy with patience and good humo(u)r. They have not only put up with my ability to relate everything back to figure skating, but have also, through the liveliness of our discussions and the depth of their questions, engaged me even more deeply in the maddeningly fascinating world of information literacy. Thank you!

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# 1

# Librarians in Learning Management Systems: Strategies and Suggestions

# Cyndi Landis

Many colleges and universities offer online classes or at least incorporate some sort of learning management system (LMS) into traditional classes to create a platform for the instructor and students to communicate and relay information. Because of the increasing importance of technology literacy and the streamlined benefits of having a unified platform for each course, chances are that the LMS environment won't be going away anytime soon. So what can the library do to get in on this collaborative learning tool where students go to get information about assignments, grades, and guidance? As a librarian, can the LMS be a starting point for information literacy outreach to teaching faculty? If so, what could that look like? This article addresses strategies for establishing a library presence in the LMS and provides suggestions for creating information literacy and library resource modules.

**Background and Opportunities**

The LMS enables students to log into a course to engage with the content using an online interface which allows them to see and interact with course modules, assignments, files, announcements, discussion boards, and grades. LMS interfaces have a variety of settings that allow the instructor the ability to permit or prohibit access to librarians, teaching assistants, and students so a librarian must work directly with the instructor to decide on the librarian's contributions to the LMS and gain access to the interface.

Many researchers have commented on the technological challenges of integrating librarians into the LMS due to the fact that there are several LMS vendors with a variety of features and permissions. Because there are so many scenarios of LMS vendors and settings, there is no established standard for integrating the librarian into the LMS and many strategies are applied to specific situations (Farkas 2015, Hoffman and Ramin 2010, Mune et al. 2015). However, best practices have evolved by the librarian community sharing case studies and assessments of the library's integration in the LMS. Among the many challenges that can arise, faculty collaboration, technology support, and curriculum design are frequently reported. Getting to know the LMS interface and the collaborative landscape of faculty is the initial step that should precede any module development or implementation.

No matter which LMS is used or is planned to be used in the future, collaboration with the instructor will be foundationally important. Heinrich and Attebury (2012) attribute success in integrating the library into the LMS to "close collaboration with course faculty, including involvement in assignment design[,] access to the LMS," and "consistent communication between all parties" (p. 175-176). Communicating with faculty and being able to outline the various options of integration and any other time constraints or technological limitations will

help establish a mutually beneficial collaboration because much of the success of the library integration at the end of the course depends on "whether or not the course instructor promotes library use" (Farkas, p. 5).

Hoffman and Ramin (2010) describe a "librarian's presence in an online course" as being "more than an academic solution: it is a powerful outreach tool" (p. 298). LMS integration not only allows the library liaison a "risk-free" way to offer library services to professors not willing to give up face-to-face class time, but the online environment enables the library to reach distance learning communities who could benefit from additional resources and guidance. The LMS enables the librarian to reach greater audiences for longer amounts of time, reaching students beyond the physical campus and extending the time from a "one-shot session" to becoming a resource throughout the entire length of the course.

Librarian's integration in the LMS can be designed at the macro-level, creating generic library resource tools that will easily integrate into the LMS, at the micro-level, customizing library resources to a specific course or program, or at the embedded librarian level, with the librarian moderating a specific discussion board or assuming an active role during the course of the semester (Farkas, 2015). Each level of LMS integration depends on what the librarian can offer, what teaching faculty wants, and what will best benefit the students. Understanding the levels of integration and preparing what that might look like for a specific course can help the librarian when communicating with faculty on what services he/she can provide.

**Strategies for Establishing the Library's Presence in the LMS**

As discussed in the previous section, it is important to understand the full picture of the LMS and identify which courses and faculty to approach. From the initial list of courses and faculty, the librarian should focus on building faculty relationships, identifying areas of customization, and knowing personal limitations. These defining areas will help librarians navigate the initial steps of establishing an LMS outreach initiative for the library.

**Building Faculty Relationships**

Faculty relationships are the key to establishing a presence in a course's LMS. To help build relationships with faculty across campus, Wilson (2015) recommends that librarians try "presenting at department meetings, sending e-mails, and attending social events through the institution" while continuing to feed existing relationships and "keep[ing] conversation going" by sending "periodic e-mails, meeting for coffee, and chatting at institutional functions" (p.492). When a librarian has an ongoing relationship with faculty, they will be more likely to collaborate with him/her on adding library resources to the course's LMS. These relationships open doors to collaborating on assignment design, granting greater access to the LMS, and can also lead to opportunities for more traditional library instruction sessions. Fruitful faculty relationships will also promote library services through word of mouth to students and other faculty.

**Identifying Areas of Customization**

Establishing the library's presence in the LMS is more than just curriculum design around information literacy modules. Wilson (2015) describes how the librarian has greater flexibility and reach within the LMS because he/she "is able to reach and provide tailored library services to both face-to-face and online students by customizing the role of the embedded librarian" (p. 491). Library content within the LMS should be integrated with specific assignments or learning outcomes of the course or program to ensure that the librarian's efforts will not be overlooked. Modules built within the LMS can provide critical information to the student in his/her time of need, so customizing the content at the micro-level to compliment the assignment, course, or program will help place library content in relevant context. Library resources, information literacy modules, and LibGuides can be customized to specific assignments, courses, or programs so that the students are supported directly. If the librarian's LMS access allows embedded librarian support, he/she can customize a library-specific discussion board with frequently asked questions or host live chat sessions. Other ideas for customizing information literacy and library resource modules will be addressed later.

## Knowing Personal Limitations

When discussing best practices within an online course, Hoffman and Ramin (2010) explain that a library-specific discussion board and or integrating the library reference chat widget within the LMS prove to have the most student interaction (p. 294). If the librarian is successful in connecting with faculty members and becoming embedded in courses, he/she may quickly find that the requests are exceeding his/her capacity to support the courses properly, so involving other librarians from the beginning can "[partition] the workload and [help] instructors become familiar with more than one librarian" (Hoffman and Ramin, p. 298). Having modules prepared ahead of time can help librarians prepare for taking on multiple courses at a time. Librarians should prevent getting stretched too thin because meeting the needs of the students and the expectations of the faculty will pave the way for future collaborations.

## Suggestions for Information Literacy Modules

To meet the needs of the digital classroom, librarians should consider creating digital content around information literacy that is relevant to the course and its assignments. Online modules reduce the librarian's limits on time and topics covered since the LMS allows students to go at their own pace and engage with the content that is relevant to their information need. So librarians may find more instructional freedom in LMS integration rather than getting cut short with "one shot" sessions. However, modules on the LMS can limit the way information literacy activities can be taught. When planning integration into the LMS, librarians should consider the variety of ways to customize the content by preparing a suite of resources, integrating multimedia, and staying organized.

## Preparing a Suite of Resources

Create a suite of information literacy modules to have as examples when meeting with faculty. Mune, Goldman, Higgins, Eby, Chan, and Crotty (2015) suggest that the modules be designed in a way where teaching faculty "can select from a variety of standalone, customizable modules" so that the librarian and the instructor can easily identify which areas of information literacy should

be featured on the LMS and how to customize the modules to benefit the specific course outcomes and activities (p. 101). When the library content is adaptable and meets faculty needs, the content will more likely be promoted by the instructor and integrated into the class, contributing to the overall success of the LMS integration. This modular approach also prepares the librarian's content to fit within most of the technological scenarios of the various LMS platforms and permission settings.

Modules built like an a-la-carte menu allow faculty to select which modules and customizations will best support the course curriculum. By breaking the information literacy resources into smaller chunks, the librarian can more easily revise and customize the module chunks to specific courses or programs. Table 1, derived from a modular outline Mune et al. (2015) created to align with the Association of College and Research Libraries (ACRL) and the Association of American Colleges and Universities (AAC&U) information literacy standards, can be adapted by librarians to serve as a menu when meeting with faculty to select which modules can be included in the course and at what level of detail those topics should be taught (p. 110). Once the information literacy modules are selected and customized, librarians should "take the tests and view the videos in the sequence in which students will access materials" to ensure that the topics covered make sequential sense in the context of the assignment or the course (Heinrich and Attebury, p. 176).

Table 1: Suggestions for Information Literacy (IL) Modules

| IL Topics | Modules | Customization Suggestions | Level of Detail (R=review; T=teach as new) |
|---|---|---|---|
| 1) Research Topic and Question | | | |
| | Developing a Research Topic | Topic examples | |
| | Writing a Thesis Statement | Thesis examples | |
| 2) Search Techniques | | | |
| | Choosing Search Terms | Keywords | |
| | Effective Searches | Databases | |
| | Peer-Reviewed Articles | Databases ; Articles | |
| | Journals | Journals | |
| | Newspapers and Magazines | Newspaper and Magazines | |
| 3) Evaluating Sources | | | |

| | Types of Sources | Comparison Examples | |
|---|---|---|---|
| | Primary and Secondary Sources | Examples | |
| | Critical Evaluation | | |
| **4) Analyzing and Using Sources** | | | |
| | Annotated Bibliography | Example | |
| | Literature Review | Articles with examples | |
| **5) Citing Sources** | | | |
| | Copyright and Fair Use | | |
| | How to Cite | Citation style used | |
| | Plagiarism | | |

## Integrating Multimedia

Enrich information literacy and library resource content by integrating multimedia such as videos, screen captures, tooltips, and chat. Heinrich and Attebury (2012) recommend keeping videos "divided into smaller modules, allowing for easier revision" to save time when updating and customizing the videos by simply replacing specific short segments (p. 176). Course - specific examples can be sequenced with generic information literacy lessons to create a customized video in a shorter amount of time. Multimedia such as videos, screen captures, and tooltips will help students interact with the content to replace the activities and instructor modeling used during traditional library instruction sessions.

## Staying Organized

Because librarians will be recruiting and executing several LMS course integrations at the same time, it is recommended to document each instructor, course, customization, and results to plan for the current and future semesters. Having clear documentation of which modules are integrated in which courses will help the librarian answer student questions and promote LMS integration to similar courses. The librarian should keep track of the assignments and course activity throughout the semester so he/she can release modules at the point-of-need to "avoid overwhelming students at the beginning of the course" (Hoffman and Ramin, p. 301). If the professor requests multiple modules for a course, librarians can trickle in new modules over the semester to have an excuse to send an announcement to the students to call attention to the new content and remind them about the existing library modules.

As the semester comes to a close, it is important to "get feedback from the students and faculty" and "keep records for each course and statistics in general" (Wilson, p. 493). Depending on the

LMS platform, statistics may include clicks from the LMS to the library website, page views, average duration of time on each page of the IL module, video views, discussion posts, participation in a poll or other online activity, or research consultation contacts that can be traced back to the students in the course. All statistics should be documented with the course integration details to help improve future LMS integrations. These best practices for documentation and assessment will help with planning and improvement for future courses. It is in the librarian's best interest to work with the faculty to tweak involvement in the LMS to best fit the course's needs and the student's engagement so that he/she can count on having a presence in the LMS each semester.

## Suggestions for Library Resource Modules

While information literacy modules are an easy sell for classes with a research assignment, they may not be used or promoted by the faculty if there is not a direct tie to the class. In addition to presenting information literacy modules, think outside of the box to prepare library resources that the teaching faculty can't turn down. Consider ways to have relevant content to add to any course such as promoting the library's services that are both general and program-specific. With the right selection of library resource modules, librarians can save faculty hours of student consultation. Similar to the information literacy modules, develop "chunkable" library resource modules that can easily be pieced together to create the magical formula for any course. To begin building a suite of library resource topics, start with frequently asked questions from the Library Circulation Desk and Research Center. What do students not know about using the library website or physical space? Other commonly used service points that are housed within the library like a writing center or tutoring service can be included too.

## Library Basics

Library websites are not always user-friendly or intuitive. Schofield and Eccelstone believe that due to the bureaucratic culture of libraries, many websites were "built for stakeholders battling over real estate instead of being built with the users in mind" (Schofield and Eccelstone, 2016). To aid students in using the website, librarians can create support materials, interactive tooltip presentations, or video tutorials that guide viewers through the library website from the student's perspective. Call out specific areas of the library website that students may find helpful; explain what the various search boxes mean and in which instances the student would use them; describe the basic tips of searching the databases; and point out the research consultations and reference chat features. Distance learners may not ever step foot inside the physical library, so the library website may be his/her only option for having a campus resource that can promote his/her academic success. Lastly, building a permanent LibGuide specific to the course, program, or department can help students continue to access content relevant to their area of study once the semester is over.

## Promote Relevant Service Points

While a math class may not be up for an information literacy workshop, they'd be happy to know what the math tutoring hours are in the Learning Commons. If the library doesn't house the tutoring center, offer the math club a space to meet with their appointments and small groups by

posting a tutorial on how to reserve a room. Same goes for writing centers, technology services, research consultations, computer lab hours, or other specialized services within the library. Table 2 provides an overview of suggestions to include in the library resource modules that should be customized to include other library services and course context.

Table 2: Suggestions for Library Resource Modules

| Library Topics | Modules |
| --- | --- |
| **LibGuides** | |
| | Program Specific |
| | Course Specific |
| **Library Website** | |
| | Catalog (all search boxes) |
| | Databases |
| | Course Reserves |
| | Room Reservations |
| | Journals |
| | Newspapers and Magazines |
| **Service Points** | |
| | Reference Center/Consultations |
| | Live Chat Reference Help |
| | Citation Help |
| | Subject Tutoring |
| | Writing Center |
| | Technology Services |
| **Contact Information** | |
| | Librarian Liaison |
| | Library Hours |
| | Computer Lab Hours and Locations |

**Conclusion**

If librarians are integrated into the course's LMS and understand what the students really need, they can tailor teaching and learning services to the students. Face to face library workshops have a time and place for teaching information literacy and introducing library resources to the campus populations, but they can be limiting in time and location. LMS integration can supplement "one shot" sessions or they can be offered as an alternative way for the librarians to get in front of students. Burgoyne and Chuppa-Cornell (2015) also conclude that integrating the librarian into the LMS "[offers] the opportunity for going beyond "one-shot" experiences

because more time is available to develop scaffolded projects and guided application to achieve greater depth of learning" (p. 419). LMS integration can be flexible and far-reaching offering library help in a student's time of need and should be considered as a first step of faculty collaboration.  By integrating library resources into a course's LMS, librarians are getting a virtual foot in the door of the classroom. Librarians may not have 50 minutes of undivided attention as they would with a face-to-face workshop, but LMS integration is a starting point for developing a course-related relationship with faculty and unveiling a range of concepts they could teach if given class time. Although the combination of in-person workshops and LMS module integration is ideal, either option affords valuable outreach and instruction opportunities.

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# 2

# A Busy Librarian's Guide to Youtube

# Saleh Aljalahmah

Every job has its requirements and instructions to keep the employee professional in his/ her job. Librarians, for example, must keep themselves updated all the time, because their job is basically to offer the information and knowledge for their users. It is impossible to do that if they do not update their knowledge and use the newest tools and sources. It is the librarian's responsibility to update themselves by subscribing to some sources, reading the news or asking their mentors for advice. Providing information for the users today is totally a different process than it was in the past. Nowadays users would like to get information from the librarians without going to the library. Librarians today should be able to help and serve their users online. There are many tools librarians can use to do that, such as online chats, social media tools, creating websites and creating Youtube channels. Librarians should be able to deal with these technology tools and apply them to their services.

**Why It Is Important For Librarians To Use Social Media Tools?**

Social media tools and technologies are tools which allow people to interact and connect each other through a virtual community. People can create, share, discuss and evaluate ideas or information in that virtual world. Librarians can gain many benefits when they involve themselves in that virtual community. However, creating an account in that social media tool is not a goal by itself. Librarians should work hard to make their social media accounts so active and serve their users by doing some services via it. Youtube is one of the most popular social media tools nowadays and many users subscribe to many Youtube channels. Libraries can use their Youtube channel to enhance inclusion and outreach activities. However, there are many challenges and risks in using these social media tools which librarians must be aware of.

Social media tools and technologies have become the most effective way to contact and interact with people. I believe they are the most guaranteed way of making sure that a message is delivered to the users. Some users reply to that message and some ignore it all together. It basically depends on the creativity of your message. People in business are more clever in attracting the users and getting their attention. However, people do not trust most of the business social media tools for many reasons. And when people do not trust you in social media, they are going to ignore you, block or even report spam ! When it comes to trust, there is nothing that can be compared with how much people trust libraries and librarians. For example, users in the Law school library are asking the librarians for legal advice. That show who users are usually trust librarians and share with them even their personal things. This is the main benefit that libraries and librarians can use to their advantage in the social media world. The trust of users makes it very easy for libraries and librarians to reach people and interact with them. However the question is : are librarians and libraries aware of this strong feature ? Are they going to use it in their social media tools ? Also, organizations in general when they are using a social media tool they find it hard to choose between the quantity and the quality. Should they use numerous social

media tools to reach more users ? Or should they use fewer social media tools, focusing on one tool in order to provide more professional contact in contacting, when serving and helping their users. In Kuwait, most of the organizations are focusing on only three social media tools, which are Twitter, Instagram and WhatsApp. My example in this assignment is using Youtube as a social media tool to provide library instructions to the library's users.

**What Is Youtube?**

Youtube is an American video-sharing website that allows you to upload, rate, play, share and comment on videos. Youtube's website was created by three former PayPal employees, Chad Hurley, Steve Chen and Jawed Karim in 2005. The first YouTube video, titled *Me at the zoo*, shows co-founder Jawed Karim at the San Diego Zoo. The video was uploaded on April 23, 2005, and can still be viewed on the site. In 2006 Google bought the Youtube channel for $1.65 billion. Youtube now operates as one of Google's subsidiaries. Youtube makes use of WebM, H. 264/MPEG-4 AVC and Adobe Flash Video technology to display the videos. There are many channels nowadays in Youtube and you can find many Video clips, TV clips, music videos, movie trailers and other contents such like video blogging, short original videos, and educational videos. Also there are many libraries and universities that created a Youtube channel to communicate and provide their audiences with instruction about their services. However, most of the content on YouTube has been uploaded by individuals, which mean librarians can create and upload their videos under their names and became very effective. Unregistered users can watch videos, and registered users can upload videos to their channels. Videos considered to contain potentially offensive content are available only to registered users, affirming themselves to be at least 18 years old. Nowadays there are some videos that reached 2 billion views and likes. That shows with your Youtube channel you can reach and connect with the whole world. In 2015 Youtube announced a premium YouTube service titled YouTube Red, which provides users with both ad-free content as well as the ability to download videos among other features. Nowadays, Youtube is a global website that is being used almost in every country, people visit it daily.

**Advantages And Disadvantages**

Youtube as a website and service contains many advantages that reflect positively on the users and the channel's creators as well. Librarians will earn many benefits from using a Youtube channel as a tool to communicate and provide library instructions to their users.

First, as I mentioned previously, Youtube is a global website that allows you to reach users from different countries. Librarians can use their Youtube channel to provide library instruction such as how the users can browse the library databases or how the users can do a professional search process. These kinds of videos are needed and users are willing to learn and watch them from everywhere in the world. So librarians can become very popular on Youtube which will help them to attract more users to their library or their library's website.

Secondly, Youtube's website shows some ads before the videos start. These ads are from companies that would like to do some marketing for their products by publishing them on Youtube channels. The fees for these ads are separated between the Youtube company and the channel owner. For example, if I have a Youtube channel and my users watched the ads before

my video started, I would earn some money from that, because I helped in marketing that product or service. Ads will show in your channel according to how many views your videos got and how many users subscribed to your channel. So librarians can earn some money for them or for the library by posting these videos on their channel and interacting with their users in order to get more views and subscribes.

Third, librarians will be able to interact and earn social feedback from their users in their Youtube channel. Users can comment, rate, like, dislike and favorite videos on Youtube. This feedback will demonstrate how the users feel and reflect on your videos. With these advantages, librarians will have a great body of knowledge to develop and improve their attitude as librarians.

On the other hand, using social media tools have some disadvantages as well. Librarians need to spend a lot of time on this social media tool. Because users will comment in different time zones, especially when they are from other countries. This might keep the librarians busy and distracted from doing their job in the library. I suggest to locate a specific librarian to just handle the library's Youtube channel. Also the library can locate a specific team to operate their Youtube channel. Otherwise it is going to be hard to be active and successful in that channel.

Also on the internet in general, people might get bad comments or negative words. This might have a bad effect on the librarians and they might get disappointed. However the smart librarians should not be affected by these comments and should have the ability to use these bad comments as power that could push them to do better.

Additionally, not every librarian might be able to use this social media tool in a professional way. Librarians would need to have a high level of technology skills. Librarians with an IT background would be the best choice to handle the library's Youtube channel.

**How The Youtube Channel Can Be Useful For Library Instruction?**

As I mentioned previously, librarians can upload many videos to their channels whenever they want. These videos could be five hours long which is an enough time for workshops. Librarians can upload workshops on their Youtube channel, such as searching strategies, databases types, citation instructions, using references, understanding the classification systems and many other instructions. The comments will be a very helpful way of seeing what the users think about your videos and knowing if they understand them or not. Also librarians can provide a whole program of instructional lectures in their Youtube channel, such as steps to create a personal LibGuide. That topic, for example, needs more than one video, so librarians can create a playlist in their channel about it and upload many videos in that playlist. All these ideas and options prove that using Youtube channel to provide library instructions is a perfect idea, because it is better for librarians to record these instructions and upload them than do it again every month for new users. Also librarians will reach more users with these instructions and many people will learn from it.

**Examples of Libraries Using Youtube Channels**

Nowadays almost every library has a Youtube channel. However most of them do not use it professionally or have stopped using it for some reason. I believe to manage your Youtube channel and be active with it, you have to be interested in this experience and do it with love. That what I saw in the next three examples.

First Manchester Metropolitan University (MMU) Library Services channel which is one of the best channels in my point of view. In this channel users can learn more information about information skills and watch very useful workshops. In this channel the librarians uploaded many instructional lectures in many playlists. First playlist called *Find Help In 15 Seconds* which contains short videos that present the information such like taking book out in 15 seconds, swiping into the library and finding books in 15 seconds. Also this channel has another playlist where they uploaded longer instructional videos such like searching in the library catalogue, renewing a library loan, returning items to the library, finding electronic journals and accessing ebooks. The users like their videos and they usually leave positive comments on their videos. It is really an interesting channel that provides a helpful information to the users in a smart and quick way.

The second example is The British Library channel which is also one of the best libraries channel in Youtube. The British Library has mostly uploaded videos about their collection and events. However they have a playlist called *How to use the library* where they have uploaded many useful instructional videos to their users in order to teach them how to use the library in a professional and effective way. I found most of these videos so helpful for me as a user such as document supply service videos, using the DataCite Metadata Store, exploring the collections and registering with the library. All these videos are very helpful for the users because they demonstrate all the steps that you have to follow in order to do it.

The last example I want to point out is The Library of Congress channel which contains a huge collection of videos. The Library of Congress channel has more than 30 interesting playlists. One of these playlists is called *Teacher Resources from The Library of Congress*. In this playlist they uploaded many instructional videos such as working with maps, working with photos, planning a search, copyright quick check, teaching with primary sources and many other useful videos. I believe The Library of Congress channel is very important and useful for users and librarians as well. Librarians or teachers can learn many helpful things from these videos because it is done by experts in the fields.

These were some examples for libraries which started working on their Youtube channels and provide their users with helpful instructional videos. Youtube channels is a huge advantage that will benefit the librarians and the users if they used it in a professional way like these examples.

**How To Create A Youtube Channel For Your Library ?**

The first step in my opinion in creating your Youtube channel is planning. Librarians should know why they need to create this channel and have some goals and objectives before they create it. Because in order to manage your Youtube channel in a professional way, you have to know why you created it and how you can achieve your goals. After creating your plan, you can start creating your Youtube channel.

Creating a Youtube channel is an easy thing and free. First you have to go to [youtube.com](youtube.com) and you will see in the top of the page a sign up option. When you select sign up you it will take you to a page where you have to write your account name, email and your password. After that you will get an email to confirm your account and activate it. You can subscribe for any channel that you are interested in and find it useful for you as a librarian. After that you can create your channel easily.

To create your channel first you have to login in your account. When you login you will see My channel option in the left side of the page click on it. Now you can see your channel page and manage it. There are many things you can do in this page such like editing your channel's picture, add channel ART, control your channel access, editing your channel's description and creating a playlist.

The home page of Youtube website is very friendly and easy to use. Also you can download Youtube Apps in the smarts phones and manage your account and channel from there. These apps can alerts you when anythings were posted in your channel form your users such like comments, rates, likes or dislikes. This will help you to be updated with your channel and your users all the time.

**How To Upload A Video?**

Youtube worked so much to make the uploading videos process very easy and it does not take a lot of time. There are two ways to upload videos to your Youtube channel. First, if you are trying to upload a video by using the Youtube app it is super easy and fast. First you have to open the app and click on the person icon. You will have a list in this page, choose My videos from that list. You will see a blank page with a small red upload icon, click on it and the app will ask you to allow it to access your video library in your phone. If you agree about that you just have to choose which video you want to upload and it will be there in your channel.

Uploading videos by using the website is mostly the same process with a little different steps. First you have to open youtube.com page and login in your account. You will see in the top of the page an upload option click on it. If you did not found it, go to My channel page and you will find it there. After clicking on it you will see the option of select files to upload. Click on it and choose your videos. After that you will have the option to choose who can see this video, whether the public or specific users.

**Feedback In Youtube**

Feedback in Youtube is very important because it is the only signal for you to know if you are in the right way or not. There are many ways that you can know what the users think about your videos and your channel. First, comments are very clear feedback you can see it from your users. The users can write in the video comments their opinions and questions. Second, rates are another great way to tell how much the users find your video helpful. Also likes and dislikes options will show you how many of your users liked and agreed with your video and how many didn't like it. Additionally, the subscriptions for your channel is the main signal that shows you how many users find your channel important and they want to be informed in every video you

will post in the future. According to the subscriptions number, Youtube website will decide how many ads they will post in your videos and how much you will earn from it.

These feedback can be positive or negative. Librarians should have the knowledge of how to keep and increase the positive feedback with their users and how to fix and improve their channel to avoid the negative feedback.

**Conclusion**

In conclusion, social media tools should not be a goal by itself, it is always a way that helps libraries and librarians to reach and provide their users with better services. It is so wrong if librarians consider using the social media as their goal. The way librarians are using that social media tool and what benefits they will earns from it is the most important part in using the social media tools.

Youtube channel as a tool will helps the librarians to do what they actually do in the library but in a more advanced way. In a Youtube channel there is no limit of how many users can see and learn from the librarian's instruction. Also there is no time limit for the users' questions. Which means librarians may post a video in their channels and they will reserve questions about it after 6 years or more. Librarians nowadays have no excuse to not reach unlimited users and provide them the instruction they want. They should trust and involve themselves in the social media to achieve their goals.

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# 3

# Visual Literacy in the Classroom

# Brittiny Tirapelle

There's a common recurring theme in much of the research surrounding visual literacy: that of our increasingly image-saturated culture. From graphic novels and Ikea furniture instructions and billboards lining the highways, and especially the rise of applications like Instagram, Snapchat, and Tumblr, modern society is awash with images; images which are now their own kind of visual communication. It is understood almost instantaneously. What's more, it transcends spoken and written word, making it a universal and globally known language. For this reason, understanding visual literacy and its application has come to the forefront of library instruction interests, not just regarding art students but for the general population as well. Therefore, this paper will explore the meaning of visual literacy, and basic concepts and theories surrounding visual literacy. Discussion will then move into various approaches to visual literacy within library instruction, and how that might apply to the classroom. Finally, this paper will close with a more in-depth examination of the significance of visual literacy to the broader community.

**Overview of Visual Literacy (VL)**

*VL & ACRL: Defined*

According to Hattwig et al, the ACRL *Visual Literacy Competency Standards for Higher Education* "are the first of their kind" in regards to "interdisciplinary visual literacy performance indicators and learning outcomes."[1] Further, the outcomes provide both a "framework for student visual literacy learning and offer guidance for librarians… and other academic professionals in teaching and assessing visual literacy."[2] The ACRL visual literacy standards offer description and guidance for librarians wishing to apply visual literacy to the classroom. In these standards, the ACRL defined visual literacy as "a set of abilities that enable an individual to effectively find, interpret, evaluate, use, and create images and visual media." [3] The ACRL further states that such skills "equip a learner to understand and analyze" visual information.[4] Thus, effective visual literacy involves a complex skill set surrounding the use and understanding of imagery, and which allows an individual to read, interpret and use such visual language. As "21st century learners" engage in modern society's increasingly "highly visual culture," yet lack the skills needed to do so effectively, it is essential to incorporate these competencies into the library and academic curriculum.[5]

*Processes and Theories*

Besides the ACRL competencies, there are numerous other sources that contribute to understanding visual literacy. These include various processes to learn how to "see" an image as well as several learning theories in relation to visual literacy. In conjunction with the ACRL competencies, these processes and theories provide a basic foundation useful for both a greater understanding of and how to teach visual literacy. For instance, take the Toledo Museum of Art

and their outline for a six-step process towards seeing art.[6] The goal of this process is not only to "see," but also to understand images on a "deeper level," with the final result leading to the individual's developing visually literacy.[7]  This process for "The Art of Seeing Art" consists of: "Look, Observe, See, Describe, Analyze, and Interpret," where each step involves a deeper level of interaction with art and one's own awareness of thought to arrive at that greater visual understanding.[8] Concerning the classroom, such a process as "The Art of Seeing Art" could inspire ideas for librarians planning visual literacy instruction courses, especially when aimed at the early stages of "seeing" an image.

In her discussion about the importance of combining cognitive theories with the aforementioned ACRL standards when teaching visual literacy, Beatty outlined such theories as "Dual Coding Theory, Cognitive Load Theory, and Multimedia Theory."[9] Beatty argued that by understanding these learning theories and how they relate to visual literacy via the ACRL standards, librarians could better "understand how human beings process visual and verbal information," and could thus "ensure that their students acquire the skills they need" to become visually literate.[10] As such, further explanation on each of the three theories – dual coding, cognitive learning, and multimedia – are discussed in brief below.

Originally presented in his book *Imagery and Dual Processes (1971)*, Paivio later expounded on the dual coding theory when he published *Mental Representations: A Dual Coding Approach (1990)*.[11] Through dual coding theory, Paivio hypothesized that the human brain utilizes two different "systems" for handling and processing information, those being "nonverbal objects and events, and [the other]… language."[12] The latter Pavio referred to as just "the verbal system," since it was a "language-specialized system."[13] Paivio referred to the former, the "nonverbal objects and events" system, as the "imagery system" due to the main function of "analysis of scenes and the generation of mental images."[14] While "functionally interconnected," in that both systems can be utilized simultaneously, Paivio insisted on qualitative processing differences that resulted in specialization of the two systems.[15] The core idea with dual coding theory is that of two distinct cognitive functions for information recall and processing, one of language and one of images. Therefore, students learn through imagery and visualization as well as with written and spoken words. This furthers the importance of teaching visual literacy, since students learn from more than just language alone.

Cognitive load theory, originally developed by Sweller in the late 1980s, was constructed around the idea of mental overload in student learning and problem solving.[16] Sweller suggested that cognitive load occurs when the "cognitive-processing capacity" of an individual is too limited to process an unfamiliar problem.[17] Thus implying that students struggle to learn new information when they have "have no frame of reference" to relate it to.[18] Additionally, Sweller explained previous research about how people process information in "chunks."[19] So, cognitive load occurs when students are faced with large amounts of new and unfamiliar information. To mitigate this problem when teaching visual literacy, it might be best to introduce concepts and ideas in small portions, and to relate those concepts to something the students already know.

Originally developed by Mayer in the late 2000s, multimedia-learning theory postulates that students learn better from both words and pictures than with words alone.[20] Mayer suggests

that multimedia instruction can be "based on delivery media," presentation mode, or "sensory modalities," where delivery media might include "amplified speakers or screens," presentation mode would focus on words and pictures, and sensory mode would focus on auditory and/or visual based learning.[21] Mayer further promotes a "learner-centered approach" to instruction that "focuses on the nature of the human cognitive system," or, on how people learn.[22] Thus, Mayer's multimedia theory draws on, and even expounds on, Paivio's dual coding theory above, by endorsing the unification of visual and verbal learning methods as a way to improve student learning.

The learning theories outlined above provide a foundation for understanding how students learn through both images and words. Further, these theories present the idea that students not only learn better when information is presented both visually and verbally, but also that students learn better when information is presented in a relatable way via smaller, bite-size portions. Regarding visual literacy, these learning theories used in conjunction with the ALRS competencies and the Toledo's "Art of Seeing" process contribute to developing that deeper understanding of visual literacy, as well as encourage ideas for creating effective instruction plans when teaching visual literacy to students in the library.

**Studies and Application**

Teaching with images can help students to develop a variety of skills. These skills include concepts "essential to visual literacy" and other areas of academic performance, such as "critical thinking, communication, collaboration, creativity, and innovation."[23] Outlined below are two case studies, which explore varying approaches to applying images and visual literacy in an academic library setting. Additionally, each overview includes definitions of the specific approach, intended outcome, and how that approach might be applied in class.

One approach to incorporating visual literacy into library instruction is that of embedding it into first year instruction, which is exactly what the University of Montana did with their "*Capture the Moment* exhibition of Pulitzer-Prize-winning photographs."[24] This method utilized extensive collaboration between faculty and the "undergraduate services librarian" to embed visual literacy instruction throughout the freshmen seminar, with critical thinking as the course's central theme.[25] The librarian's role was to develop assignments designed to teach students how to look at and think about art in a scholarly way.[26] Two of these new assignments consisted of the "ethics of seeing" and "capture the moment" activities.[27] The first activity, "ethics of seeing," involved class discussion that used pre-selected images brought up via ARTstore in combination with the question "*What do we have the right to see?*" as a way to jumpstart class discussion.[28] The goal of this assignment was to spark conversation by having students compare and contrast their "assessment of visual materials… with their experience assessing other, more traditional, texts."[29]

In response to student "difficulties involved in reading and evaluating visual images," the second assignment required students to attend the *"Capture the Moment* Pulitzer prize exhibit on campus" with guidelines for how to look at and think about the photographs.[30] The intended outcome was for students to recognize the difference between "reading the printed word and "reading" visual material."[31] Regarding classroom application, both these activities are fairly

straightforward and would need little variation to be applicable in similar instruction scenarios. Possible adaptations could include reconfiguring "ethics of seeing" for a particular subject, such as history and historical interpretations of specific events or societies. In that, the images shown in the library instruction class could have a theme or relate back to the students' coursework, be it writing, science, history, etc. "Capture the Moment" could focus on other visual material as well as, or instead of, photographs, such as paintings and illustrations. The activity also doesn't have to require a museum visit, though that might be preferred for a more genuine and engaging experience than viewing images online.

Another and relatable approach for non-art and non-design students involves the creation of a "basic learning program for enhancing visual literacy," originally developed for Japanese high school and college age students by Ariga, et al.[32] Utilizing student photography and a class-collaborative webpage to upload and share work, this program's core objectives concentrate on observation and content creation as a way to construct appreciation and meaning.[33] This is accomplished through the "Look-Think Exercise" series, in which the authors focused on "perception, visual variables," and significance of the "analysis of implementation."[34]

The first exercise, *Perception*, uses the "six Gestalt factors" of "figure-ground relationship, proximity, similarity, closure, good continuation, and uniform connectedness" as a guiding force for students to "understand an intuitive way of looking at the visual world."[35] The idea being that having students focus on these factors while they take photographs to show their observations will in turn foster "understanding of visual perception" and help to "create effective visual communication designs."[36] The second and third exercises, *Visual Variables* and *Signification* include the same theme of photography to communicate understanding, but with slightly different goals.

The second exercise "develops awareness of how graphic images express quantity, quality, and distinction," and focuses on "constructing a scale of photographs" of the same theme to demonstrate understanding of "visual elements… and visual meanings."[37] The third and last exercise, *Signification,* "aims to get students to think of signification by visual images" by encouraging students to explore denotations and connotations of "what is photographed in social and cultural contexts."[38] Student written reflection and presentations, class discussion, and the aforementioned collaborative webpage, where students could share and discuss each other's work, were all used as assessment tools to garner student development throughout the course.[39]

A project of this size might be too much or too involved for one-shot classes and the like, but elements of this study could certainly be adapted to fit into smaller time-slots. Perhaps focusing on just the first exercise would be more realistic and beneficial for students who just need to learn the basics of visual literacy, and not necessarily the basics of graphic design. Also, searching for images online or showing pre-selected images to illustrate Gesalt's concepts, as with the first approach, might be more feasible and less time-consuming than having students go out and take their own photos, even if the latter method is more idealistic.

Besides the two photography and observation based activities above, the Visual Literacy Toolbox has compiled a list of "online activities, activity plans, questions, and learning

objectives," as well as a list of additional resources, in order to assist faculty in both understanding visual literacy and in curricula customization when incorporating visual literacy to instruction.[40]

## Significance

As discussed above, teaching images and visual literacy in the classroom can increase student skills in "critical thinking, communication, collaboration, creativity, and innovation," which is especially helpful for students living in today's "visually rich, screen based world."[41] Shanahan points out the importance of visuals across all academic disciplines, not just the obvious in art and design. For instance, images are used in science to help "explain scientific phenomena," since "language is insufficient" on its own.[42] These images include pictures of atoms, plant cells, and even human anatomy. "Multiple representations" of information "increases the possibility of accuracy and wide understanding."[43] Students might not understand what a plant cell or an atom look like through words alone, the image provides an example and gives students a visual to think of when reading text. In social studies, graphics appear in the form of maps and "analyses of the meanings of… photographs and political cartoons" and historical artwork.[44] Pictures are also "important in children's literature" and graphic novels, considering that "illustrations carry… meaning for all readers."[45] Some readers, not just young children but readers of all ages, may prefer visually based learning and reading, since they often seem to understand it more immediately and more easily than with just written and spoken words. This demonstrates the importance of the dual coding and multimedia learning theories above; students need more than just words to learn, they need visuals too.

## Conclusion

Visual literacy's increasing presence in modern society and its ability to facilitate global communication make it an important subject to include in library instruction. As previously discussed, visual literacy is the ability to see, read, and communicate with images and other visual material. There are several concepts, theories, and past approaches to visual literacy, including possible class activities, all of which may help librarian instructors come to a greater understanding of the subject and how to apply it to their own classes. For visual literacy is the language of images, a language that art students would study but might not know how to research, and a language that the modern world comes into contact with every minute of every day, but might not fully understand. Visual literacy is an age-old, pervasive form of communication, what better time to learn it than now?

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# 4

# Really Really Ridiculously Good-Looking: Best Practices for Creating LibGuides

# Meghan Damour

LibGuides, the popular content management/web publishing platform developed by SpringShare, tends to be somewhat polarizing in the academic library world; it seems that most librarians either despise them or tout them as the best thing since sliced bread. Regardless of how we feel about them personally, however, we are often asked to create, maintain, and teach with them. Academic librarians in particular tend to rely on LibGuides, as they are often their only potential point of contact with some very time- crunched groups on campus—this results in a large number of guides covering a lot of topics, which means that there are a lot of places that guides can go wrong. This paper aims to provide a quick and dirty briefing on ways to improve your academic library's LibGuides.

There is a lot of information available on general "best practices" for LibGuides. Most of this information is written by and for individual academic institutions, though there are a few pages written by larger communities of librarians (bestof.libguides.com) and SpringShare itself (the web platform company that created the LibGuides and LibAnswers apps). Best practices for LibGuides seem to be fairly consistent across institutions and disciplines and tend to be focused on the platform itself, but the flexibility of the platform (and the diverse needs and skills of the librarians creating the guides) means that it's very easy to create hugely varying pages: "Layout, design, visual interest, user-friendliness, and a sense of the responsible librarian's approachability seem to be largely under the creative control of each LibGuides author, regardless of institutional type" (Stankus & Parker 2012, p. 254). However, simply agreeing upon some standards and best practices for your own institution can help ensure that a user's experience is efficient and consistent across library webpages and guides, which helps to create a more positive, successful search experience for the user. So let's look at some generalized best practices that seem to crop up a lot throughout the web, and zoom in on how those might be applicable in the average academic library:

**DESIGN**
**Standardize look and feel across your library's guides:** And, ideally, mimic the look and feel of your library's other webpages. This one is pretty straightforward, but not consistently done.

- Colors and fonts should be the same across guides
- Guide/page/tab names should summarize all of the content they cover (for example, if a page has 80% content on Spanish literature and 20% on Catalan literature, the title of the guide should not be just "Spanish Literature)
- … And guide/page/tab names should be formulated to mirror each other across guides (i.e. the title of the landing page of every guide shouldn't flip-flop between "getting started" and "start here")

- The way links behave (do they open in a new window, a new tab, or the same tab?) should be agreed upon across and within guides
- Major content items like librarian contact information and chat widgets should occur the same number of times and be in the same place on each guide
- Style and grammar choices (i.e. formality, use of the Oxford comma) should remain consistent across guides.
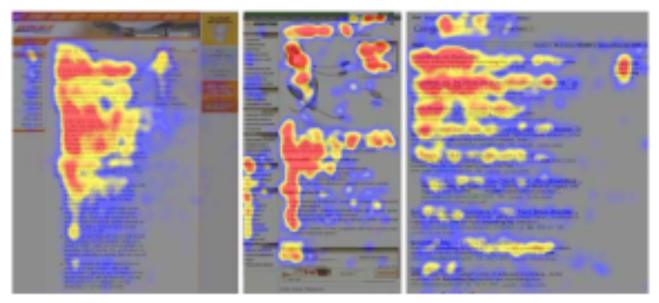
My subject guide for undergraduate nursing students should look and feel very much the same as my colleague's subject guide for doctorate students in religious studies, and those two guides should look and feel very much the same as our colleague's topic guide on searching JSTOR. Content, of course, will vary dramatically, but users should essentially feel as though all the guides were created by the same person all at once.

**Use clean and simple design (i.e. make your guides really really ridiculously good- looking):** Across many of the usability studies that were reviewed for this paper, this is the number one thing that came up. Students prioritized simple page design when asked about what qualities they wanted in a guide before even seeing one, and they commented on it or wished for it in a page that they were shown (Wood, n.d.). And this makes sense—in an age when we're working with Google and Wikipedia as everyday household resources (the homepages of which are literally search boxes on white pages), most guide users likely don't see a reason to tolerate visual clutter and difficult navigation. And while a visually appealing webpage doesn't necessarily contain the best information, studies do indicate that attractiveness—essentially, good design—does confer some degree of authority (Nielsen Norman Group, n.d.). Google and Wikipedia are simple, familiar, and consistent. And we should be striving to be the same.
What specific principles does a "clean and simple design" include? The first is the F- pattern. Based on the Nielsen Norman Group's 2006 eye tracking study, this idea basically says that readers "often read webpages in an F-shaped pattern: two horizontal stripes followed by a vertical stripe" (see Fig. 1). We know that users will not read the entire page, so acknowledging this and giving your readers "visual signposts" is key.

Fig 1. https://www.nngroup.com/articles/f-shaped-pattern-reading-web-content/

Essentially, you should be using a visual hierarchy to enhance and reinforce content focal points within your page.

- The entry points of your page—where readers' eyes will land immediately (usually the top left corner)—are a good place to help direct readers using heavier elements such as bold text or images
- Consider this popular page structure: navigational tools on the far left, main content on the mid-left, and the very most important things a third of the way to halfway across the page
- Use caution with mega-menus—their effectiveness is widely debated among librarians and web designers

Studies also show that readers read virtually none of the text below the fold (the parts of the page that can't be seen without scrolling down): they'll spend 80% of their time above the fold, and then will scroll below the fold and spend the other 20% of their time on a page (but overall they only read 20-28% of the text on the page!) (Nielsen Norman Group, 2010).

- Do your very best to keep at least all of the headings on a page above the fold
- Avoid large blocks of text, primarily by cutting back on content, but also by using lots of paragraph breaks and subheadings

The key with all of this is to accept and relish open space—give your readers' eyes a place to rest. It is easy to want to compile a huge list of all the resources you think anybody might ever use for your engineering topic guide, but this can be overwhelming. Select the most important resources (more about that in a minute) and arrange them on the page with the other widgets and items in a way that is nice to look at and 'tells' your readers what their eyes should do.

The screenshot of a Virginia Commonwealth University LibGuide (Figure 2) provides a good demonstration of the key points here—plenty of restful space for readers' eyes; not too much content; all headings and boxes are visible above the fold; design is consistent between all pages

and all of the university's guides; F-shaped reading pattern is accommodated, with heavy design elements guiding the eyes toward content.

Fig. 2 http://guides.library.vcu.edu/c.php?g=47588&p=297801



**CONTENT**
**Write for the web:** "Writing for the web" means a lot of things, but the gist is simple: by writing and structuring your guides appropriately for the web environment— acknowledging the ways that reading on the web and on paper are different—you are actively helping your users accomplish whatever it is that they came to your guide to do. Users read webpages very differently than they read most printed material; readers on the web tend to scan pages for information, rather than read the entire page word by word. This means we can't write or structure our guides like printed books and expect that to work for our users. Fortunately, there are many simple ways to make your LibGuides web-appropriate.

- Structure the textual content of guides in the inverted pyramid or front-load format, used widely in journalism: the most important information at the top, and more detail further down the page
- Keep all of your text concise, both linguistically and visually:
    - o Include only one idea per paragraph
    - o Use natural language and avoid library jargon (i.e. a link that says "borrow from other libraries" instead of "interlibrary loan")

- Use the types of words your readers use (which, depending upon the guide and discipline, may include some of their jargon)
- Use readability tests to determine what grade level your content reads at—one of them is embedded right in Microsoft Word
- Paragraphs themselves should be quite short—around 20 words per sentence and five or fewer sentences per paragraph
- Don't let your lines of text span across the entire webpage—this is very hard to read! The default column widths in LibGuides are a good size
- Create 'friendly' URLs or use link text—use the LibGuides link boxes (this provides a lot of functionality) or create short URLs using a service like Google's link shortener or bit.ly.
  - Keep link descriptions short. Give your readers a general idea of what's going on behind the link, and let them click through to explore it themselves. No need to provide a detailed overview of everything the database or website does.
- Use a sans serif font that conveys the same voice or persona that your writing conveys (i.e. Arial or Calibri; no Comic Sans)
- Make your guides accessible to differently-abled people, such as blind, colorblind, or deaf users (see the ARL's tech standards resource listed below).
  - Photos and videos should have descriptive alt-text (text that a screen reading software could read to a blind user). LibGuides has a place for this in its photo tools
  - Videos should have captions for deaf users
  - Avoid relying solely on color to convey meaning (i.e. green for good and red for bad, but also √ for good and X for bad)
- Your guides should also be discoverable—use natural language keywords and tagging functions to make it easy for users to find your guides from the library homepage as well as Google or other search engines

Similarly to our design best practices, the key with writing content for the web is simply to keep it simple.

**Organize the content logically:** When creating or restructuring a LibGuide or a set of LibGuides, it is important to decide (hopefully with the help of your colleagues) what types of LibGuides you will be creating. Many libraries have their guides divided into categories such as *subject guides* (for example, guides on public health, or linguistics), *topic guides* (a mobile app guide, or a "how to search EBSCO" guide), and *course guides* (intended for use by students in specific courses, such as ENGL3080). Deciding what types of guides your campus needs and having a clear, directed, fairly narrow vision in mind when creating each and every guide can help to ensure that you're not making a lot of overlap or being willy-nilly about the content in your guides.

- Decide how each type of guide should be structured internally—by media type (i.e. by journals, databases, e-books, etc.), by sub-category (i.e. bibliographic databases, content databases, etc.), or by some other strategy?
- Consider creating a table-of-contents "splash page" as the first page the users land on to give them an idea of everything within the guide and how to proceed

- Use meaningful headings and sub-headings to help your readers find the most appropriate information for their needs
- Organize content and resource links by importance, not by alphabetical order (Frankly, if you have enough content items in your guide that an alphabetical order would be apparent, you have too many content items in your guide)

In order to create a simple and clean LibGuide, you will likely be forced to evaluate which resources are the most important for your users to know about—but that's part of what's helpful about LibGuides for your users! How to determine what resources are most important will vary by discipline and is a challenge best approached collaboratively with the help of your fellow librarians and involved department members.

**Make your own life easier:** This will be a short section, but I did want to bring it up— LibGuides, particularly the recent 2.0 version, offers a lot of functionality, much of which can make your life very easy if you and your colleagues let it. But there are also a few things you can do independently of the platform to make your guides easy to create and maintain. An out-of-date LibGuide is basically useless, so it's important to keep long- term upkeep in mind when creating content for your guides.

- Explore the reusable boxes function within LibGuides. This essentially lets you create content and reuse it across multiple guides, while only having to edit it in one place— works well for widgets and items that will be consistent across guides, such as chat boxes, library hours, etc.
- The fewer links in your guides, the less work you'll have to do to make sure those links still work in one month, five months, one year…
- Use the link box creator in LibGuides as opposed to creating links in the HTML editor—this allows you to track statistics on the link and reuse the link and its description on other pages and guides when appropriate
  - Remember to link through your institution's proxy when you create links so that students can access full text or will be prompted to log in when they click through

Think proactively about things that might be a lot of work in the future and how you can include that information without creating extra work for yourself (for example, don't create elaborate tables to put a list of Journal Impact Factors in, because these change somewhat frequently, and it's a good bit of work to try to edit these tables later on)

The goal is a user-centered guide, but if your guide is so involved that you can't keep it up to date, it doesn't do the user any good. Consider workflows and strategies to help you and your colleagues minimize the amount of work that LibGuides create. This helps both you and your users in the long run.

**Make it user-centered:** This is the final, and perhaps the most important practice of all. "User-centeredness" encompasses a lot of things, just as "writing for the web" and "good design" do. But this is the whole point—why make LibGuides if you're not going to make the effort to make them radically, wholly, one thousand percent user-centered? Most LibGuides aren't for us;

they're for the users. Let's shift the focus to the users and their information needs. It is of vital importance to keep user-centeredness at the forefront at every stage of LibGuide creation and maintenance, but library-centered structure and content is sneaky, and will try to leak into your guides. Step outside of yourself and be your user.

- Consider performing some usability tests for your LibGuides, such as card sort activities or link naming tests
- Provide links to electronic resources and related tutorials, not print materials
- Use high-quality graphics (pay attention to copyright, though!)
- Provide citation help
- Minimize text descriptions

I think we often have a fear that we will under-explain something, that our users will leave the guides because they are confused, but what ends up happening is that our users leave the guides because they can't find what they need among all the clutter. Keep it simple—in design and in content.

I hope these tips can provide a good foundation for your library to either begin creating or rennovating your LibGuides. As the web becomes more and more our primary contact point with users, we are doing ourselves and our users a disservice if we don't put in the effort to make our guides the best they can be.

**LibGuide Design Resources**
Ahmed, N., & Luedke, J. (2010). Best Practices for Libguides and Online Pathfinders. Retrieved from
https://drive.google.com/file/d/0B5WnEFuCnqc7YzI3ODA5ZTUtODFhZS00MjhhLThkYzgtO WI4NDkyMzJkOGIx/view
*Handout that accompanied a conference presentation—brief and very helpful design tips with lots of outside resources listed.*

BestOf LibGuides Community. (n.d.). Best Practices for Librarians by Librarians Retrieved from
http://bestof.libguides.com/bestpractices?hs=a
*Compilation of LibGuide-community-nominated guides that relay their best practices, tips, and tricks for using the LibGuides platform.*

Butler University. (n.d.). Butler LibGuides: Standards & Best Practices. Retrieved from
http://libguides.butler.edu/c.php?g=2411
*An institution-specific internal LibGuide detailing their selected standards and practices for creating LibGuides.*

Dobbs, A. W., Sittler, R., & Cook, D. (2013). *Using LibGuides to Enhance Library Services*. Chicago: American Library Association.
*Excellent book detailing all aspects of LibGuides, from their history to best practices to pedagogy. Contains a chapter on technologically and pedagogically excellent LibGuides across the web.*

Marshall University Libraries. (n.d.). Best Practices – LibGuides v.2 Toolkit – LibGuides at Marshall University. Retrieved from http://libguides.marshall.edu/libguides_v2_toolkit *An institution-specific internal LibGuide detailing their selected standards and practices for creating LibGuides.*

Morales, A. (n.d.). Purdue Subject Guides (LibGuides) Standards. Retrieved from http://guides.lib.purdue.edu/ld.php?content_id=14409529
*Another institution-specific internal document detailing their selected standards and practices for LibGuides.*

Nielsen Norman Group. (2006). F-Shaped Pattern For Reading Web Content. Retrieved from https://www.nngroup.com/articles/f-shaped-pattern-reading-web-content/
*Very helpful! This links to the eye tracking study, but the NN Group provides a variety of short blog posts on web content and design. Highly recommended.*

Nielsen Norman Group. (2010). Scrolling and Attention. Retrieved from https://www.nngroup.com/articles/scrolling-and-attention/
*Again, only one of the many invaluable articles on the NN/g site.*

Wood, E. (n.d.). LibGuides Best Practices Summary. Retrieved from https://docs.google.com/document/d/1PhX6dwCKnCJdjQgjE2kHJeyY56RXAZ4b8QiiTkq49Go/edit?hl=en
*Compilation of responses to listserv queries by an academic librarian about other universities' LibGuide best practices & guidelines. Many links to examples of other LibGuides.*

**LibGuide Content Resources**
Association of Research Libraries. (n.d.). Web Accessibility Toolkit. Retrieved from http://accessibility.arl.org/standards-best-practices/#technical-standards
*Discusses accessibility, universal design, and technical standards for accessibility.*

Kupersmith, J. (n.d.). Library Terms That Users Understand. Retrieved from http://escholarship.org/uc/item/3qq499w7#page-1
*A very helpful document containing a summary of findings from 51 usability studies, laid out both in a quick list and by each study.*

Orcutt, D. (2010). *Library data: Empowering practice and persuasion*. Santa Barbara, CA: Libraries Unlimited.
*Contains some helpful chapters on user-centered design and content, and focuses on curating and using data to support assessment and improvement.*

Ouellette, D. (n.d.). Subject Guides in Academic Libraries: A User-centered study of Uses and Perceptions. Retrieved from https://drive.google.com/file/d/0Bx6JhFDkmSU5ODU4ZDA0ZWQtODA4ZS00NGU1LThiYzAtNjk4NTNkZjc2Zjhi/
*An interesting perspective on LibGuides' usefulness for students to keep in mind.*

The Readability Test Tool. (n.d.). Retrieved from http://read-able.com/
*Provides a quick and easy way to test the readability of your work.*

Sonsteby, A., DeJonghe, J., Desilets, M., & Finlkins, M. (n.d.). *Usability Testing In the Academic Library: A LibGuides Case Study*. Retrieved from http://digitalcommons.macalester.edu/cgi/viewcontent.cgi?article=1216&context=libtech_conf
*A brief and accessible Powerpoint presentation compiled by librarians at Metropolitan State University detailing how to go about usability testing. Geared towards librarians with little to no UX experience.*

Tony Stankus & Martha A. Parker (2012) The Anatomy of Nursing LibGuides, *Science & Technology Libraries*, 31:2, 242-255, DOI: 10.1080/0194262X.2012.678222
*Focuses on common content and design across nursing LibGuides. Helpful findings for other disciplines as well.*

Usability.gov. (n.d.). *Writing for the Web*. http://www.usability.gov/how-to-and-tools/methods/writing-for-the-web.html
*Provides details on writing for the web and instructions for using the readability statistics feature in Microsoft Word.*

Western Illinois University. (n.d.). *LibGuides: Best Practice guide*. Retrieved from http://wiu.libguides.com/c.php?g=295611
*An institution-specific internal LibGuide that details their guidelines for both design and content. Has some helpful ideas about content creation*

# 5

# How one-shot library instruction is failing transfer students

## Chelsea Heinbach

**Transfer students exist! And they're important.**

Transfer students make up a significant portion of university populations for a multitude of reasons. Approximately 1 in 3 students will transfer institutions during their college career (Shapiro, Dundar, Ziskan, Yuan, & Harvell, 2013). The rising cost of college, feeling unprepared by their high school education, and being undecided about what to study are only some of the possible reasons to attend a community college before committing to a four-year institution. There are also many transfer students that move from one four-year institution to another. This could be due to a change in studies, a desire to move, or simply seeking a better fit for their education. The flexibility to move between institutions is beneficial to students, but raises a number of issues, particularly in the library.

When students transfer into a university, librarians have no knowledge of their previous information literacy education, and assumptions about what students do and do not already know can be detrimental to their education. It is common for transfer students to be lost in the mix of the rest of the student population as librarians focus on other unique groups with more easily defined needs, such as first year students. Furthermore, librarians are often hindered by the "one-shot" library instruction model, in which they only have the opportunity to meet with classes once and cannot address individual students' needs. In addition to this lack of outreach to transfer students and the limitations of the one-shot model, there is limited literature discussing this gap in services. "[While] transfer students have received some attention in the library literature, the amount of research is scant in comparison to the growing numbers and needs of this population" (Phillips, 2010, p.337). This paper discusses the importance of outreach to transfer students, the complications that arise when attempting to address their needs, and suggestions to address these issues by looking at the influence of student engagement on retention and past studies conducted by libraries on transfer students. Furthermore, this paper will offer suggestions to support transfer students in a way that one-shot instruction cannot.

**Background**

Libraries are not the only ones failing to address the needs of the growing transfer student population. A study conducted at a large research oriented state university in 2006 found that the services dedicated to integrating community college students into the university were lacking (Townsend & Wilson, 2006). This was discovered through interviews during which the researchers inquired about students' perceptions of the university versus their previous institution, the assistance students had received throughout the transfer process, and whether students had attended transfer student orientation (Townsend & Wilson, 2006). The study asserted that the first year students at the university received the bulk of the outreach efforts that lead to retention, and this gap in support for transfer students is echoed in library literature.

Academic libraries tend to focus the majority of their outreach on first year students. That is because they know that making this connection is important to student retention. Academic libraries offer invaluable services that engage students with their studies and encourage efficient and effective information seeking behaviors. One study found that library use in the early weeks of a student's semester are significantly linked with retention (Haddow & Joseph, 2010). It is important that librarians begin to put their efforts into supporting transfer students in addition to first year students.

The University of Toledo, recognizing a consistent increase of transfer students, explored potential initiatives to address their information literacy instruction needs (Phillips, 2010). They conducted a survey of other academic libraries in Ohio to gauge the existing information literacy programming for transfer students by contacting 72 academic librarians. These librarians were chosen because they were listed as representing the information literacy programs of their respective institutions. The survey aimed to gather information about the information literacy philosophies at each institution, the librarian's rating and description of their information literacy services, and finally to determine whether transfer students were given special instruction. The results signified that there was not substantial outreach to or tailored programming for transfer students, even when the librarian acknowledged them as a unique population. "While several OhioLINK academic library respondents acknowledged transfer students as a unique population with unique needs, this survey revealed that many do not provide separate instructional services for these students" (Phillips, 2010, p.342). As a part of the questionnaire, librarians were asked to detail why they did not provide specialized instruction for transfer students (if they had signified that they do not). They could choose from none, other, no funding, too few transfer students, transfer students are prepared, or unsuccessful past attempts. The majority of institutions responded, "None", signaling that this is likely an opportunity for outreach that simply hasn't been addressed or considered (Phillips, 2010, p.340).

**Who are they and how do we find them?**

The complications do not end with deciding to allocate resources to transfer students. Transfer students are difficult to identify. They are immediately immersed into the student body and most often impossible to distinguish from the students who have attended that institution since their freshman year.

During a diversity initiatives movement, Oakland University in Southeast Michigan acknowledged the need for tailored outreach to transfer students and assigned their outreach librarian to address these needs. It was important to the Oakland University library to include transfer students and other special populations in their diversity initiatives. The outreach librarian was tasked with improving outreach and services to multiple special populations including: minority racial groups, international students, graduate, returning, and transfer students, distance learners, at-risk students, and Lesbian/Gay/Bisexual/Transgender Students. The outreach librarian did this by increasing exposure of the library utilizing marketing strategies such as flyers, mailings, Facebook, and planning campus-wide events (Switzer, 2008).

Switzer found that the ideal library service for transfer students was independent research assistance: "research consultations are particularly useful for returning and transfer students who

may be encountering difficulties reorienting themselves to an academic setting" (Switzer 2008, p.291). Research consultations are easily customizable and therefore ideal for students with varying needs and capabilities. It is important that transfer students are made aware of these opportunities.

**How do we make them aware of our services?**

Orientation is the natural suggestion for the time to reach out to transfer students. However, orientations are busy and overwhelming affairs and the library is not always a priority. From the author's own experience, the library is not automatically enrolled in orientation activities, and instead is required to submit a proposal arguing why the library should be considered for a spot at orientation. There are many important groups, services, and offices vying for students' attention at this time. Students are overwhelmed with information and likely unable to retain any important information literacy instruction or skills. Libraries can embed their staff in these hectic days in order to market the library as a friendly place for research help (and more), but it is not an appropriate time to attempt to teach the important skills necessary to conduct college level research.

While the overwhelming environment of orientation is not the best time to reach students meaningfully through explicit instruction, one institution found that it was still a viable time to gain contact information and begin to build a relationship with their students. Librarians at the University of South Carolina-Upstate found an alternative to embedding themselves in orientation by creating a mandatory online tutorial/course hybrid called Foundation in Information Literacy (FIL) (Kearns & Vidas, 2011). FIL was delivered via the university's course management system (Blackboard), and informed by ACRL information literacy standards. It was designed to take approximately thirty minutes to complete and was conducted completely online (Kearns & Vidas, 2011).

The designers of FIL considered other options for outreach to transfer students including a drop-in workshop (where students voluntarily attend a scheduled library workshop) and a credit bearing information literacy course. FIL was mandatory, so by design it reached every transfer student, whereas a drop in workshop risks limited attendance. They ultimately decided upon the online course because they wanted to offer more than a drop-in workshop and did not have the resources to run a credit bearing course in information literacy. This online tutorial/course hybrid was intended to "alert students to the level of research skills [they] expect at Upstate, [but] FIL has [also] given us valuable information on the information literacy abilities of our transfer students" (Kearns & Vidas 2011, p.1) This outreach and instruction method worked in two ways. It informed the librarians of the level of expertise that transfer students were coming to their university with, and demonstrated to the students that college level research does require a specific set of skills. For the authors, this program was designed to encourage students to pursue additional help at the library if they struggled with the activity. Although the authors have good intentions, it would seem likely that the tool could be disheartening and intimidating for some students due to the lack of personal interaction in an online course. If students find that they struggle with the activity they may feel too intimidated to talk to a librarian about their gaps in their knowledge. However, reaching out to transfer students upon their entrance to the university is a great way to market the library and begin to develop a relationship with them.

**What do we teach them?**

Aside from finding ways to reach transfer students, academic libraries also struggle with what to do for them once they are aware of the library services. Transfer students enter a new university at varying stages of expertise. They could have received basic database skills from their time in community college, but nothing on how to evaluate different types of information. It is also possible that they have received no information literacy training whatsoever after attending a four-year institution with a weak instruction program. However, as they will be attending the same classes as students who may have received programmatic library instruction, they may be at a disadvantage. When University of North Carolina at Greensboro librarians surveyed their transfer students approximately 73% of them self-reported as being either fair or poor at knowing how to properly generate and utilize key words. They also found that the students who came from another University of North Carolina institution were rated as the most knowledgeable in information literacy while those coming from a community college were rated the least knowledgeable (Griggs & Lininger, 2015). There is also often a difference in how libraries conduct instruction in two year institutions versus four year institutions, "It is believed, in part, that this [difference in information literacy skills] occurs because of different instructional designs at two- and four-year institutions. Emphasis is on teaching basic library skills at community colleges while students at four-year institutions are expected to already have those skills and are taught skills to search for, locate, and critically analyze information" (Phillips & Atwood 2010, p.336). Two year colleges often employ a number of innovative approaches to teaching information literacy and many of them have robust instruction programs. While Phillips and Atwood's observation might simplify the differences between the instruction programs at two and four year institutions, it is important to recognize that these institutions may differ in terms of pedagogical goals and student experiences.

Regardless of the student's previous institution, the one-shot library instruction model does not afford librarians the luxury of learning who transfer students are and assessing their needs. For example, if a librarian is teaching advanced evaluation of information to a junior level class and transfer students are not yet familiar with the basics of information retrieval, we will overwhelm them and contribute to feelings of self doubt and not belonging. Embedded librarians may have a better opportunity to gauge student abilities, develop relationships, and adjust to transfer students' individual needs, but librarians cannot rely on programmatic one-shot instruction to teach the transfer student population. Academic librarians must ensure that their instruction is engaging and informative about the resources and services available at the library. While this is true for any student population, it is especially pressing for students who may be struggling.

**Recommendations**

The difficulties discussed in these studies demonstrate the complications that arise when attempting to address the needs of transfer students. It is understandable that librarians struggle to pinpoint exactly what their distinct needs are, as they vary so wildly. However, it must be acknowledged that one solution will not address all of the information literacy instruction needs of any population. Instead, librarians must remain quick to adapt to individual needs, as this will best serve all of their students, "What every junior transfer does need is flexible, student-centered library orientation and instruction which celebrates the strengths this population brings to

campus instead of confirming their fears that they've come late to the table" (Ahnberg, 2015). This can be found in existing, easily customizable services such as research consultations. By marketing research consultations to transfer students, they will feel encouraged to seek out additional help. Transfer students will almost certainly be enrolled in classes with professors that assume they know information literacy basics that they may not, and this may cause them to feel ashamed about reaching out. If libraries explicitly market to them, they will hopefully feel more comfortable asking for assistance. The emotional responses to information literacy instruction are important to consider when assessing the success of these initiatives. It is important that librarians focus on individual attention and confidence building when working with this student population.

Rutgers University conducted an in depth study of the effects of collaboration between writing centers and librarians on "at risk" students, including transfer students (Tipton, 2006). This study focused on integrating library instruction into writing workshops and found that one of the most important factors in teaching these skills was how they affected students' emotional states and self efficacy. "The key is to provide both learning and emotional support as well as reality checks at each step in the writing/research process so that the student masters it rather than avoiding the task altogether" (Tipton 2006, p.6).

This study found that a students' emotional state when conducting research and perceived capability is important to their development as researchers. When students enter a situation feeling unprepared, they are likely to deal with self doubt and other self defeating emotions. Equipping these students with important skills at their time of need can increase their confidence and self assurance and lead to higher retention rates. Tipton (2006) also addressed a concern about tailoring services to some students and not others:

Small scale, intense collaborations continue and ought to continue at the research university at the same time the large scale efforts are pursued. One reason is special student populations such as our under-prepared transfer students. The one-size-fits-all school of education has already failed some of these students more than once, and alternatives are desirable for retention and graduation of a diverse student population. (Tipton 2006, p.401).

It might seem problematic to focus many resources on special populations of students, but that is necessary to create a comfortable learning environment for all. Services such as research consultations are still available and marketed to the student population at large, but putting effort into additional prompting for under-served populations can help them feel more comfortable.

If librarians take Oakland University's proposed expanded definition of diversity and include transfer students, it follows to consider outreach initiatives that emulate those to diverse students. Collaborating with student offices and programs that already provide specialized services to transfer students is an additional way to embed the library in transfer student culture. As Rutgers partnered with the writing center while they focused on "at risk" students, academic libraries can partner with existing services and initiate student affairs movements to better serve transfer students.

**Conclusion**

There is no simple solution for how to serve transfer students because they are such a diverse group of individuals. It can be difficult to pinpoint their exact needs and more difficult still to implement programs that adequately serve this population. The one-shot instruction model will not address transfer students' diverse needs. However, it is important to acknowledge that this gap exists. Once librarians do that, they should ensure they are explicitly reaching out to these students in order to signal to them that they are not alone.  Having customizable services like research consultations available to these students is important. Developing relationships with other student offices and initiating diversity movements to aid at risk students will make the library more visible and more deeply embedded in transfer students' lives. It is also imperative to continue this conversation professionally. Phillips and Atwood included a call for papers in their 2010 study, and still very little research has been conducted on this topic. It is important that we do not fail to address the needs of 30% of our students simply because it may be complicated.

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# 6

# Driving in a Parkway and Parking in a Driveway: Preparing for International Students in your Classroom

# Joanna Stankiewicz

The nature of the instruction librarian position is that it puts the teacher in front of classrooms filled with students from all kinds of learning experiences, cultural backgrounds and educational traditions. So how can a teacher with an insignificant understanding of individual experiences effectively teach a class of international students or that includes these students, within a typical 60-minutes instruction class? One can, as Kris Gutiérrez and Barbara Rogoff suggest, simply have a "common objective across various approaches" that is the "desire to increase student learning" (19). While the objectives of library instructors may be altruistic, the theoretical approach to teaching multi-cultural students may be different then the practical experience. Cultural-historical theory may lead instructors to expect regularities in the ways cultural communities participate in education and communication styles. However, this approach can also restrict the instructor's active engagement and limit the comprehension of the students (Gutiérrez and Rogoff, 22). In academic settings the diversity of the classroom is not be limited to the cultural norms of a specific group, nor may it include only "international students", rather it can be a complex combination of varied educational experiences. Students in the academic library classroom can be both non-native speakers of English or native English speakers that come from countries that have English as an official language, and attending college as either undergraduates or graduate students. These students can be referred to as ESL (English-as-a-second-language), ELL (English Language Learners) and LEP (Limited-English-Proficient). Thus, individual student development needs to be approached on a broad spectrum to encompass independent characteristics of individuals within the classroom.

These challenges for an instructor, are especially significant in academic library environments where the instructor and students have limited time together. It is imperative to successfully prepare for the opportunities that can come from the diversity of educational and cultural backgrounds. Information literacy instruction should be taught to students equitably allowing for adjustments to methods to best guarantee comprehension. Here are specific suggestions and tips for working with, and teaching to a classroom with students of diverse cultural and educational backgrounds compiled from literature on the topic.

**Do not talk down to students**

Studies of international students have revealed that language is the primary barrier in communication and instruction for these students (Amsberry, 354). Therefore, it would seem reasonable that by modifying vocabulary, pronunciation, and grammar an instructor would better communicate with students. By applying "comprehensible input", an aspect of language learning theory, instructors use speech modification to facilitate comprehension. However, using what is commonly referred to as "teacher talk" can have the opposite effect and negatively influence

classroom discussion and comprehension. Early studies of speech modifications in the classroom or "teacher talk" focused on describing the modifications teachers made rather than measuring the effect these modifications had on classroom learning (Amsberry, 356). Also many of these early studies did not consider the perspective or perception of the students to the modified speech of the instructor. By using "teacher talk" A.J. Lynch's study found that these adjustments in speech could be considered intellectual rather than linguistic and perceived as "talking down" to the student (Amsberry, 356).

Expanding on this idea is Miriam Conteh-Morgan- according to her studies, international students at the university level in general have a high level of English proficiency (192). Adjustments to speech for these kinds of students have little impact on learning. Instead, she recommends speaking clearly and pausing frequently rather than speaking slowly when teaching. Exaggerated articulation rarely reflects real world communication and may seem as inauthentic. Eileen Blau in her research has found that effective comprehension does not come from "slowing down or simplifying syntax." Instructors, by explaining the entire ideas with in the context of conversation will give students the opportunity to process the entire meaning of the semantic groups first, rather than spending time deciphering individual word meanings (Amsberry, 355).

**Collaborate with other librarians, instructors and faculty**

This is incredibly obvious, however by planning in advance for these types of scenarios, an instructor can almost guarantee preparedness and effectiveness of meaningful instruction. For this kind of collaboration between the different categories of professionals on campus to work, all parties involved need to share ownership of learning outcomes.  Karen Bordonaro, in her investigation of the uses of an American college library by ESL students, advises that an "integrated program involving ESL and library personal can effectively cope with the difficulties and differences, making library use easier and more pleasant" (519). Combining the academic knowledge and expertise of all instructors involved can only help in the intellectual development of these students. Faculty-librarian teams working together for the benefit of the students will result in more constructive and effective teaching time (Bordonaro, 520). Conteh-Morgan believes that ESL classes are "natural avenues" for incorporating the teaching of information literacy. There is evidence in the literature that ESL instructors are already teaching information literacy at all educational levels within language education (Conteh-Morgan, 32). The collaboration between librarians and the teachers already familiar with the students, will permit for more beneficial learning opportunities because of the cross-application of information literacy concepts with potentially already acquired skills.

Library instructors and classroom teachers should not be repeating the same information and techniques to students within separate instructional lessons as this will bore the students and possibly discredit academic authority. Conteh-Morgan in her proposal for a new model of teaching ESL students, suggest that ESL teachers already have a foundation for a "low-anxiety" instructional environment. By "low-anxiety" she means an environment where established learning and teaching strategies are already in production and can put students at ease with new learning topics. This kind of environment is less overwhelming, preferred by students, and created because of the already establish relationship with the ESL teacher (31). There are so many advantages to collaborating with the students' current instructors that can only benefit the

students understanding of information literacy. It is also important that the collaborating librarian has a current and complete understanding of the resources and concepts that have or will be taught in the classroom so to build on student learning. Without the constant and offered help of the instructor that primarily interacts with the students, there will be a lack of sustained and continued learning. Information literacy should be built into the already ongoing program, building on the students' prior knowledge and reinforcing known concepts.

**Plan for extra time in the lesson for explanations and questions**

Studies of international students in academic settings, has pointed towards the importance of interaction between the student and instructor in classroom discussion. While students may "indicate understanding by smiling and nodding," Amsberry explains, they may need further explanation but are embarrassed to ask, or do not comprehend the specific question (356). By providing built in time for self-reflection, students can assess their own learning progress, and some of the awkward silences filled with nodding heads will be eliminated. Also, many instructors may struggle with the meaning or understanding of the accented speech of their students and transcribe the meaning in error. The role of the instructor as listener can influence both the attitude of the students towards the instructor, and their own comprehension. Amsberry suggests that as an instructor it is important to practice "listening" especially to that of accented speech. Practicing and employing listening strategies, like listening for meaning rather than individual words will improve the understanding of speech and confidence. Command of foreign accented linguistics will improve with exposure to non-native speakers (Amsberry, 15).

Positive feedback will encourage student discussion and help check for understanding. Provide enough time for answers, and when no one at first volunteers rephrase the question using different terms or phrases. As mentioned above in the section on "teacher talk" it is important to use "real world" language without offending the students' intelligence. By asking open-ended questions, students are not able to nod to indicate understanding rather have to engage in the conversation. Amsberry cites literature that has promoted linguistic scaffolding techniques to ensure comprehension and not falling into the trap of filling in the gap when a student is struggling with an answer or question (356). For example offer whenever possible to show and demonstrate what they are asked to do/learn and use visual aids if appropriate. Schedule in time during the end of the lesson for reflective assessment allow the students to think critically about the lesson and analyze the success of their own learning. Conteh-Morgan determines that "summative assessment is, therefore, of not much value in one-shot instruction sessions because it does not allow for feedback necessary for effective learning" (195). Formative assessments that help evaluate the learning development of students are valuable to not only the analysis of met objectives but also evaluation of the teaching strategies.

**There is not just one way to experience information literacy; support student's unique learning experiences**

This challenge is no different than the ones faced by domestic students who for the first time are introduced to using information resources. Familiarity with the information-learning environment needs to be established. Hilary Hughes, in an investigation of international students, reported that few students have a formal information literacy education and lack awareness of

education sessions offered by the library (134). To help students learn it is helpful to understand their information literacy learning needs and experience. Christine Susan Bruce described this experience as "Informed Learning". In this view, the task of the teacher is to understand the different ways it is possible to experience a situation or perceive a concept (23). The instructor's responsibility is to "open the door" to informed learning by understanding how diverse views may influence the learning environment. International students have diverse worldviews and educational experiences that when shared can open the door to creative and critical thinking strategies that while different from traditional American techniques may be just as effective. Embracing these cultural and educational differences will make the librarian a welcoming and fresh alternative to the already complex navigation of academia.

Online information resources, can be especially complex for international students. The fluency of internet and database use is reliant on language knowledge and experience. Language and vocabulary skills may make the use of online resources more difficult for students trying to identify the appropriate search terms to find results. Introductory information literacy education may have not been part of the curriculum in the students' native country of study, and thus needs to be revisited in-depth and the learning needs to be ongoing. Many international students according to Hughes' investigation, recommended that these information literacy sessions be available throughout the year to continually build on experience. Repeat lessons should also be provided throughout the year as not to exclude students joining the campus on a later date (137). Flexible and ongoing scheduling of these introductory lessons are important to the ongoing development of international students' education. This is especially important to students who may already have anxiety around online resources. Searching out individual attention from a library instructor may be intimidating and possibly seen as embarrassing. Students that arrived later in the year observed that unless the information literacy sessions were part of a specific course it was not available to them. In conclusion, educators need to not only be aware of the learning opportunities of their students but advance their own cultural confidence to better support the learning environment (Hughes, 143).

**Become familiar with second language acquisition theories, the knowledge will make you a more thoughtful and effective instructor**

Many library instructors are already familiar with, and incorporate behavioral and cognitive theories of learning to their teaching strategies. However, in order to better understand international students, a library instructor not only needs to understand learning theories but specifically second language acquisition theories. Miriam Conteh-Morgan discusses two major theories of second-language acquisition that she believes will aid library instructors in the development of better methods and cross-cultural communication:

**Innatist Theory:** "Innatists do not see language development as being influenced by responses to the environmental stimuli as behaviorists do" (Conteh-Morgan, 192). Instead second language learners as children, have a natural ability to process language rules such as grammar. Native speakers as children will absorb the aspect of the language spoken around them, this is why innatists theorize it is more difficult to learn a new language for adults. Learning the new language in a sheltered classroom environment is a conscious attempt to understand material rather than a "natural" process that does not have the filter of prior linguistic information. In the

classroom this may mean that international students need to process a meaning or deconstruct the meaning, by building on prior understating of the language (194).

**Interactionist Theory:** "Interactionists believe that as native speakers communicate with language learners, they modify their language to accommodate the learners' communicative proficiency and level of understanding" (Conteh-Morgan, 192). Second language learners, therefore, by communication and interacting with native speakers can gain language proficiency and in many situations self-correct mistakes based on experience. Classroom learning based on this theory stresses the importance of real life, authentic, and meaningful interaction. Instructional librarians can take a communicative approach to teaching by stimulating conversations and acting as facilitators rather than just providing the information. Time to reflect and process the information is necessary for effective learning to take place with any student but particularly limited English proficient students (194).

**Conclusion**

International students bring unique educational experiences to the classroom creating diverse and sometimes complex opportunities for instructors. The suggestions above offer the instructor an opportunity to focus on their own limitations rather than that of the students. Librarians already have the skills to be effective teachers and by improving their understanding of information literacy as experienced by international students they will only enhance the learning environment. International students bring different worldviews and experiences that can benefit the entire classroom's learning and encourage critical thinking. These tips when applied to the class will create a welcoming and effective learning experience for all students.

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# 7

# Teaching Technology to Seniors

# Renate Robey

Violet comes to the library often to check out books. During one of her visits, she looks longingly over at the computer classroom. Violet tells the librarian that she wishes she could learn how to use the computer so she could look at her photos of her grandchildren on Facebook or email old friends who have moved away. "But I'm 78 years old. I'll never figure out all this new technology,"

Harold, 81, is also a frequent library patron. One day, while chatting with his favorite librarian, he mentions how his doctor keeps telling him go online for medical information even though he doesn't have a computer. A few of his friends have bought tablet computers and he's thinking about it, but he's not sure. "It sounds like there's all kind of stuff on the Internet, but how am I supposed to get there?"

Violet and Harold are not alone. Many seniors are interested in learning Information and Communication Technology (ICT) but don't think they can manage it and don't know where to turn for help.

Libraries, can play a key role in helping older adults – those over 65 – to bridge the generational digital divide. By offering classes specifically targeted to seniors and designing the classes using research on how seniors learn technology, patrons like Violet and Harold will not be left behind in the Information Age.

In addition, libraries are well-positioned to address the second level digital divide —the gap between seniors who have access to technology and their ability to actually use technology effectively.

The issue of older adults and ICT is particularly timely now that the first Baby Boomers have already hit 65. The population of older adults is expected to double by 2050, according to the U.S. Census Bureau (2014). By 2040, 21% of the population will be over 65 (U.S. Department of Health and Human Services, 2012).

Computer use among older adults is soaring. In 2015, 58 % of those over 65 were using the Internet, up from just 14 % in 2000, according to the Pew Research Center (2015). However, even those seniors who are using computers say they face hurdles gaining access to technology and want help (Pew Research Center, 2014).

Research on seniors and technology instruction indicate what kinds of programs and instruction techniques work best for older adults. This guide will look at class make-up, pacing, instruction, practice time, accessibility and training materials. This guide also addresses the need to consider barriers for this group, including computer anxiety and the lack of perceived need for computer

skills. Finally, it will look at the importance of peer coaching in teaching technology to seniors, the need for social interaction during instruction and providing long-term support for older learners.

**Barriers to ICT for Seniors**

While seniors like Violet and Harold may want to acquire computer skills, there are a number of barriers that often prevent older adults from acquiring ICT skills. Most of the barriers can be overcome if libraries are aware of the issues and can plan programming and marketing to address them.

- **Lack of perceived benefit or need**. Some seniors who are not using the internet don't think they would get much out of doing so (Gitlow, 2014). Research has shown that seniors are very task-oriented when learning ICT skills and need to understand exactly what the benefit of learning technology will be before they are motivated to do it (Callahan, Kiker & Cross, 2003). To help older adults see a need of benefit, it may be helpful to demonstrate relevant skills. For example, showing an avid sports fan how to find stats for any sports team. For another patron, it might be quickly locating that old-fashioned hand cream they've been trying to find for years. Marketing of the class might be more effective when it mentions the specific need. A class called "Email your grandkids" or "Keep up with your family on Facebook" might be enough motivation to sign up for a class.

- **Negative feelings about social media**. Older adults who have not used social media may have very negative views about using ICT for social networking (Vroman, Arthanat & Lysack, 2015). In their article, "Who over 65 is online? Older adults' dispositions towards information communication technology," Vroman et al. state that older adults dislike social networking in part because they fear it will have a negative effect on their face-to-face social interactions. They may be frustrated that communication modes have changed so drastically from phone calls and personal visits to emails, tweets and Skype. It may help to point out that seniors who do venture into the social networking universe have reported benefits in terms of social connectedness and increased interactions (Gatto & Tak, 2008). Rather than waiting for the rare handwritten letters, some seniors now set up Skype or Facetime sessions with their grandchildren.

- **Fears about Internet safety**. Some seniors may have a deep mistrust of putting any personal information on a computer and won't want to learn ICT until they feel safe going online (Fausset, Harley, Farmer & Fain, 2013). This can be addressed early on by talking about internet safety and best practices, such as creating strong passwords, adjusting privacy settings, and not posting personal information such as physical address or vacation dates in social media. Once students have mastered the mouse and move on to setting up email accounts, libraries may want to offer a specific class that deals with staying safe online that will cover topics including antivirus software, spam and phishing scams.

- **Computer anxiety.** Many seniors are fearful they will break the computer and may be extremely hesitant to touch the computer or to "play around" with any part of the computer. That anxiety will prevent them from signing up for the course or make it difficult to learn necessary skills. Some instructors start class by dangling the mouse by the cord or hitting a few incorrect keys just to show students that the computers are perhaps not as fragile as they thought (Bean, 2003).

- **Cognitive or physical issues.** Seniors experience declines in vision, memory, dexterity, mobility and other areas which may make it difficult to perform basic tasks such as handling a mouse or viewing a computer monitor. Modifications can make library computers used for training more accessible. For example, a larger flat screen monitor will help with declining vision. Some seniors may find it easier to use special keyboards such as a commonly available model that has large bright yellow keys with easy-to-read black letters.  A number of adaptive technologies are built into popular software and seniors can be shown how to use them. Microsoft Windows 10 offers a number of accessibility options including a built in screen-magnifier and the option to use speech recognition to control your computer. For those with hearing issues, Windows 10 offers the option of a visual display or text display on the screen to replace the typical sound cues that tell you an activity is taking place or action is needed.

- **Lack of access.** Seniors may not have Internet access at home or may not have any access to a computer. Library computers are an obvious solution but only if the computers are available for practice while they are learning new skills. Setting up senior-only classes and practice times will help solve the problem of access. In addition, classes to help seniors figure out the differences between various computers might help those who are thinking about buying technology. Some libraries have tried "Technology Petting Zoos" where patrons can come at look at various laptops, tablets and desktops and explore how they work (Pew Research Center, 2013)

Despite the significant barriers seniors may face, they can be overcome with classes that are targeted to seniors and designed to address these hurdles. Next, let's look at the specifics of these classes and what elements are necessary for seniors to successfully learn ICT.

**Class Makeup**

- **Keep classes small.** Most people prefer smaller classes, but seniors especially like smaller classes for technology instruction (Mayhorn, Stronge, McLaughlin & Rogers, 2004). It is easier for them to hear the instructor and sit closer to the front of the classroom to see demonstrations. In a smaller, class, they may be more likely to ask questions and there is more time to address questions with fewer students. Ideally, classes would be around 12 students (Ricketts, 2002) and not exceed 20 students (Irizarry, Downing & West, 2002.)

- **Group students by ability.** Seniors who have never touched a mouse should not be in class with seniors who have already have figured out how to email. In Florida, the Palm Beach County Library System registers seniors for the library class with the equivalent of

a reference interview. They ask patrons if they have a computer, if they've used the library computers, or what they already do on the computer. These questions are likely to produce better results than just asking a patron "Do you know how to use a computer?" Depending on their answers, they might be enrolled in a mouse skills class or a more advanced class (Bean, 2003).

- **Don't forgot the more advanced seniors.** Given that 58% of adults over 65 are using ICT, some of those may already be comfortable with the basics. However, according to the Pew Research Center, many say they need help to do more advanced tasks such as organizing photos or adding new technology such as a tablet computer or a more complicated smart phone (2014). Even though they have the basic skills, they will still benefit from the senior-focused teaching techniques and long-term support.

- **Know that seniors may underestimate their computer skills.** Some seniors will describe their computer skills as very basic when they may actually have more advanced skills (Marquié, Boddaert & Huet, 2002). Feeling more confident about their computer skills will help seniors learn ICT.

- **Survey says!** At the beginning of the session – or at registration – ask students what brought them to the class and what they hope to learn. It might be helpful to know your students all want to shop online, look up bible verses or sign up for a senior dating site as you are teaching the class.

## Pacing

- **Slow. Slower than you think you need to. Really Slow.** Much of the research points to the pace of the class as being a key predictor in how successful older students are in learning technology (Mayhorn et al. 2004). This calls for speaking slowly as well as moving through material slowly.

- **Allow for self-pacing.** Older computer students wanted to be able to take their time to master a skill before moving on to another skill. If the class is set up so that everyone has to get to the same point in order to move on, it may make an older adult nervous, or reluctant to ask for help if they fall behind. If there are activities that require every student to get to the same place, using volunteers or trained senior peer coaches may help keep the class on track.

## Instruction and materials

- **"I can't find the dot!"** An older relative of mine took an introductory computer class and announced she would be fine if she could just find the dot – as in "dot com." It was clear her class hadn't started from Square One. For older adults, it is important to explain terminology that may seem organic to computer literate people. Start at the beginning and explain everything – including the dot.

- **Avoid jargon.** While so many computer terms are a part of our culture, some of the phrases have different meanings for seniors or are unfamiliar to them. For example, an icon might be called a picture when it is first introduced to students. (Bean, 2003). Before jumping into the "drop-down menu" it might be worth explaining that it is an extra list that you can look at.  Terms like "click" also aren't necessarily clear for older adults. They might be thinking of Dorothy clicking her ruby slippers while the instructor is hoping for a left click on the mouse.

- **Break it down into very small chunks.**  For some seniors, a course covering computer basics such as opening a browser, using a mouse and double clicking might be appropriate. But for other seniors, moving the mouse might be enough for a class. Some instructors actually just focus on the mouse for the first session – the instructor actually opens the browser for that first session so the student only has to concentrate on controlling the mouse (Bean, 2003).

- **Leave plenty of time for questions.** Seniors will most likely have questions and time for that needs to be included in the lesson plan.

- **Rinse and repeat.** Repetition is key for seniors to be successful. This involves repeating material during instruction, but also allowing for practice so newly-acquired skills can be repeated.

- **Simple instructions.** For seniors with diminished memory capacity, a long list of instructions to perform a computer task can be daunting. Instead keep the tasks simple and the instructions short (Mates, 2004).

- **Handouts should be easy to read.** That means the type is generally larger and there are step-by-step instructions with illustrations that are easy to follow. Detailed handouts should be provided so they can follow along in class and use them later when they try things on their own (Mates, 2004).

- **Relate new skills to past experiences.** It may help some students to imagine that moving a mouse is like ironing. That connection to a familiar task may help them learn the new skill. Others may find the image of knocking on a door helps them with double-clicking.  They may want to compare fields on a computer screen to lines on a tax form (Chaffin & Harlow, 2005).

- **Multi-modal approach.** Research shows that seniors are most successful when instruction combines lecture, modeling and active participation (Callahan et al., 2003).

- **Give me a break!** It is helpful to allow students frequent breaks to stretch their legs, go to the bathroom and just take a deep breath. Learning technology can be hard work.

- **Give students a win early on.** When possible, try to provide an initial positive experience, which will build confidence and help with computer anxiety (Mayhorn et al., 2004).

- **Acknowledge that they may only want a slice of technology.** Because seniors are task-oriented, they may not want to learn about computers if they think they will have to learn *everything*. If their goal is emailing grandchildren, they may not be interested in learning about apps. Also, as stated earlier, they often want to know why they are learning a specific task rather than just learning technology in general (Callahan et al., 2008).

## Practice

- **"I forgot what we did last week."** Practice is key to an older adult retaining the skills they learn. In addition to the repetition in class, they need to have access to a computer to practice. In some library systems, computer homework is assigned after the first class. Their first homework assignment might be to practice their mouse skills. This leads to the next point.

- **Provide a place and time to practice.** Having computers available in the library is a great resource but may not work for seniors who are just learning to use the computer. If they haven't mastered all the skills of the mouse, it is likely they won't know how to sign in, open a browser and navigate to the mouse exercise. Also, walking up to the computer next to someone who is actively surfing can be intimidating. Having an open time in the computer lab or classroom and a library staff person available to help out encourages practice.

- **Consider incorporating practice time to the end of class.** Strike while the iron – or the mouse – is hot and let seniors remain in the classroom to practice the new skills. This is also a great time for the students to get to know each other which will help with retention of students and other programs discussed below.

- **Think long term.** For older adults to truly master ICT skills, they will need long term support. It may take more than just one introductory series of classes. Many seniors repeat beginning-level classes. In addition, they will need to practice and will want to get technical support for an extended period of time. The goal, Xie and Jaeger (2009) argue, is not to have a student in the beginner computer class become completely computer literate after one session, but instead to train them to be able to eventually explore on their own.

## Peer coaching and social interaction

- **"If you can do this, so can I."** Seniors sometimes learn best from older adults who know just a bit more than they do (Mates, 2004). Students are sometimes less intimated asking a senior peer coach a seemingly basic question than they are asking a younger computer expert. According to Xie, (2007) if the instructor is considered a "young IT elite", then older adults may not view them as helpful as an older instructor or a peer coach even though that person may be less skilled.

- **Surfing clubs.** Another way to encourage practice time and peer coaching is by setting up a social support system for seniors in the library. Creating senior computer clubs is

one way to encourage that (Xie & Jaeger, 2009). Once the seniors have gained basic computer skills, they might join a computer club with other seniors at their skill level. They might meet weekly and work on mastering those skills and adding new ones.  Once they've done that, they might move on to more complicated projects such as putting together a photobook or cookbook. The club meetings could be hosted by library staff or by more advanced seniors.

**Logistics**

- **Time of day.** For many seniors, morning may be a better time to hold the classes. (May, Hasher & Stoltzfus, 1993).  Unlike their younger counterparts, they probably are not working during the day and will be more alert in the earlier hours of the day.  In addition, some seniors don't want to drive at night or during rush hour.

- **Brrrrrrr!** Be aware of cold classrooms. Some seniors find that age has brought circulation issues and they often are colder than those around them. While computer labs and classrooms are typically a bit cool, keep that in mind by either adjusting the temperature or by alerting students that it might be cooler in the classroom.

- **Consider registration for the beginning series.** Some libraries require a commitment to come to all the classes, often a series of three or four classes, when a student signs up. That ensures that a student is motivated and may prevent them from giving up if they get frustrated after the first class (Bean 2003). Make sure registration – especially for beginning classes — and information about the classes is available without having computer skills.

**Tablets, or "I hate my computer, I love my iPad."**

In their 2014 study, "Getting Grandma Online: Are Tablets the Answer for the Increasing Digital Inclusion for Older Adults in the U.S.?" (Tsai, Shillair, Cotten, Winstead & Yost), the authors argued that seniors who were frustrated with regular computers found tablets much more usable.  The participants in the study ranged in age from 65 to 95.

The seniors in the study said they found their tablets intuitive or easy to use, convenient, and comfortable to hold. They really liked being able to easily move the tablet to a comfortable location such as favorite chair.  Nearly 20 percent of them said they had struggled to use traditional computers. Many said they saw other seniors using tablets and that prompted them to want one for themselves.

Given the rise in tablet usage, libraries may consider offering classes specifically for older adults exploring this technology.

**Conclusion**

The guide has touched on some of the key points that will help librarians to plan effective ICT classes for older adults. As the over-65 population continues to grow, it will be increasingly

important for libraries to address their specific needs and help them bridge the generational and second-level digital divides. This guide will hopefully help libraries prepare successful classes for the growing number of older adults who are ready to embrace technology.

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# 8

# Visible Thinking and the Implications for Instruction Librarians

# Meghan Ecklund

As educators, we are continuously looking for new and more effective methods of teaching. We wish to guide our students to a world of intrigue and provide them with tools for their independent success. As librarians, we have a unique situation in which we can try new methods of teaching with our students, without the constraints from strict political guidelines for school education. Visible Thinking is a method of teaching that emphasizes student learning through observation skills. Generally speaking, Visible Thinking is a way to encourage students to use thinking skills they have already developed *outside* the classroom. The methods of Visible Thinking routines help promote a deeper understanding of how we think, and allows for deeper learning on the part of the students. Currently, Visible Thinking routines have been adopted into traditional education fields, yet not into other instructional fields such as library instruction, museum educators, etc. There are a number of important implications and benefits for instructional librarians to become aware of Visible Thinking routines as a method of instruction, and adapt the routines into their teaching. Therefore, this review addresses (1) the development of Visible Thinking as a relatively new teaching method, (2) the Visible Thinking Framework, and (3) provides examples of how Visible Thinking routines may be adapted to a library instruction setting. In addition, this review also makes note of how Visible Thinking is being used with technology today in the digital age.

**Background on the Visible Thinking Method**

Visible Thinking is a relatively new concept within the field of education. Articles and research projects exploring the concept of *making thinking visible* began to appear in educational journals in the early 2000s. Visible Thinking is generally defined as a "broad and flexible framework for enriching classroom learning" (Visible Thinking, Introduction, 2016). Perhaps the most well-known project dedicated to Visible Thinking research is based out of Harvard University's Graduate School of Education. Titled *Project Zero*, researchers are collaborating to explore how to make thinking visible through routines that guide learners' thought processes and encourage active processing (Project Zero, 2015). Project Zero was started as a research-based approach to teaching thinking dispositions and has developed into a new school-wide culture of thinking (Project Zero, 2015).

Key investigators in this field are David Perkins, Ron Ritchhart and Shari Tishman, faculty members at Harvard University. These researchers and promoters of Visible Thinking agree that theories of education have moved past teaching students what to know to teaching students how to find information (Tishman, 2000). Research conducted to explore Visible Thinking arose after educational studies found that skills and abilities alone are not enough to cement knowledge and

learning for students. Learning is more apt to happen when content is addressed with alertness and positive attitudes on the part of the students (Visible Thinking, Introduction, 2016).

Visible Thinking, according to the researchers for Project Zero, "helps to facilitate a pattern of thinking useful for day-to-day life" (Visible Thinking, Introduction, 2016). Visible Thinking promotes a culture that values thinking as a process that requires time, can be modeled, and that "the process and products of thinking are present in the environment" (Visible Thinking, School Wide Culture of Thinking, 2016). When it comes to thinking, there is an interrelatedness between cognition, affect, physical environment, and social context (Ritchhart, 2007). Visible Thinking routines are practices that help learners' spot occasions for thinking outside the classroom, and pursue those occasions (Ritchhart, 2007).

Though library visits and library educational programs are short, they do provide opportunities to create and support this new culture of thinkers. There are two main ways library educators can join the Visible Thinking project and promote a culture that thinks: by (1) incorporating the Visible Thinking framework core routines when planning programs, and (2) showing genuine interest in students' ideas and thoughts during their time with them (Ritchhart, 2007). Both make use of the interrelatedness between cognition, physical environment, and social context (Ritchhart, 2007).

**The Visible Thinking Framework**

There are a variety of practices and resources associated with Visible Thinking. First we need to understand the goals associated with Visible Thinking. The goals are: (1) deeper understanding of content, (2) greater motivation for learning, (3) development of learners' thinking and learning abilities, (4) development of learners' attitudes toward thinking and learning, (5) increasing learner' alertness to opportunities for thinking and learning, (6) a shift in the classroom culture toward a community of enthusiastically engaged thinkers and learners (Visible Thinking, In Action, 2016).

In order to accomplish those goals, researchers, such as those at Harvard University, have compiled a set of core routines for educators to adopt and adapt within their curriculums. These routines are patterns of thinking in action. Educators can use multiple routines in a single lesson. Currently, there are seven core routines used in Visible Thinking teaching methods: (1) What Makes You Say That?, (2) Think Puzzle Explore, (3) Think Pair Share, (4) Circle of Viewpoints, (5) I Used to Think… Now I Think…, (6) See Think Wonder, and (7) Compass Points (Visible Thinking, Core Routines, 2016).

***Visible Thinking Routine 1: What Makes You Say That?***

The purpose of this routine is for students to build their explanations based on observations. The key questions associated with this routine are: "What do you see? What's going on? and What makes you say that?". These questions open the door for deeper observations and interpretation. In turn, this routine forces students to justify their explanations with evidence-based reasoning (Visible Thinking, What Makes you Say That? 2016). Such a routine is useful for looking at artwork, historical artifacts, or stories and poems.

*Application:*

Here is a general example of *What Makes You Say That* routine in action from Project Zero: use an image to explore and inspire students at the beginning of a unit. For example, Project Zero recorded a third grade class being presented with "The Numbering at Bethlehem" by Peter Bruegel, a busy scene in winter. The teacher was launching a social studies unit focused on community (Visible Thinking, What Makes You Say That? 2016). The teacher asked students to categorize similar ideas about what the scene portrayed, and group them in terms of community activities. Community activities such as gathering food, getting shelter, trying to stay warm, preparing for war, and religion (Visible Thinking, What Makes You Say That? 2016). Each one of those group activities were backed up with explanations provided by the students when prompted with the question "what makes you say that?" creating a deeper investigation on what makes community (Visible Thinking, What Makes You Say That? 2016).

*What Makes You Say That* has potential in both an academic and public library setting. When we think about the sorts of educational programs available in a library setting, they usually focus on helping students navigate through the physical library and online networks. Instead, engage learners in discussions about why they would choose certain resources over others, or why they would look in certain areas of the library (or online databases) for specific information. By doing so, opens interrelatedness between students' previous experiences and using those skills in a new environment. Key documentation for this routine is to record the lists of learners' ideas (Visible Thinking, What Makes You Say That? 2016). Such recordings can be done by the librarians or the students. Such documentation is useful later when students can revisit what they originally thought about a topic, and see how their thinking changed since the lesson.

### Visible Thinking Routine 2: Think Puzzle Explore

The purpose of the *Think Puzzle Explore* routine is to have students practice connecting prior knowledge to current investigations that then lead to exploring new questions (Visible Thinking, Think Puzzle Explore, 2016).

*Application:*

Here is a general example of *Think Puzzle Explore* routine in action from Project Zero: Make a chart with columns for students to write what they think, what they are puzzled about, and what they want to explore, about a specific topic. For example, in a biology class starting a unit about bones, a teacher gave her students a replica of a bone joint, and asked her students to made observations based on the evidence in front of them (Visible Thinking, Think Puzzle Explore, 2016). Students were asked to write down what they initially thought about bones and joints in general, what puzzles them about bone and joint physiology, and what they could explore (i.e. flexibility, different joints in the human body, how these joints are different in animals) (Visible Thinking, Think Puzzle Explore, 2016).

*Think Puzzle Explore* has potential in both an academic and public library setting. Many libraries teach specific computer skills and technologies to both adults and children. In such programs, the *Think Puzzle Explore* routine could be immensely helpful. The instruction librarian could

structure the class around the three components of this routine. For example, beginning a class in Microsoft Excel, ask what learners already know about Excel, what puzzles them concerning the application or use of Excel, and what specifically they want to know about Excel. Key documentation here would be to record the learners' answers and come back to those lists throughout the program. Such a structure shows the instructor's genuine interest in what the students already know, and what they wish to learn during the session. In addition, there is a lot of promise for beginning and ending a class with the *Think Puzzle Explore* activity. Topics and questions the students come up with in the "Explore" portion of the routine could be used as an assessment by librarians. Such documentation will show how well the class addressed what the students wanted to learn, and therefore, the success of the session.

### Visible Thinking Routine 3: Think Pair Share

*Think Pair Share* is another routine that promotes active reasoning and explanation. In particular, the purpose of this routine is to also develop articulation skills when students are asked to share their thoughts and findings with peers (Visible Thinking, Think Pair Share, 2016).

*Application:*

Here is an example of *Think Pair Share* routine in action from Project Zero: *Think Pair Share* is a great routine to use at the end of a unit to see what students have learned and what they are still confused about. For example, a third grade teacher used this routine after completing a unit on multiplication and division with her students (Visible Thinking, Think Pair Share, 2016). She gave her students a math problem and two hypothetical answers. After students individually looked over the math problem and chose their answer, they paired up with another student to share their reasoning for choosing that answer (Visible Thinking, Think Pair Share, 2016). Finally, students, in pairs, presented their final answers, whether right or wrong, to the class.

*Think Pair Share* has potential in many library settings. Simply adapted, an instruction librarian can ask students to write down what they think about the topic of study. From there, the instructor can have the students break into pairs to compare answers. Finally, the library instructor will have students share their findings with the group as a whole. If answers offered by the students are correct, then the instruction was successful, if the answers are not, or students have questions, then certain portions of the session can be revisited. For example, the topic at hand is for students to learn the differences between primary, secondary, and tertiary sources- a great skill to use when conducting research, and a course that is usually offered in a library setting. The instructor provides an overview of the definitions of primary, secondary, and tertiary sources, then provides the students with a list of sources that they then must organize into the appropriate category. Once the students independently make their decisions on which sources are fall under which category, the instructor has students pair up and discuss the reasoning behind their answers. Finally, the pairs will then share with the rest of the class which sources they think are primary, secondary, and tertiary. Conducting a lesson in this way will help students feel reassured or validated in their choices with their partners before sharing with the entire group, as well as helps instructors know what is still confusing to their students.

### Visible Thinking Routine 4: Circle of Viewpoints

*Circle of Viewpoints* is a great routine for exploring diverse perspectives surrounding a topic. In addition, this routine helps students understand that many people have different feelings and thoughts surrounding topics and that these diverse opinions are just as valid as their own (Visible Thinking, Circle of Viewpoints, 2016).

*Application:*

Project Zero has a great example of *Circle of Viewpoints* routine in action. *Circle of Viewpoints* is generally used when making observations from historical artifacts or images. For example, a sixth grade teacher asked her students to look at a historical etching of a slave trade in their social studies class (Visible Thinking, Circle of Viewpoints, 2016). The image depicted a slave trade involving an ambiguous negotiation. Around the image was a white board, on which students could write the various perspectives connected to the image: "Who would be interested in this image? Who might care about this image? What people might be affected by this image?" (Visible Thinking, Circle of Viewpoints, 2016). From those questions, the students developed characters associated with those perspectives, and investigated more deeply the reasons for their chosen character's perspective on the topic of slavery.

*Circle of Viewpoints* has more potential in a public library setting when applied to a literature or even story time session. After reading a short story, have learners pick out the individual perspectives proposed in the story. A great example of this would be with the children's story "Peter's Chair" by Ezra Jack Keats. The story illustrates a dilemma Peter faces with his new baby sister: his parents are giving her all his things! Students should pick out the characters Peter, Mom, Dad, Baby Sister, and (for fun) Peter's Dog. From there, learners will write down the story or the dilemma from each characters' point of view (Cale, 2011). Such a routine asks learners to look at issues from multiple viewpoints. Key documentation for librarians using *Circle of Viewpoints* would be to record what their students say about who the characters are and what they think the characters' perspectives are. A great way to do this would be on poster boards. As discussion continues, changes can be made to the poster boards, creating a very interactive story time.

In addition, in an academic library setting, *Circle of Viewpoints* can also be used to help students with topical essays. For example, topics such as gay marriage, legalization of marijuana, etc. have many controversial viewpoints to address. The method forces learners to investigate all sides to an argument or the many points of view, which in turn helps them discover where to search for specific information regarding the topic, and begin to know who cares about the topic and why.

### Visible Thinking Routine 5: I Used to Think…Now I Think…

The purpose of this routine is to get students to reflect on the hows and whys of their thinking process. *I Used to Think…Now I Think* is also useful in situations when opinions or beliefs have changed, and students can recognize the cause and effect of that change (Visible Thinking, I Used to Think…Now I Think, 2016). *I Used to Think…Now I Think* is a great routine designed for circumstances in which students' opinions will most likely change as a result of instruction (Visible Thinking, I Used to Think…Now I Think, 2016).

*Application:*

Specifically, *I Used to Think…Now I Think* routine is used after new information is presented, after watching a film, at the end of a unit of study, etc. (Visible Thinking, I Used to Think…Now I Think, 2016). Learners get a chance to share and explain their shifts in thinking and reflect on why their opinions changed or didn't change (Visible Thinking, I Used to Think…Now I Think, 2016).

*I Used to Think…Now I Think* is a routine applicable to many areas of library instruction. At the end of an instruction session, librarians can ask their audience what students learned from the session, and how their thoughts have changed on the topic of study. However, researchers have identified an issue of inconsistency through the use of *I Used to Think…Now I Think* (Knox and Mainero, 2016). If this routine is used after learning has occurred, students have a difficult time recalling what they originally thought about the topic at hand (Knox and Mainero, 2016). A solution to this would be to break up the routine into two parts. The first, *I Used to Think…* could be conducted before the unit of study, and the second part *Now I think…* could be used at the end of the unit of study and a discussion could ensue when students observe the changes.

It is important to note that due to the short length nature of library instruction sessions, students may not experience immediate changes in their thinking. In addition, addressing topics of a sensitive nature where students may have predisposition of opinion regarding a topic such as immigration or gay marriage, *I Used to Think…Now I Think* may be emotionally toiling for some students. Instructors need to be aware and know their audience for this routine to be successful.

### Visible Thinking Routine 6: See Think Wonder

*See Think Wonder* encourages students to make careful observations and thoughtful interpretations. The key questions to use when implementing this routine are: "What do you see?", "What do you think about what you see?", and "What does it make you wonder about?" (Visible Thinking, See Think Wonder, 2016). *See Think Wonder* is most successful when the three questions are used together when introducing students to new ideas, art, or units of study.

*Application:*

There is great potential for the *See Think Wonder* routine within many curriculums. Project Zero has recorded instances of its use in a variety of scenarios including math, topics of human rights, and observing art and objects (Visible Thinking, See Think Wonder, 2016). A great example of this comes from a school in Michigan. A Physical Education teacher used the *See Think Wonder* routine to explore organic and non-organic farms and foods (Knox and Mainero, 2016). Each student was given a template on which they wrote what they saw in the images the teacher provided regarding organic and in-organic foods, as well as what they thought about the topic, and what the images made them wonder about (Knox and Mainero, 2016).

In a library setting, *See Think Wonder* has huge potential in a variety of educational scenarios. An example of *See Think Wonder* in action is during a session in which students are asked to look at a particular library database. The instructor asks them what they see, think, and wonder

about the functionality, the aesthetics, the user friendliness, and types of information they will find there.

### *Visible Thinking Routine 7: Compass Points*

The *Compass Points* routine is used for evaluating propositions in a way that prevents personal reaction or quick judgement (Knox and Mainero, 2016). The routine works by using the four directional points N (north), W (west), E (east), S (south) to propose specific prompts. E is used for the question "What *excites* you about this idea or what is/are the upside(s)?". W stands for the question "What do you find *worrisome* about this idea? Or what is the downside(s)?". N asks learners "What else do you *need* to know or find out about this idea?". Finally, S asks learners "What is your current *stance* or opinion on the idea?" (Visible Thinking, Compass Points, 2016).

*Application:*

The application of *Compass Points* routine in a traditional classroom setting is relatively simple. Set up a large compass, and have students write, or place sticky notes with their answers to the NWES points (Visible Thinking, Compass Points, 2016).

In a library instruction setting, the *Compass Points* routine may be used in a variety of ways in both academic and public libraries. The answers the learners give to the NWES questions may serve as a guide for librarians that directs the course goals towards what it is the students wish to learn about the topic, how they feel about the subject already, and what they think will be most challenging. *Compass Points* is also helpful for learners to start brainstorming about possible paper topics.

### Technology and Visible Thinking Methods

There are a variety of resources online for educators looking to use Visible Thinking routines in their classrooms. Current research about Visible Thinking routines is prominent in the field of formal education, rather than library instruction settings. Harvard, Johns Hopkins University, and a variety of educator blogs can be found on a google search. A large collaboration between educators from all educational fields exists on the web (Visible Thinking, VT Network, 2016). A Culture of Thinking movement is growing in traditional education circles with Visible Thinking at its center (Visible Thinking, VT Network, 2016). However, the routines can be easily adapted to most instruction settings. Educators are sharing their experiences with Visible Thinking routines on the internet for others to view. Collaborations exist between schools around the world (Visible Thinking, VT Network, 2016).

Once Visible Thinking routines are recorded in library settings, instruction librarians should also link their research to the internet either through [Project Zero](), or the [Visible Thinking webpage]().

Already, within social media, there are a plethora of examples of Visible Thinking routines are being used in all manner of curriculum. Sites such as Pinterest, Facebook, and even YouTube, are searchable for further viewings of Visible Thinking routines in action. Such links are provided in the bibliography of this review.

One area that is lacking in research is how Visible Thinking can be adapted for use in our increasingly "digital age". As mentioned, there are a plethora of resources for educators to compile a toolbox of how to use Visible Thinking routines in their own classrooms. However, there are no studies concerned with using technology based media to enhance Visible Thinking. Nor are there examples of Visible Thinking routines being adapted for use with digital media such as computers and phones. Therefore, this may be an area that librarians can expand and experiment with Visible Thinking Framework.

**Conclusion**

Finding resources on the topic of Visible Thinking methods being used outside of the sphere of traditional education is very minimal in quantity. Research and studies conducted on Visible Thinking routines used in a library or other nontraditional learning environments is non-existent. However, that is not surprising due to the fact that Visible Thinking as an education method is relatively new and has not yet taken root in all educational spheres. The potential of the Visible Thinking Framework in instructional library settings is astounding. In the future, more research and experiences will most likely begin to crop up that are applicable to other instruction fields outside of traditional education.

In addition, very little documentation exists on the topic of how Visible Thinking routines can be applied to electronic or digital environments. Further research requires visiting how the digital age is affecting thinking patterns in learners and how educators are using technology to promote or hinder student thinking. Here is where librarians and other teaching institutions may be of immense help in continuing research. Typical library instruction involves a plethora of technology based information sessions: from searching databases to finding reliable sources, from emails to connecting social media sites, from adobe to excel, all of which are important skill sets patrons wish to learn for success in the digital age. Therefore, by adapting and trialing Visible Thinking routines with these types of instruction topics, instruction librarians are creating resources for education researchers to see how technology is affecting learning and assist in the development of new ways to address instruction in the our rapidly increasing digital age.

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# 9

# Citation Managers on a Shoestring

# Andrea Copland

While many university libraries host comparison charts for citation managers on their websites, it is often difficult to direct students towards a single platform with which to organize sources, let alone furnish long-term support for the growing number of citation tools offered. The issue is further complicated by several factors that contribute to a student's choice in citation manager: general usability/share-ability (including reliance on the PDF format and the ability to interface with other citation managers), suitability for certain disciplines, multilingual functions, bibliographic generation, and any proprietary limitations. Thus, this guide is a quick reference to free citation managers (Zotero, Mendeley, Docear, and ReadCube) for instruction librarians as well as a tool to help them guide students towards a citation manager that best suits them.

Technology is constantly evolving and proliferating to the extent that it significantly influences the research strategies of most undergraduate and graduate library users (Hensley, 2011). Because of this interdependent relationship between technology and research, reference librarians often act as mediators between the researcher and the way the information is organized and credited due to their broad perspective on both information and research. Enter the free citation manager. Similarly to the manner in which they help users discover a variety of information and research strategies, librarians are often called upon to know which citation manager best suits the researcher (Hensley, 2011).

As Necka points out in *Selecting a reference manager*, many of the choices involved in choosing a citation manager come down to the researcher's pre-existing workflow, and how much they need to interact with the information they compile (Necka, 2013). Since citation managers are designed to increase the efficiency of research, it is important to critically evaluate them for how much time the researcher can save by using them and whether each citation manager supports research as a collaborative and conversational process.

Due to the sheer number of free citation managers on offer to researchers, I have selected Zotero, Mendeley, Docear, and ReadCube to compare in terms of general usability/share-ability, reliance on the PDF format, the ability to interface with other citation managers, suitability for certain disciplines, multilingual functions (if applicable), bibliographic generation, and any proprietary limitations as mentioned above. Each citation manager will be discussed in turn, and further resources for choosing citation managers and continued tech support will be included in the conclusion. Please note that these comparisons come from personal exploration of each citation manager unless indicated otherwise.

**Zotero**

Zotero is one of the most popular and user-tested free citation managers, and has a well-established presence in most academic disciplines. Developed as an open source tool with

funding from individual donations and charitable organizations like the [United States Institute of Museum and Library Services](), the [Andrew W. Mellon Foundation](), and the [Alfred P. Sloan Foundation](), Zotero was created at George Mason University in 2006. Because of Zotero's open source nature, users are constantly developing add-ons to the software, which are tailored specifically to their research uses. This customization comes in extremely handy for other users within the same field as any researcher who has created an add-on, as they often create tools specific to their discipline. Zotero itself runs primarily as an add-on through the Firefox browser (its original iteration) and can also be downloaded as a desktop application on any operating system including Windows, OSX, and Linux and used on mobile devices. As Necka points out, it is a streamlined software that caters to researchers who don't need to make extended notes as they work and simply need a way to organize and search their sources (2013). This observation can be extended to include researchers with an established system for research and simply need to economize their citation efforts. This means that rather than being particularly good for one discipline, Zotero is particularly good for experienced researchers as a demographic. Though Zotero has somewhat limited features, it is possible to take notes as add-ons to PDF's, which are automatically saved in a separate file and searchable along with citations. Zotero can also handle a couple of other commonly used formats such as Google Docs and web pages, and extract metadata for citations and the whole of the digital library the researcher assembles. Largely because of its streamlined nature, Zotero is very intuitive to learn. There are also many online resources including demos and an "official" blog linked to the website from the developers. Zotero's multilingual capabilities are currently limited to an add-on called Juris-M.  Predictably, the bibliographic generator sometimes loses vital punctuation marks, but corrections usually amount to small edits in the final list of references. Zotero stores all types files from users' libraries in a cloud-based platform called "Zotero File Storage." This allows for access both on and offline on any device synced with a Zotero account, as well as access on non-synced devices through Zotero.org.

**Mendeley**

Until recently Mendeley, like Zotero, was a completely free online citation manager and desktop application. The software was recently acquired by the academic publisher Elsevier, making it proprietary to the company. However, the free version is still a powerful citation software and provides 2GB of storage. Similarly to Zotero, Mendeley runs through a web plug-in, desktop and mobile applications, and is very easy to learn and work with on multiple operating systems including Windows, OSX, and Linux. Unlike Zotero, notes are not stored separately from the PDF files they are taken in and are searchable only with the PDF file they pertain to (Necka, 2013). This can make annotations difficult and time consuming to find. The main strength of Mendeley is the share-ability between other Mendeley users (Necka, 2013). Mendeley allows for collaborative groups of up to three researchers who can then share documents and notes among themselves. However, this is a major drawback to the free edition due to how small the groups have to be to use it. Because the paid version allows more users to collaborate, it is an ideal platform for multiple people working in labs or on experiments (Necka, 2013). Largely due to this collaborative feature, it is a particularly popular citation manager for the natural sciences, and many labs encourage its use (http://libguides.mit.edu/references). Online support is available through Elsevier and is fairly comprehensive, though proprietary. Mendeley supports such formats as PDFs, Google Docs, LaTex, blogs, and emails. Like Zotero, it is able to extract

metadata from these formats for multiple purposes. Mendeley's main and most unique strength is its ability to extract metadata on what's "trending" among researchers by providing a "feed" on the user's screen that displays the most popular search terms and articles day to day. Though it may not apply directly to any given topic, it could be useful in generating new keywords for database searches and expanding a user's research within a discipline. Mendeley's unique use of metadata gives it a somewhat revolutionary position in the academic world by providing "academic social networking" through its feeds and metadata on the number of reads of articles and dissertations. As librarians continue to teach research as a collaborative process, this may prove to be an invaluable asset.

**Docear**

Docear is a newer, completely free (like Zotero) citation manager developed in 2010. Docear is a new wave manager that goes beyond organizing sources and takes on the rest of the research process by providing mind-mapping and document planning as tools within the software. Docear is described by its developers as an "Academic Suite" meant to operate for researchers as Microsoft Office does for office workers (Beel, J. et al., 2011). Despite these bells and whistles, Docear manages to maintain a sleek interface and is easy to learn. It has its own database, which is largely sourced from- and functions like- Google Scholar and automatically links references to full-text articles in that database. Another feature is Docear metadata, which is very similar to that of Zotero and Mendeley and can isolate information in PDFs and convert them to citations automatically, with little input from the researcher. Because Docear hosts enhanced PDFs to facilitate mind-mapping, more editing is required in finalizing references from the automatic citation generation, as spellings sometimes get scrambled. This metadata is also used to create "recommendations" on other scholarly literature which may pertain to a researcher's work (Beel, J. et al., 2011). Based on my experience with Docear, I am inclined to say that it aids researchers in "information management" as much as it does in "citation management," which is quite exciting. This seems to indicate that it would be appropriate in any discipline, but particularly useful to a researcher looking to integrate evidence and resources into their planning process as they write. The Docear developers are also extremely active and continually increasing the capabilities of the software. For example, Docear is partly multilingual and more limited than Zotero in this respect, but the developers of Docear are working on a more comprehensive multilingual function. Their website is more informative than that of Zotero (quite a feat), and includes video and extensive screenshot tutorials as well as the philosophy behind the program and a vision for what it could do in the future.

**ReadCube**

ReadCube is essentially the proprietary (to a collective of publishers), very flashy version of Docear and is one of the newest citation managers available. It specializes in enhanced PDF's more so than Docear, meaning that researchers can highlight, annotate, and interact with a PDF almost as seamlessly as if it were an analog copy. Though I really had fun playing with these various features for annotating files, I didn't find it as easy to use as Docear. This meant that I spent a bit of extra time with the software and made some interesting discoveries in terms of other features. ReadCube is very in-tune with the idea of researchers building a vast digital library of references, as described by Hensley (2011). Similarly to Zotero and Mendeley's digital

libraries, ReadCube allows users to import any existing saved files from their computer (Windows, OSX) and organize them into various folders in the desktop application. The most useful feature in ReadCube is its ability to save a user's login information for database access and circumnavigate the cumbersome library authentication systems that come with institutional database subscriptions. Larger databases like PubMed and Google Scholar are also searchable through ReadCube. Like Docear, ReadCube links references within articles to the full-text if available. ReadCube also delivers "daily recommendations" based on the previous day's searches. The bibliographic generator was just as suspect in terms of errant punctuation marks and misspellings as Docear's, thanks again to developing metadata kinks in the interactive PDFs that will likely be resolved as the program matures. Related to the software's flashy overall appearance and function, I could not make heads or tails of any multilingual functions. To counter that, in terms of electronic language, it is extremely easy to import documents into ReadCube from other citation managers though its sharing capabilities are limited and the software is meant to stand alone – I assume as a "research suite" similar to Docear. Based on this, ReadCube seems most suited to researchers in the humanities, or any researcher looking to make their search process through their institution's databases more efficient.

**Other Considerations**

Despite researchers' reliance on it, the PDF is an increasingly cumbersome format to read research in across multiple fields of study and even more difficult to interact with (Madisch, 2015). Madisch claims that the PDF is particularly problematic in publishing scientific research, as readers are forced to constantly scroll back and forth through hundreds of pages just to compare graphics, charts, and text (2015). Some citation managers support the PDF format, while others are equally able to support a diversity of formats such as Google docs. As citation managers become more sophisticated and offer more ways to annotate PDFs, the fixity of the format is becoming less of a concern. However, as more citation managers offer enhanced PDFs, these capabilities could be valuable decision points for some researchers. For example, Docear and ReadCube could address the many concerns researchers have with the PDF due to their highly interactive platforms and availability of "enhanced" PDFs.

Despite the problematic nature of the PDF, the fact remains that many citation managers have been developed to extract metadata from the format and would require significant technical revisions in order to cope with any new, "universal" format developed to correct the flaws of the PDF. This means that in some ways, researchers could be faced with even more challenges to establishing research as a conversational process without the PDF. This brings up two big questions in how we currently conduct and teach research: First, if we can share collective wisdom better, do we sacrifice the universal – if clumsy – readability of it that we currently have through the PDF? Or, second, does the question become more philosophical: How is the input of a community of research most easily shared as technology continually evolves?

Another major consideration to take into account when comparing citation managers are the limitations of the free software versions and established communities of users. For example, Mendeley is a popular choice in scientific research labs, but the free version only allows for collaborative groups of three. This could be a major issue in larger research groups especially if the department or professor mandates the use of this limited software, regardless of the

proprietary nature of the company that provides it. Mendeley's new proprietary status also introduces a concerning precedent: the transition from totally free software to a mandatory buy-in to retain the full capabilities of the previously free platform effected a huge number of established users. Can we truly trust these free programs to remain free, given this precedent?

Based on the relatively universal accessibility and availability of support for free, though potentially transitory citation managers, it may be productive for institutions to reconsider the purchase of licenses for other reference software such as EndNote and RefWorks. Each of the free citation managers discussed in this guide are equally as easy to teach and nearly (if not equally) as powerful as paid citation managers. Faced with constantly threatened budgets, can we justify the use and instruction of expensive, limited citation managers? Or, is the security and consistency of these subscriptions sufficiently valuable enough to justify their purchase if not all free citation managers remain free?

## Conclusion

Thanks to the large role personal experimentation played in this paper, it is safe to conclude that citation managers are most easily chosen based on personal preferences. However, it is important to acknowledge the established practices of a user's field of research as a confounding factor in this conclusion. Not all users have the luxury of choice, let alone the time needed to try various citation managers and make that choice. As established citation managers, Zotero and Mendeley have the largest networks for online user support. These resources are extremely easy to access as either a librarian assisting a user or as an independent user. In terms of general usability, Zotero, Mendeley, and Docear were the easiest and fastest to learn. Mendeley is the clear free citation leader in the natural sciences thanks to established users, while Zotero offers the most multilingual functionality for international users. Zotero and Mendeley also generated the most accurate bibliographies. In terms of overcoming the inflexibility of PDF formatted files, Docear and ReadCube provided more ways to take and search notes than either Zotero and Mendeley. An aspect not considered in this guide was the cutting edge information management capabilities in Docear and ReadCube, which allow researchers to plan their written document and mind-map their findings. The best course of action in advising users is to determine exactly what aspect of their research could benefit most from the features of one of the four citation managers discussed above.

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**Further Reading/Citation Manager Support**

Comparison between Docear, Mendeley (free version), and Zotero: http://www.docear.org/2014/01/15/comprehensive-comparison-of-reference-managers-mendeley-vs-zotero-vs-docear

Docear: http://www.docear.org/docear/about/

Mendeley: https://www.mendeley.com/home/d/?e=201

MIT Library Guide: http://libguides.mit.edu/references

University of Wisconsin-Madison Library Guide: https://www.library.wisc.edu/services/citation-managers/comparison-chart/

Wiki Tables: https://en.wikipedia.org/wiki/Comparison_of_reference_management_software

-Extremely helpful as a one-stop shop/quick reference table for comparing almost any citation manager, particularly free software in the spirit of open source information! Links to support sites and provides basic information on the software including operating system requirements.

Qiqqa: http://www.qiqqa.com/

ReadCube: https://www.readcube.com/

Zotero: https://www.zotero.org

# 10

# Connect the Dots: An Exploration of Connectivism in Theory and Practice

# Michael Bovee

The field of education, as is the case with most of society, has been significantly impacted by recent advances in digital technologies and unprecedented levels of global connectivity, with new theories of education being developed in an attempt to best suit the changing needs of a newly emergent global learning community. One of the more talked about emerging trends of recent years is the Massively Open Online Course (MOOC). In its simplest terms and as put by Wikipedia, "A Massive Open Online Course (MOOC) is an online course aimed at unlimited participation and open access via the web" ("Massive open online course," n.d.). While somewhat controversial at first, the MOOC has more-or-less grown to be a widely accepted phenomenon; even many major universities such as Stanford, Princeton, and UC Berkeley have begun offering MOOCs through providers such as Coursera and Canvas.

Although it wasn't known as such at the time, the first MOOC, again according to Wikipedia, was a course entitled *Connectivism and Connective Knowledge* that consisted of 25 tuition-paying students from the University of Manitoba along with 2,200 online students who were taking the class for free. This course was put together by Stephen Downes of the Canadian National Research Council and George Siemens of the online distance learning-oriented Athabasca University and explored how we learn through various "Web 2.0" interfaces and formats such as RSS feeds and blogs ("Massive open online course," n.d.). Rather than working through conventional channels of online learning such as video lectures and quizzes, this course was based in connectivist theory and really laid the groundwork for an entirely different way of thinking about learning in a 21st century environment.

## What is Connectivism?

So what is connectivism, exactly? And more importantly, what implications does it carry for education in a 21st century information ecosystem? Before answering these questions, let us look at the most prominent proponents of the theory. Stephen Downes, as mentioned earlier, is a Canadian theorist who runs a blog called OLDaily. According to OLDaily, Downes is a "leading voice in online and networked learning" and a "leading proponent of connectivism" (Downes, n.d.) His interests include "logic and reasoning, critical literacies, and free learning" (Downes, n.d.) As noted by Downes (n.d.), Downes is known for his, "deep, passionate and articulate exposition of a range of insights melding theories of education and philosophy, new media and computer technology." He is also "one of the first adopters and developers of RSS content syndication in education" (Downes, n.d.).

George Siemens is another Canadian theorist who seems to write less about himself. In his blog he simply claimed that he is "with the Technology Enhanced Knowledge Research Institute at

Athabasca University" (Siemens, n.d.). On his bio from Athabasca University, it is stated that he is "a writer, theorist, speaker, and researcher on learning, networks, technology, analytics and visualization, openness, and organizational effectiveness in digital environments" ("George Siemens," n.d.). It is also mentioned that he "has pioneered open connectivist courses that have included over 15,000 educators and students as participants," that "he is a frequent keynote speaker at conferences detailing the influence of technology and media on education, organizations, and society," and that he has "presented at conferences in more than 30 countries" ("George Siemens," n.d.).

Siemens authored the seminal text of connectivism entitled *Connectivism: A Learning Theory for the Digital Age,* the main thesis of which is that traditional educational theories, i.e. behaviorism, cognitivism, and constructivism, are inadequate a 21st century information environment for a multitude of reasons. Namely, Siemens stated that learners need skills that transcend a multitude of possibly unrelated fields over the course of their lifetimes and allow for continual or lifelong learning, that technology changes the way we think and interact with the world and also supplements our ability to process information, that learning occurs in day-to-day interactions and in mundane environments, that learning is not limited to the individual, or in other words that collective learning is a thing, and that "know-how and know-what is being supplemented with know-where" (Siemens, 2005).

Connectivism, Siemens wrote, is "concerned with the actual process of learning, not with the value of what is actually being learned" (Siemens, 2005). So, for example, the success of a connectivist class focusing on, say, the history of banana cultivation in Central America would be measured not by what the students know about banana cultivation in Central America, but rather by the students' abilities to navigate Web-based resources in order to find information about banana cultivation in Central America. The key idea is that, "we need to act by drawing information outside of our primary knowledge" (Siemens, 2005); that we need to build connections with those around us and develop the skills necessary to determine the value of the bits of information we are able to gather through these connections and understand the ways that they can be put into play with one another.

Similarly, Downes wrote in *Connectivism and Connective Knowledge* that "At its heart, connectivism is the thesis that knowledge is distributed across a network of connections, and therefore that learning consists of the ability to construct and traverse those networks" (Downes, 2011). Knowledge, as such, does not exist within individuals, but across a community of practice. It cannot, therefore, emanate from a single point of authority, but rather only be accessed through networks. So education, as a result, consists of the process of learning how to be a node in a network through and by which knowledge is created. These ideas mean that a connectivist approach to education or "the idea of a connectivist course is that a learner is immersed within a community of practitioners and introduced to ways of doing the sorts of things practitioners do, and through that practice, becomes more similar in act, thought and values to members of that community" (Downes, 2011).

One of the main arguments espoused by adherents of connectivism is that, "including technology and connection making as learning activities begins to move learning theories into a digital age" (Siemens, 2005). In fact, it seems as though connectivism is contingent upon and can only exist

within a digital environment; that connectivism is a reaction to the rise of ubiquitous computing and the movement towards "an environment where the connectivity of devices is embedded in such a way that the connectivity is unobtrusive and always available" (Beal, n.d.). Whether or not this is an appropriate response will be addressed later, but the fact of the matter is that most individuals with Internet access embed ourselves, intentionally or not, into certain communities of practice on the world-wide web, which is a driving force behind connectivism.

That being said, the information environments in which we operate are often complex and chaotic. Connectivist theory strives to empower individuals to successfully navigate and operate within this reality in order to create stronger and more powerful networks. As stated by Siemens (2005), "Self-organization on a personal level is a micro-process of the larger self-organizing knowledge constructs created within corporate or institutional environments. The capacity to form connections between sources of information, and thereby create useful information patterns, is required to learn in our knowledge economy."

Rather than shy away from the chaos brought about by the ontological instability of information in the digital information age, then, connectivism strives to take it head on and instill resilience in users that allow them to use the perpetual state of flux of Web 2.0 environments as a tool to be utilized in the long-term knowledge-creation process. In Siemens's (2005) words, it "is driven by the understanding that decisions are based on rapidly altering foundations."

These ideas mean that on one end, and as stated by Downes (2011), the purpose of connectivism is to immerse a learner "within a community of practitioners and [introduce them] to ways of doing the sorts of things practitioners do, and through that practice, becomes more similar in act, thought and values to members of that community." On the other end, as mentioned by Siemens (2005), the individual "in turn feed[s] back into the network," which then "continue[s] to provide learning to individual." There is, then, a dynamic back-and-forth relationship between individual and network; between student and community. The two continually shape and inform one another, perpetually generating new knowledge. As said by Siemens (2005), "This cycle of knowledge development (personal to network to organization) allows learners to remain current in their field through the connections they have formed," but he fails to mention that this process also keeps a field current and relevant to learners.

**Connectivism and MOOCs**

Given this background on connectivism, it seems as though the MOOC is the ideal representation of connectivist learning. Not all MOOCs, though, are connectivist. As MOOCs began to gain a name for themselves throughout academia, they began to be modeled on traditional university classes and sought to emulate the lecture-based classroom. This approach was directed towards a more passive audience; students would watch a video lecture and answer some quiz questions afterward, for example. A notable and widely talked-about example of this is Stanford University's 2012 MOOC on Artificial Intelligence. While it is generally accepted that such MOOCs, known now as xMOOCs, "significantly broaden the number of students who can be exposed to university-level courses," they are often criticized as being "inferior to the university courses they mimic because they eliminate teacher-student interactions and involve limited student-student interactions" ("xMOOC vs cMOOC? A glossary of common MOOC

terms part 2", n.d.). Just as in the standard university classroom, a participant of an xMOOC either takes the role of teacher or student, never both. While there may be a time and a place for such divisions of power in the traditional classroom, the xMOOC model tends to only use the Internet as a transmitter, neglecting the many opportunities its dynamic and collaborative nature could provide.

Conversely, connectivist MOOCs, or cMOOCs, "involve groups of people learning together" and "often include blogs, learning communities, and social media platforms that contain content and promote interaction" ("xMOOC vs cMOOC? A glossary of common MOOC terms part 2," n.d.). Most significantly, "participants are all considered teachers and learners" ("xMOOC vs cMOOC? A glossary of common MOOC terms part 2," n.d.). The cMOOC is the MOOC that was originally intended by Siemens and Downes, it is the MOOC in which "we are all educators, or at least, learning to be educators, creating and promoting the (connective) practice of education by actually practicing it" (Downes, 2011). Rather than solely being the receptors of information, student-teachers in a cMOOC actively engage with and share information with one another to collaboratively create something new. Yet, it is the xMOOC that is generally thought of when "MOOC" is used in popular discourse, and as a result the cMOOC is often overlooked. While recognizing the widespread popularity of and easy accessibility offered by xMOOCs, the behaviorist theories that underlie their practice limits the scope of possibilities they offer in the digital, interactive, and collaborative environment of the Internet. For this reason, cMOOCs will be the focus of the rest of this paper.

**Putting the Theory into Practice**

In an article entitled *A MOOC By Any Other Name* (2012)*,* the unnamed author wrote that, "Ideally, MOOCs should facilitate active, meaningful, and productive learning relationships," very much evoking connectivist theory. She followed that, "Learning in MOOCs is not about remembering facts, but creating innovative, fresh knowledge through communication with peers, while giving new shape to shared meanings and concepts" ("A MOOC By Any Other Name, 2012), further enforcing the idea of knowledge taking place through communication and creating connections between peers, opening up the possibility of discourse and collaboration towards a shared goal. This reiterates that knowledge is should not imparted on students in a MOOC, but is rather created through nodes of connection, much like synapses between neurons in the brain.

In such an environment, though, there is no readily evident structure or discernable boundaries in which learning can occur, and given the breadth of students that may participate in a MOOC, a lack of structure could be exclusionary. Downes himself pointed out in *From MOOC To Personal Learning* (2015) that "Students have to manage their own time, find their own resources, and structure their own learning," for which reason "it is argued students must already have a high degree of skill and internet savvy in order to be successful," while in *A MOOC By Any Other Name* (2012) it is stated that, "One of the challenges for MOOCs is how to reconcile […] being massive and serving diverse populations with the need to adapt to the learning preferences, levels of prior learning, and tastes of individual students." In response to these concerns, Downes claimed that, given that learning in the "real world" is not directed, "navigating the chaos and making learning decisions is the lesson in a cMOOC" (Downes, 2015).

This is where information literacy comes into play. It seems that in Downes's opinion, cMOOCs are the framework through and in which information literacy is developed, and much like conventional literacy, which is "rooted in our comprehension of, and ability to work within, abstract symbol systems (and in particular, language and mathematics)" (Downes, 2015), information literacy can only be understood in the context(s) in which it is situated. In his words, "the modern understanding is about more than communication and meaning in a language or symbol system. It is about operating and interacting in a complex and multi-dimensional environment" (Downes, 2015). These ideas mean that one acquires the skills necessary to operate and learn within a MOOC by participating in MOOCs, or, as Downes (2015) says, "Learning in a MOOC and literacy in a MOOC become synonymous. We are not acquiring content or using language and literacy, we are becoming literate, becoming MOOC." As cMOOCs are more or less learner-built and learner-directed, problems surrounding inclusion of a diversity of students ought to take care of themselves. Right?

Keith Brennan, for one, does not think this is necessarily the case. He believes that connectivists are blinded of the shortcomings of their theory by subscribing to what he calls "ideological monogamy" (Brennan, 2013). His criticism started by pointing out that "One of the most important aspects of the learning experience is motivation" (Brennan, 2013). He also mentioned self-efficacy, or "our belief that a task is achievable by us, and that the environment in which we are working will allow us to achieve that task" (Brennan, 2013). Self-efficacy is a fundamental force in motivation; low-self efficacy students are easily discouraged, give up early, and generally blame themselves for failing at tasks, while high self-efficacy students are highly motivated and work quickly and confidently to complete tasks. Typically, notions of self-efficacy originate from past learning experiences, but in a MOOC there could be a wide variety of past learning experience among the participants and therefore differing conceptions of self-efficacy.

Brennan also mentioned the concepts of cognitive load, which is "the amount of information we can take in, process and retain… Complex, new, or difficult tasks have a high load. Simple, known or easy tasks have a low load," and prior knowledge, which positively correlates with both cognitive load and self-efficacy (Brennan, 2013). Simply put, cognitive load is the reason novice drivers, for example, learn to drive in a parking lot and not on the interstate (Brennan, 2013). Connectivism, according to Brennan (2013), overlooks the fact that some people are novices and some people are experts in certain fields or within certain communities of practice, and that when people of varying degrees of prior experience and skill are put in the same learning arena it can result in a fairly chaotic learning environment, thus favoring experts and burdening novices. Further, Brennan (2013) pointed out that "In Connectivism, the distributed platforms, the networked nature of learning, the requirements for metacognition, digital literacy, the new tools and techniques add significantly to the novice's cognitive load." While Downes (2015) made the point that 21st information literacy in this sense can only be learned through collaborative online environments, such literacy is a requisite skill for participation in such environments and those who lack it will not be able to succeed as well as experts. It's a catch 22. As Brennan (2013) put it, "Design for experts, and invite novices, and watch novices get shot out of the sky." Everyone in a cMOOC is equal in theory, but some end up being more equal than others.

This, though, is not the only criticism of cMOOCs. At its core, it could be argued that connectivism overlooks fundamental aspects of how we learn. This sentiment was evoked while reading Laura Gibbs's 2012 blog post *Teacher Authority and Student Initiative in a MOOC.* This post, which gives an account of participation in a cMOOC, begins with the observation that "there are many students who prize very highly the rules of a class and teacher authority, even in a massive course like this where the teacher is more absent than present;" that there are a number of students in the class "who are very much expecting the teacher to function as the voice of absolute authority in the class" (Gibbs, 2012).

This is best illustrated through an anecdote about an assignment the class had to do, and how they reacted when Gibbs got creative with the parameters of the assignment. The class was told to write an essay on Edgar Allen Poe's short story "The Oval Portrait." Instead of writing an essay, Gibbs wrote a reworking of the story for a 21st century audience. The instructor of the MOOC lauded Gibbs's creativity and gave her a good grade for the assignment, but she received highly negative criticism from peers, who essentially told her via forums that she should have failed for not following the rules.

Gibbs (2012) attributes this steadfastness to rules and authority, in part, to "the *international audience* [emphasis added] and different cultures of schooling in different countries… yet another factor in the globalization of MOOCs," and there is certainly something to be said for that. Taking this concept a step further, though, it really should be noted that connectivism and cMOOCs operate under the assumptions that everyone has equal access to information, or at least to the resources necessary to obtain information when this simply is not the case. The literacies and framework fervently promoted by Downes, specifically, are very much rooted in affluent, Global North, neoliberal technical utopianism, in an idea that the Internet is the great democratizer that brings freedom and education to all. According to "Internet Live Stats," (2016) only 40% of the global population has access to the Internet, the majority of which is composed of the globally affluent. Further, in an article published by the International Monetary Fund's *Finance and Development,* it is stated that "The Internet threatens to magnify the existing socioeconomic disparities, between those with access and those without, to levels unseen and untenable" (Ishaq, 2001), which sheds light on the severity of the situation at hand. Even if access were assured for the entire global population, which is a highly pressing issue in and of itself, would it be right to impose culture-specific notions of information literacy on the rest of the world, or would that further exasperate the radical inequality experienced by the global population? Would it not be the same as subjecting developing nations to the global economic framework and depriving them of their own autonomy and self-determination? It is for these reasons that it could be said that connectivism is inherently exclusionary of most of the world's population and could even verge on colonialism.

Further, as expressed by Gibbs in her blog post (2012), many students cannot cope with the idea that rules are arbitrary in cMOOCs. This is no fault of connectivism itself, but it is an underlying assumption of connectivist theory. She writes, "For some students, though, the absence of the teacher as a determining factor in the day to day activities of the class, as someone who gives the grades, as someone who enforces the 'rules,' is clearly going to be a shock," and even more poignantly that, "In the absence of the teacher-as-rule-enforcer, some students seem ready and willing, even eager, to leap into that role themselves" (Gibbs, 2012). This illustrates that

education and learning are in one way or another a function of power, that power will inherently pervade even the virtual classroom, and that many North American and European librarians, the products of a late-capitalist consumer-directed society, are simply not equipped with the tools necessary to be able to constructively deal with the radical freedom offered by cMOOCs.

**Conclusion**

It may be a bleak outlook, but I'm of the opinion that connectivism operates under false pretenses that students will want to empower themselves to learn, when that simply may not be the case. cMOOCs were formulated in order to subvert, question, challenge, complement, and supplement the channels of conventional academia, but when students are more motivated to learn through the traditional channels than the subversive ones, even if it would be better for them pedagogically in the long run, it means cMOOCs are failing in some way. Connectivism, it seems, overlooks the way things are in favor of viewing the way things ought to be; we cannot just one day decide that power ought to be distributed horizontally across a network and expect that to be the case the next day, and for this reason I believe that connectivism is far too optimistic to be practical, at least for now. On the other hand, though, it should be mentioned that connectivist theory encourages awareness of learning and education being embedded within a greater social context. Although they have been overshadowed by xMOOCs for the time being, cMOOCs offer greater potential to continue the trend of questioning and supplementing traditional pedagogy, and it is for this reason that I believe that cMOOCs will maintain some relevance into the near future.

Subscribing exclusively to pure connectivism, like subscribing exclusively to pure ideology of any kind, is unproductive at best and dangerous at worst. It is best to be, as Brennan (2013) puts it, "ideologically promiscuous." He wrote, "There is no 'one size fits all' theory. Because there is no 'one size fits all' student. And because students, participants, and learners are the final metric that measures any theory, and experience is the proving ground for theory" (Brennan 2013). So while connectivism may be seen as ineffective, have a tendency to be a bit presumptuous, and can arguably verge on colonialism, it should also be noted that connectivism has some very practical applications, it can enrich the learning experience, and can aid in bolstering information literacy. While it may not be best utilized in a vacuum, connectivism can be used in junction with other theories of education on an as-needed basis and, similarly, cMOOCs can be best used as a supplement to enhance students' learning.

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# 11

# Wake Up and Smell the Bias! Spreading Awareness in Library Instruction

# Paul Worrell

As a busy library instructor, you have many goals to accomplish in a single hour long session.  You have to teach search strategies, explain how to evaluate sources, and give out general information on library resources and services.  This goals alone can take over an hour to cover, but even if you meet this challenge there is an element that goes unaddressed: unpacking hidden biases.  While libraries have historically taken pride in being neutral and unbiased institutions this is a falsehood.  Noble, Austin, Sweeney, McKeever, and Sullivan (2014) highlighted that the Library and Information Science (LIS) field "privileges White, male, middle-class, heterosexual, U.S.-based values and interests" (p. 212).  It is a critical aspect of LIS that often goes unnoticed and unchallenged.  As librarians, we need to be active in bringing awareness to the inequities in information resources, our institutions, and in the field as a whole.

Now this does not mean you have to tack on fifteen more minutes to your laundry list of instruction goals.  Instead, think of unpacking bias as an overarching theme, spread throughout your teaching.  When you challenge students to uncover hidden biases in the information and resources around them, then you start enacting real change.  To help you do this, we will explore bias and how it pervades LIS, take a look at what professionals are doing in the field, and combine the most effective instructional strategies to create a plan for helping spark awareness in students.

**Pulling back the Curtain of Bias**

Underlying biases permeate our day to day life (Ross, 2014).  We constantly make decisions based on unconscious reactions, perceptions and assumptions.  Even when we think we are consciously aware of bias we may be following patterns and habitual thinking that have developed throughout our lives (Ross, 2014).  Biases can take the form of patterns and inclinations and extend beyond our relationships with people and prejudice (Ross, 2014).  It is inherent in our preference for specific foods, hobbies, activities and all through this is mostly unconscious.  Yet bias is also taught through experience.  Your parents may have taught you not to run into the street, effectively creating a bias of danger for that particular situation (Ross, 2014).  These "helpful" assumptions occur in other ways, such as in hiring situations when we value someone's experiences and abilities as good qualifications.  Ross explained that qualifications are simply biases that are accepted and "codified" by society (2014).  Ultimately, biases are a complex part of how we interpret the world and information around us, and while the process of developing biases is not inherently wrong, we need to be cognizant of their potentially negative impact in our lives.

Feeling overwhelmed?  That is okay, but it is important to realize how unconscious and pervasive bias is throughout our lives.  So it is not a far stretch to recognize that there are biases in Library and Information Science as well.  While it has been a value in libraries to support the community and society over the last century, as they do so they mirror the dominant ways of thinking and behaving.  Acknowledging the slant and privilege inherent in libraries is important, and it is crucial that we accepting this reality and act to change it.  How do we effectively do this?

Let us look at a specific example of bias in LIS.  Bias frequently occurs in cataloging and subject terms.  Researchers have long criticized Library of Congress Classification and Subject Headings as disrespectfully organizing groups, sexualities, and identities that lacked mainstream privilege in society (Drabinski, 2013).  People who do not represent dominant groups find demeaning labels and undercurrents of prejudice within the organization of the library system.  Some common examples include homosexuality being labelled under sexual deviance and most vocational headings being assumed male, with female doctors occurring as a subject term.  Therefore groups of activist librarians have worked to change the system and bring attention to the bias.  However, Drabinski pointed out that this activism, while based on good intentions, in fact perpetuated the myth that libraries and librarians can seek to be neutral and objective if they 'fix' all the problems (2013).  In addition, even corrective behaviors can be seen through a lens of bias.  A good example was the correction of the subject heading "mammies" to "negro women" in 1972 (Drabinski, 2013).  By today's standard the replacement term remains offensive and inappropriate.  So while working to eliminate bias from specific information systems is admirable, it may ultimately miss the mark.  We need to move away from simple fixes toward actual open dialogue and education on how knowledge and information is inherently biased, and is always produced within assumptions and unconscious influences (Drabinski, 2013).

This cataloging is an easily observable example of the pervasiveness of dominant bias in LIS, but there are many more examples.  We struggle with being a predominantly white and female field lacking in diversity, unknowingly perpetuating our own cultural viewpoints through our services and instruction.  So how do we break away from this and move towards starting a dialogue about bias in LIS?  One approach is occurring in Library and Information Science programs through targeted coursework that addresses privilege and equity.  The goal of these courses is to illuminate the experiences of those outside the norm and uncover the institutional barriers based on race, class, gender, and sexuality (Noble et al., 2014).  Through in-depth dialogue, readings, and town hall meetings students and faculty are calling attention to inequities in the LIS field.  Through these efforts future LIS professionals are developing a critical view of libraries, and gaining an education that extends beyond simply task-oriented vocational training (Noble et al., 2014).  This is not to say that these courses are perfect or do not have difficulties.

Discussing issues of privilege, oppression, and equity is not easy for any student.  As you explore the literature on teaching social justice, you may see a pattern of moving away from creating "safe spaces" to spaces where students need to face conflict and be challenged.  Too often safety is equated with comfort, and if the dominant groups demand comfort then no real change can come about (Steyn & Davis, 2012).  There is often an underlying assumption that people from victimized or underprivileged groups are the primary audience and interested party

of education on bias.  The wording of the title of Paulo Freire's preeminent work in social justice education, Pedagogy of the Oppressed is a prime example of this viewpoint (Steyn & Davis, 2012).  However, it should not solely be members of oppressed and underprivileged groups who champion for change and equity.  A more effective dialogue involves the dominant groups, who need education on systematic bias and privilege (Noble et al., 2014).  In essence, Freire's title needs to shift to focus on "pedagogy for the oppressor" to enact change.  This may be alarming and threatening to those with privilege and make some uncomfortable, but that is the point. Later on we will explore strategies for addressing and embracing such an approach in our instruction.

Bias is all around us and impacts all aspects of our lives.  The process of developing biases is not inherently wrong, but we need to be aware of how assumptions are formed and the impact they have.  The field of LIS is no exception, but rather has a history of perpetuating the dominant group's interests.  Work is being done to illuminate these issues in library schools, and in time the future group of professionals will be better equipped to tackle these issues.  But what can we do now? Let's shift our focus and get into today's classrooms.  What are current librarians doing in library instruction?  How does library instruction look today in regards to unpacking bias?

**Peeking into Library Instruction of Today**

In looking for concrete ways that librarians are unpacking bias in their instruction you might notice two main areas emerge: new strategies for evaluating information sources for bias, and librarians changing their teaching in ways to be more inclusive.  Evaluating information for credibility, suitability, and authority is a core value in the field, and we will explore how the expansion of these practices can help bring awareness to bias.  We will also examine the ways librarians are changing their teaching to form a picture of what is working in library instruction today, and what is still lacking.

**Evaluating for Bias**

In instructional sessions teaching evaluation many librarians use acronyms and other mnemonic devices to help students remember how to evaluate the resources they need.  I myself have had professors demand I cover the "CRAAP test" in instructional sessions (Currency, Relevance, Accuracy, Authority, and Purpose).  It is an effective checklist method for students starting to evaluate sources, but what do they actually learn from it?  The only parts of the method that touch on bias overtly are authority and purpose, and even they often do not get explored beyond surface level motivations.  Students may attempt to see the author's credentials, but fail to acknowledge the agenda or slant that the author may have.  The CRAAP test alongside many other methods seeks to simplify a complicated and messy process but little research has been done on their effectiveness (Radom & Gammons, 2014).  Studies have found that students who received instruction using the CRAAP test among other similar methods often report still having difficulty distinguishing scholarly sources and evaluating overall quality of information (Radom & Gammons, 2014; Ostenson, 2014).  Does this mean we have to give up on our quick and dirty checklists?

Let's look more at Radom and Gammons' work as an example. They developed and tested a new method for evaluation based on the "Five Ws" (Radom & Gammons, 2014).  They wanted to tap

into previous student experiences using who, what, when, where, why, and how, a common teaching tool in American education.  This new method, presented as a solution to the checklists of the past, still fails to account for biases in information and even our instruction.  This method does not taking into account students' varying backgrounds, for example those of international students.  This simple assumption demonstrates how librarians can unknowingly perpetuate the dominant culture and societal norms.  Radom and Gammons described the implementation and assessment of their method, and ultimately concluded that it was effective, due to its basis on scaffolding and tapping into students' previous experiences (2014).  This was despite the fact that their assessments showed students struggled to recall the method by name, and identify all the questions used to evaluate a source. Their work is a good example of how librarians can get overly focused on a skills-based approach to instruction, but miss an opportunity to have a dialogue on unpacking the bias that pervades information.

Clearly much research is being done on evaluating sources in field of LIS.  Older methods relying on kitschy mnemonic devices are being found to be ineffective and lacking depth.  The move to online research is rife with possible bias, but challenging one's own assumptions about students' online abilities, identifying context, and unpacking an author's credentials are strategies we should take away from current trends in research.

**Unpacking Bias through Teaching Practices**

The other approach of unpacking bias in library instruction that emerges in the research focused on trends in the actual pedagogy.  Teaching librarians are finding that older methods where you lecture at students and outline searching strategies and databases do not work (Reale, 2012; Sinkinson & Lingold, 2010).  These librarians were experiencing frustration as they observed students who were disengaged and apathetic towards their instruction.  Common themes in these "failed" instructional attempts were a focus on demonstration, coverage of large swaths of material in hour long sessions, and a lack of theory-based practices (Reale, 2012; Sinkinson & Lingold, 2010).  The corresponding solutions these librarians found for this problem followed a pattern: they researched different learning theories and ultimately used research to inform their practice.  Critical pedagogy was a recurring theory of choice for many librarians.  Founded on the principles set forth by Freire, this pedagogy focuses on promoting equality and challenging privilege and dominant bias.  Were these librarians able to tap into the theory to unpack bias in their transition to new instructional practices?

Reale wrote an informal case study of her experiences transforming her teaching to reflect a focus on student voices (2012).  Sinkinson and Lingold shared a similar experience, shifting from a model of demonstration to an inclusive teaching format that relied on student participation and engagement (2010).  In their new teaching practices they promoted more engaged and interactive classrooms, where students work in teams, take charge of their learning, and are tasked with critically analyzing information sources (Sinkinson & Lingold, 2010; Reale, 2012; Ostenson 2014).  These are all excellent movements toward creating inclusive and dynamic learning environments where overt biases would most likely be muffled, but do they go far enough to spread awareness and instigate change?

Both of these case studies were founded on Freire's ideas and concepts of shifting from a 'teacher-knows-all' banking form of education to instruction based on questioning, dialogue, and revising authority. Interestingly, while Reale described how this theory could effectively help to create inclusive classrooms and tackle inequities, she failed to describe any change beyond the basic structure of her teaching and the learning activities involved (2012). While her methods became more dynamic, she did not challenge the core content or learning outcomes. Sinkinson and Lingold also strongly stated their belief that library instruction in information literacy can reach beyond changing classroom practices (2010). They asserted that true information literacy should serve to empower students to question the information around them, support inclusiveness, and mitigate privilege and inequities (Sinkinson & Lingold, 2010). Yet even with these strong foundations in theory, there was little discussion in their research and practice of how they actually improved awareness of bias in information literacy instruction.

These two cases studies represent a pattern of sharing out effective teaching practices in the literature. While many of these new instructional practices approach the subject of bias and equity in LIS, they fail to dig deeper and provide concrete strategies for engaging students with exploring the issues. We may also still run up against the problem that Drabinski described of librarians attempting to "fix" issues of bias while being blind to their own assumptions (2013). How can we use our instruction to help students truly uncover the ways that bias influences information resources? To find out, we need to combine these effective teaching practices with the lessons learned in research on bias and social justice.

**Bringing Awareness to Bias by Pushing Students Further**

As Ross pointed out, bias pervades our everyday life (2014). Unconsciously, we assess, compartmentalize, and base our decisions on inherent beliefs that we have formed. Instruction librarians are breaking through their old assumptions of what effective teaching looks like. Through anchoring their instructional practice in research and educational theory, librarians are beginning to change how they address instruction and evaluation (Reale, 2012; Sinkinson & Lingold, 2010; Ostenson, 2014). These are great areas of change and now we are poised to push ourselves even further. What the librarians have created are classrooms where dialogue and student-ownership of learning are being increasingly celebrated. This is a perfect climate to bring awareness to the biases of the information sources that students will encounter, but efforts must expand from the simple use of checklists and mnemonic devices to a deeper conversation about the impact of bias in information, library systems and ourselves.

As we rise up to the challenge of creating instruction where this dialogue can occur Drabinski's illustration of bias in our cataloging systems can help us form a strategy (2013). Librarians who now see the benefit of instruction that is based on dialogue and participation can use this new format to bring students into the conversation of bias in information. Through facilitating a discussion where we "call out" biases we encounter in information resources, library systems, and even among our own thinking we can help students begin to demystify how seemingly neutral systems can actually promote an agenda and status quo. This means we must also go further than simply shifting our practices to and leaving the content unchanged. We need to continue our push for change in teaching to transform not only the methods and theory behind teaching, but the content and learning outcomes we desire (Drabinski, 2013). A good example of

a learning outcome is expecting students to question why they believe certain sources are more credible than others in order to unpack their own assumptions. By challenging them to unpack their own beliefs as well as the biases that underlie information we invite students into an ongoing conversation and questioning of dominant privilege (Drabinski, 2013).

Our primary goal is bring students to this point of awareness. We can support students in dealing with these truths by having an overt discussion of our reactions. It is a helpful strategy to bring perspective and context in at this point. Identifying the underlying bias in information can be abstract and conceptual, so one useful strategy to help students is to discuss concrete ways bias is used in media. Some common examples to share with students are advertising and political campaign material (Ross, 2014). Helping students connect these more clear examples of information that promote specific agendas is a way to contextualize their reactions to seeing bias around them. When students are made aware of the bias in sources and are willing to wrestle with the discomfort and inequities that this illuminates, they are better equipped to analyze the information around them.

These feelings of discomfort are common in conversations about privilege and bias. Especially students who belong to the dominant group may resist when pressed to see how many biases in information privilege them over others (Steyn & Davis, 2012). To help us handle this situation in our instruction we need to call back on those who have sought to unpack bias both in LIS and in social justice education as a discipline. According to the research, identifying oneself as part of the oppressing group is a powerful learning experience (Steyn & Davis, 2012; Noble et al., 2014). For example, the privilege afforded to whiteness permeates society so deeply that even in social justice education white people have expectations that they will be protected from discomfort. When one is called out as part of an oppressor group, it is natural to counter with resistance. Rather than judging this reaction as good or bad, positive or negative, we need to simply acknowledge it as how students engage with the truths in the bias around them (Steyn & Davis, 2012).

Unpacking biases in LIS can often lead to more questions than answers. Do I want students to leave my instruction questioning the world around them? Absolutely. Once aware of pervasive biases and inequities in information, students can more fully understand the creation of information and authority. Ross provided further expertise on bias that we can incorporate into our teaching. He described how after the first step of becoming aware of bias comes practices to transforming your everyday life. People need to become more self-reflective, and realize that their own biases can be part of a system of oppression (Ross, 2014). We can also acknowledge that uncertainty and awkwardness are okay. Remind students that conflict should never be reason to stop a conversation, rather it can inspire them students to engage with information and more critically understand it.

**Conclusion**

Through opening students' eyes to bias in our instruction, we help them begin to transform. We can do so through embracing and pushing beyond changing our instructional sessions. Not only should you incorporate dynamic, theory-based practices into your instruction, but you should challenge yourself to unpack the content and what learning outcomes drive your

program.  Pushing students to engage in a dialogue about how bias pervades all information may be uncomfortable, but you can act as a facilitator to challenge them.  Through embracing the conflict and understanding that resistance is a form of engagement we can bring together people in active discussion.  We may find that our instruction brings about more questions than answers, but ultimately this shows students are engaged and poised to wake up and see the bias beyond our classrooms.

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# 12

# Designing Asynchronous Content

# Kate Wimer

As Web 2.0 has infiltrated the classroom, and increasingly sophisticated technology has permitted increasingly sophisticated online library systems, the virtual doors of traditional universities have been flung wide to allow entrance to students of all ages, from all backgrounds, and from all over the world. There is a robust conversation attempting to deal with the challenges and opportunities that all of these factors bring, and librarians are often leading the charge with embedded librarianship in Learning Management Systems (LMS), online workshops, and virtual reference assistance available around the clock. However, we often neglect one of the foundational formats for virtual learners — asynchronous self-directed instruction. The following arguments explore the need for better asynchronous design, identify key hurdles, and set forth best practices in designing solid content.

According to National Center for Educational Statistics (NCES) data, one in four students enrolled in Title IV institutions in Fall of 2012 were participating in some sort of distance education, and one in eight were exclusively online learners (NCES, 2014, table 1). Roughly half of those exclusively online learners was working from a state other than the one in which their institution resided (NCES, 2014, table 11), with no traditional classroom exposure or access to the physical library. Alongside the solid presence of distance learners, there is a trend, notably remarked upon by Bohyun Kim in a 2011 ACRLog post, for today's students to avoid mediated information, and therefore to avoid personal interaction with a librarian. As Kim rather neatly put it, "users consider our mediation as a speed bump rather than as value-added service," (2011, ACRLog). Add to this the tendency of adult distance learners (a growing demographic, thanks to the flexibility offered by online education) to be "self-directed" and "task-oriented," and you are looking at a population that is less interested in real-time communication, and more interested in quick, painless access to the information and skills that will allow them to accomplish their larger goals (Ladell-Thomas, 2012; Cercone, 2008).

The so-called "DIY generation," influenced by Google in their pocket and YouTube experts in their kitchens and garages is leaving traditional reference interaction and instruction in the dust as they search for accessible information on their time, and on their terms, a search that can lead to misinformation, frustration, or even failure. Even understanding that academic libraries are traditionally slower (and often rightly so) in adopting new paradigms, it is therefore incomprehensible that we persist in trying to pull these students into reference and instruction formats that, upon review, are simply virtual attempts to recreate passive lecture-style learning. It is not that the traditional formats work better. Research shows that research and instruction within virtual learning environments can be as effective if not more effective than in-person environments, with the potential extra benefit coming from the elements that only asynchronous virtual environments bring, including pacing of content and the ability to refer back to material as needed (Archambault, 2011; McPhee & Soderstrom, 2012).

Asynchronous content further complements the flexibility of distance learning, opening resources to students who might not be able (due to work, familial, or time zone conflicts) to match the schedule of a reference or instructional librarian. How many librarians can tell the same story of highly-rated workshops with low (and falling) attendance? Our content isn't irrelevant, it's simply barred to students who can't or won't make time for synchronous attendance. If falling workshop attendance hasn't told us already, it is time to remove information literacy instruction from the confines of time.

Following this perspective, it also quickly becomes apparent that asynchronous instruction is also beneficial to in-person and on-campus students as well as distance students. So-called "blended format" classes employ an LMS in addition to regular classroom meetings to enhance and extend learning, provide a central location for course materials, and promote reflection on coursework outside of the classroom. While not taking the place of in-person learning, such formats enhance instruction and assist students in tailoring their education to their personal context. The benefits noted by Archambault – ability to review, flexibility of access, and the ability to define pacing – can thus be available to augment in-person learning (2011, 100).

**Barriers to Asynchronous Instruction**

There are several significant arguments against substantial investment in asynchronous content. In many libraries, the prevailing view is that such-and-such method has been tried, and it faded with time. Students are thought to be uninterested in tutorials, or the platforms are considered ineffective in reaching patrons. Asynchronous content is considered soulless, lacking in the social connections that enhance knowledge building through discourse and contextual interaction with content (Delahunty, 2014). Although the first two arguments may be addressed with stronger content design, the last is a significant issue for asynchronous instruction, and perhaps the greatest reason it has been so often overlooked in innovative library instruction.

Thanks to innovations in chat, videoconferencing, and social media platforms, many libraries are rushing into a future of ever more enhanced and available synchronous service. The idea that students can chat a reference desk at three in the morning or attend a virtual face-to-face consultation from around the world is fantastic, but the model we are currently running on may not be sustainable. Shared reference staffing aside, most academic libraries view virtual availability the same way they view their collections. We spend money staffing virtual reference portals in the wee hours, believing that helping the one student desperate to find information at 3am justifies otherwise inefficient time spent waiting for them. This is a noble mentality, but it is not the most responsible allocation of time, money, or effort. How much better would it be to pair intentional synchronous outreach with equally intentional asynchronous available content? Designed well, such content could fill in the gaps when librarians are unavailable (since, contrary to popular belief, we do not, cannot, and should not live in the library) and serve to support and enhance content when it is delivered in real time. Asynchronous instruction may never entirely match the efficacy of real-time social connection, but with innovative design and paired with appropriate real-time communication as available, it is powerful.

**Effective Design Is Everything**

Many libraries are excelling at building and maintaining powerful asynchronous content. For examples, look no further than the initiatives coming from the Association of College and Research Libraries Distance Learning initiatives. These libraries and groups are pioneering platforms, design, and innovative instruction to bring their virtual presence to its full potential.

However, online instruction, although it may feel like a standard for some, it still relatively new. It makes sense then that instructional design created exclusively for online presentation, with the unique hindrances and opportunities of the virtual in mind, is still comparatively nascent. Exponential growth and changes in the virtual environment have made it difficult to establish standards, and have outdated content and design much more rapidly than before. What was impossible yesterday quickly becomes the passé of tomorrow. In the midst of this maelstrom of opportunity and transformation, many librarians have made the mistake of attempting to simply relocate their classroom instruction design to the virtual realm. Although this was most likely a fairly effective bridging technique, such designs that remain in the modern iterations of Web 2.0 serve more as barriers to effective virtual education than anything else. Such designs focus on a "pull" mentality that requires input from the student and which often inhibit organic discovery by users. If the student is not already aware of the instruction, or the instructor is unaware of the virtual student, valuable information lies unencountered.

In addition to changing the way information is presented, some claim that the internet appears to have fundamentally changed the way we learn. According to Nicholas Carr, author of *The Shallows: What the Internet Is Doing to Our Brains*, internet use has immediate and significant effect rewiring our neuro-structures, making us more likely to skim while also making us more susceptible to cognitive overload and impeding long-term memory storage for larger concepts (2010, *Wired*). Regardless of how we as instructors may feel about Carr's assertions, splintering of attention and cognitive overload are realities that are reinforced by social media and other internet lifestyle factors beyond our control. So how to adapt? Rather than presenting an entire workshop's-worth of content in a single location, research suggests that should begin chunking content into discrete items, single concepts, and simple design. Simplifying our content structure allows us to continue to present complex ideas without overloading students in an environment that already encourages "fragmentation of attention" and in which it makes more sense to tune out than to grapple with the content. By considering how our students access and process our content, we move from the ineffective "pull" context into a dynamic "push" design that meets students where they are and brings them alongside the instructor at their own pace.

In 2013, the Library Information Technology Association (LITA) published a fantastic book, *Using LibGuides to Enhance Library Services*, which features Springshare's innovative content management system, but which describes principles of design that apply across any sort of asynchronous presentation. The following are several best practices for virtual design adapted from the guide.

**Structured Content**

When considering asynchronous information literacy instruction, the designer must consider all possible levels of students and their needs outside of time or specific context. Basically, successful asynchronous information literacy instruction must be accessible at any given time to

both the novice learner and the advanced researcher. The design must be navigable to follow logical steps in information literacy development, but those with specific questions also need to be able to drop in at the point of need for discrete answers. To facilitate this, concepts must be discoverable as discrete content items, placed in a larger flow of developmental direction. Consider, if you will, the model employed by W3schools, the web design tutorial site. Each basic coding concept has its own page which can be accessed via a site search or the navigational menu, but each is also linked to the next concept in an overall curriculum design to teach a given coding language as a whole, and there are cross-referencing links within each page to related content. Thus, the site holds a full asynchronous course in HTML, but it can also serve as a resource to advanced coders, and the interlinking allows for more organic discovery of a skill that is not always necessarily linear.

## Chunking

Chunking is almost exactly what it sounds like. Smaller concepts are presented together in chunks using visual cues such as paragraphing, bullet points, or even color and shapes to facilitate cognition. Within discrete units of content, which are, in themselves a form of chunking, this theory can be applied to explanations, steps, and even whole site design to assist with flow, allow for judicious skimming, and assist with recall. Given what we know about the fragmentation of attention in virtual environments, utilizing color, focus, and even page composition to indicate the flow of ideas can help to eliminate unintentional cognitive overload on a page.

## Scaffolding

It is also important to remember that asynchronous content is unmediated content. In a live classroom setting, we are able to get away with thinking about our content in more complex chunks, because we are able to present each smaller concept within the chunk in a linear fashion and can pause, break down, or otherwise modify our presentation in response to indicated confusion from our students. In the unmediated virtual environment, we must design in the presentation of each singular concept in an order that facilitates understanding, and we must ensure that in each case, deeper information is easily accessible on any given concept (whether through point of need Ask Us! Portals or through the option of additional content). Jamie McKenzie's 1999 characteristics of scaffolding are still a wonderful foundation to work from. According to him, scaffolding:

* provides clear directions
* keeps students on task
* offers assessment to clarify expectations
* points students to worthy sources
* reduces uncertainty, surprise, and disappointment
* delivers efficiency
* creates momentum

**Clear directions** There is a growing movement in the library world to gather and implement better information on how students think about what they need and the language that they use to

describe it. For example, a 2010 paper by Maximiek et al described using "feedback from transcripts to improve the libraries' Web site usability and design," as a major takeaway from their analysis of reference chat transcripts. The literature that followed their study has emphasized themes in patron-based terminology. For example, one study found that students generally don't use the term 'periodical,' preferring the terms 'articles' or 'journal', and therefore are unable to navigate to useful resources even when the portal is placed as a focal point in the virtual space due to unfamiliar language. With this tidbit among other philological insight, the library chose to rename links to match patron-native language to better direct unmediated queries (Powers et al., 2011).

**Clarified purpose** Each content item should be clearly aligned with an expressed outcome. A tutorial explaining peer-review should utilize the same terminology and logic as connected tutorials on recognizing categories of literature, perspective and audience, and all should point back to a larger explanation of authority and use of resources on the whole. Design should help the student to understand that each element is useful in choosing sources for their research and should point to contextual application in their studies.

**Staying on task** Although we understand the havoc that tangential information can wreak in mediated instruction, fragmenting focus and potentially diverting the purpose of a presentation into a completely different direction, we often seem to struggle with its inclusion in virtual environments. In an effort to provide as much help as possible, and sometimes in pursuit of ensuring that there is clarification available for each step in learning, we include information that is not strictly necessary to inform or engage. Information specifically in the "flow" of content should only include that which is necessary to grasp each successive concept. Extra clarification should be included as linked or expandable content that only appears on demand, and tips and other nifty tidbits should be excised or moved to quiet space outside the main flow of information. The idea is not to remove the possibility of following tangential information, but rather to ensure clarity and efficiency of each content item. The Piano Guys' YouTube channel serves as a useful model for this concept. The filming of their video, "Let It Go (Disney's "Frozen") Vivaldi's Winter" was a fascinating and innovative process, but rather than interrupt the video itself with information about how they accomplished a shot or how they froze a piano, they include a pair of embedded video links at the end of the piece directing the viewer to a "Making Of" video and another related piece of music (ThePianoGuys, 2014).

**Clearly communicated outcomes** Similar to the principle of clarity of purpose, content should have a clear goal, stated at the outset. This might simply be a descriptive title or description for a research guide, or it might be a statement of learning outcomes in a video or tutorial.

**Pointing to "worthy sources"** By making a distinction of worthy sources, we are choosing to limit the amount of external direction we present. Again, keeping in mind that asynchronous content is unmediated, and considering the limits of any given student's cognitive load, design should strive for simplicity and conceptual understanding over provision of options. One of the struggles of designing unmediated content is that it can be difficult to account for variations in question or interdisciplinary facets of research. In order to alleviate this issue, we sometimes try to indicate a selection of "also useful" resources that are tangentially related, but that are not actually authoritative to the subject at hand. The "worthy sources" characteristic suggests that it

may be better to simply indicate this issue openly, and to teach the student to identify sources that will meet the specific needs of their question variant rather than to include such tangential information alongside the specifically authoritative. This characteristic also stresses a sense of quality throughout the design of our content. By only providing the best information, we not only establish credibility as a resource, we also model authority best practices to our learners.

**Reducing uncertainty, surprise, disappointment** Along the lines of credibility and excellence, we must commit to maintenance of our content. The virtual environment itself needs to function correctly. Links need to be checked, display and loading functions should be ensured, and servers must be maintained for optimum performance. In addition to this, content should be reviewed, updated, and pruned regularly, to ensure that it remains relevant and helpful, and searchability within content must be optimized.  If our content fails to function, fails to instruct, or is irrelevant or out of date, we introduce uncertainty into the system. So much of what makes scaffolding work is the consistency within the system such that a patron who understands how to access content in one topic or location can do so again in another. Encountering malfunction or lack of reliability is detrimental to this confidence-building function.

**Delivering efficiency** Although it is an obvious thing, many of us can lose sight of the purpose of our content if we become too enamored of our design, the information we are sharing, or in any other way lose sight of the patron themselves. At the end of the day, instructional content should be exactly that – instructional. It should save the time of the student. There is a fine line to be walked between comprehensive instruction and efficiency, but if we do not commit to it, not only will we frustrate our patrons, we will lose them. Consider carefully each cognitive requirement you add to your content? Does it assist the patron in grasping the concept, and ultimately in performing effective research and analysis? If you cannot answer in wholehearted affirmation, it is time to return to the design board.

**Creating momentum** More than anything, the goal of information literacy is to create self-sufficient learners. It is only when our students are independent among the resources that they can truly explore their potential as knowledge creators, and effective asynchronous design should push toward this goal. It cannot be ambivalent, and it absolutely should not bog down. The goal must be to give as much information as is needed in such a way that the learner can visit, get what they need, and return to searching without expending too much effort in parsing out what they need. Rather, it should focus on bringing the learner alongside the expert and then encourage them even further to pursue their own learning. This is not a goal that can be accomplished by untended or passive content. We must strive to keep our videos, guides, and websites fluid and alive, responsive to shifts in knowledge and to the needs of our patrons.

**Basic Design Practices**

It is an unfortunate truth that humans do judge a book by its cover, and thanks to the ways we tend to interact with the internet, this old adage is even more powerful online. Even the best designed content will be ineffective if we fail to consider how the patron will perceive and receive it. A few major concepts to consider include color, contrast, and overall composition of your virtual space. If you are building a website or content guide, are you using focal points to draw a scanning patron through the content to highlight key concepts? If you are creating a series

of videos, do their color schemes, frame compositions, and general scripts align to "lower the learning curve"? Is there enough "rest space" in your virtual environment, or space that is free of content to balance your focal points? Does your use of too much (or not enough) color fragment attention away from your content? These are all considerations that will enhance asynchronous content and assist the user across an online curriculum.

**Conclusion: Content and Intentionality**

The persistent theme that underpins all of the design best practices is intentionality. We must carefully consider, design, and cultivate our asynchronous content the same way we do our synchronous instruction. We must remember our audiences and their needs, from the adult learner who has no other portal to the library to the young undergraduate whose education we are reinforcing. We must recognize that even for some students on campus, the virtual library is the only library they will use or recognize as valuable, and we must remember that we cannot be available around the clock to assist with every possible question or to explain the details of overly complex content. While there is a place for jargon, for encouraging critical thought, and for raising awareness of multiple portals, modes, and details, we must give the virtual space the same care in design which we give to the physical space. Given the lack of mediation, we must doubly ensure that our virtual library is at least as navigable as the physical one. When building asynchronous content, we should utilize structure, chunking, and scaffolding to ensure that it is accessible, useful, and continually encouraging our students into greater confidence in research just as our synchronous interactions. Although it may never replace the efficacy of a personal interaction with a librarian, when paired with targeted synchronous interaction, excellent asynchronous content can reinforce instruction, give a student a path to follow or a place to start, and model cognition and logic for those who might otherwise miss the lesson. It is time libraries recognized what a powerful tool they hold in their virtual spaces. It is time we refocused on our asynchronous content.

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**13**

# Digital is Just Another Format: How Children's Librarians Can Apply Traditional Strategies to New Media

# Cortnye Rusch

Librarians have always served their communities by providing access to resources, instruction for obtaining and using information, and guidance in selecting the most appropriate source for each user's needs. In the new media age, librarians need to be aware of the continuing evolution of technology, its benefits and drawbacks, and understand how they can incorporate digital media into programming. Children's librarians should consider the most effective usage of technology in children's programs, and understand the need to educate both children and their caregivers in the usage of digital media. Librarians can apply different lenses of perceiving children's multimedia literacy to understand how to evaluate the value of technology in children's programs, and continue to support children's exploration and use of new media alongside traditional formats. These perspectives include dialogic reading and radical change theory, in relation to participatory culture. Methods for assessing the merit of various digital media aimed at children, as well as examples of children's library programs incorporating technology are discussed.

**Overview of Perceptions of New Media and Children**
As with any resource, children need caregivers and other adults to assist them as they learn to navigate various media, such as traditional books, or new technologies, and utilize them to build literacy proficiency. In 2012, the National Association for the Education of Young Children (NAEYC) and the Fred Rogers Center for Early Learning created a document prescribing the amount of time children ages birth to eight-years-old should spend interacting with digital screens (National Association for the Education of Young Children, 2012). The document described NAEYC's belief that children under the age of two should have no contact with digital media, and further stated that the guidance of an adult was necessary to providing older children the opportunity to learn from the usage of digital technologies (pg. 2). Children's librarians realize that the instruction they provide through programs such as story time, and assisting caregivers with finding appropriate materials for their children, helps to promote active learning and the formation of a bond between the child and caregiver. The authors of the document recognized the prevalence of technology in all facets of user's lives, and suggested that digital resources should be utilized as long as children received time to interact, converse, and play with one another and adults without the mediation of new media (pg. 5). NAEYC's document also included factors for assessing the development of the child in relation to digital media use (pg. 6), suggesting that children progress from early stages of exploring the technology and its uses, to becoming a competent user of the resource, realizing ways the media could assist them in their lives. With the understanding that children can demonstrate mastery of digital media, and use these technologies in ways that will benefit their learning and literacy experiences, children's librarians should consider various new skill sets that have arisen from the emergence of new media, to assist children and caregivers in reaching their learning and leisurely goals.

**Skills Sets of Children in the Digital Age**
Many skill sets that are necessary for children to develop (such as understanding the parts of a book, recognizing genres, and creating meaning and understanding through dialogue with other children and adults) can apply to digital media usage. Della Penna and Lucey (2012) noted six essential literacy skills for young children to grasp as they begin to interact with resources: phonological awareness, narrative abilities, recognition and understanding of letters, vocabulary, understanding of the mechanics of print, and the ability to understand the reading of books can be a pleasurable experience (Table 1). With the influx of new and complex digital devices and media, children's librarians may find that keeping their own technology skills proficient to be a challenge. However, children's librarians should not forget the six literacy skills listed above, and should encourage children to build and apply these skills to digital media. However, Prendergast (Children and technology, 2015, pg. 27) argued that librarians and educators spend too much time developing print-based literacy skills in children, in lieu of providing instruction on multimedia literacies and proficiencies. Therefore, children's librarians should be aware of digital media and technology skills sets as well, to provide children and their caregivers the best scaffolding for learning across all forms of information.

Develop Fine Motor Skills and Expertise of Digital Media Use: Children develop fine motor skills such as holding books, turning individual pages, and selecting materials from book bins. Further, as their interaction with print material continues, children learn the properties of a book, understanding aspects such as chapters and indexes to assist in their navigation of the resource. Multiple authors have recognized that aspects of technology, especially computer mice and touch screens, require that children develop fine motor skills to utilize digital resources (Walton-Hadlock, 2008; Prendergast, Children and technology, 2015; Hicks, 2015). Librarians can support the various motor skill capacities of their users by providing traditional resources, tablets, touch screen computers, and computers with mice. Dresang (2008) also noted that alongside the various digital devices, children must also learn to navigate the unique features of various websites, applications, and textual materials, including comprehending hypertext links (par. 5). Mills (2011) referred to the unique aspects of digital resources (menus, icons, etc.) as sign symbols, and stated that children need to develop awareness of the functions of these features to be able to utilize them efficiently (pg. 62). As children's librarians, we must help children understand the similarities and differences that exist between traditional formats and digital technologies, enabling them to become technology proficient (Campbell and Koester, 2015, pg. 8); these skills of evaluating novel tools and manipulating them to the advantage of the child will continue throughout their lives. Some educational facilities and libraries have already considered how technology expertise can be incorporated in a children's setting with the creation of augmented reality (AR) resources that enable children to utilize their swiping, searching, and comprehension skills to find materials in the library without the guidance of a librarian (Meredith, 2015, pg. 73).

Analyze the Textual Qualities of Resources: In addition to understanding the differences between print and digital resources, children's librarians can also help their community to draw connections between the similarities of the various media. Children can recognize story conventions such as beginning, middle, and end, while also understanding the various characters within the resource. Additionally, children are required to mediate their own understanding of the material they are reading. Jenkins (2009, pg. 49) stated that children come to understand their

own identities in relation to the materials they engage with, through reenacting stories, and recreating them through various means. In order to be able to develop a sense of self in relation to a text, Jenkins argued children must engage in, "a close analysis of the originating text, genre conventions, social roles, and linguistic codes. She must go deep inside the story to find her own place within the words" (pg. 51). By demonstrating to young users the various ways a story such as Little Red Riding Hood can change depending on the author, illustrator, and selected medium, librarians can help children recognize that different forms of interpretation of a text occur naturally, and allow them to create a relationship between themselves and the resource that is meaningful and unique.

Play, Teamwork, and Problem-solving: Regardless of the setting, children engage in play and playful communication with one another, growing their abilities to imagine, while also developing communication skills that will be necessary throughout their lives. With the capability to connect with people from around the world through the internet, children must learn how to develop skills of communication, and methods of interaction on a broader scale. Librarians can understand the importance of teamwork, making individual and group decisions, create meaningful interactions and sharing of information, and solve problems (Dresang, 2008; Walton-Hadlock, pg. 52). By demonstrating to caregivers and children the appropriate media to engage in different forms of conversation, children can become competent conversationalists, both online and in person.

Understand Qualities of Digital Communities, Biases, Privacy, and Safety: As children learn to communicate effectively with others in a digital setting, librarians and caregivers alike must assist children in understanding social and cultural differences, while ensuring that children recognize the rights and responsibilities of utilizing digital devices and resources. Jenkins described how the internet and technology can be used as tools to assist children in gaining information from online communities, and supplement their findings with the learning they have completed in classrooms and through face-to-face and textual interactions (pg. 77). Schmit (2013) discussed the need for librarians to show through the incorporation and digital and physical resources, the various voices and interpretations of information authors (pg. 37). Children should realize that each voice they encounter fits within the content of the author's various worldviews, experiences, and ideas, and that each resource may contain biases due to these perceptions. In addition to sorting out factual and relevant information (Jenkins, pg. 96), librarians should also provide information to caregivers about how to ensure that the information children have access to does not compromise their right to privacy, or otherwise endanger their safety and wellbeing.

Create and Share Information: Besides the ability to access a myriad of voices and ideas from digital resources, children also have the opportunity to create their own works, and make them public to the communities in which they engage. Paganelli (2016) noted that children can become authors in the traditional sense of making their own physical books, or, with instruction, learn digital strategies such as coding, to make their own websites and interactive media (pg. 12-14). As children become aware of the various methods of producing and disseminating information, Mills argued (pg. 57), they recognize the merits and unique characteristics of each resource. They can apply the skill of creating their own meaning and understanding of another author's creation, and use these resources to build their own materials. Haines and Kluver (2015,

pg. 73), and Hicks (pg. 44) recognized the importance of providing children the opportunity to engage with various media formats, and to encourage children to embrace their individual understandings. Librarians can help to foster children's creativity and promote children-made works in the library setting, encouraging other users to share their own ideas with others.

**Drawbacks of Technology**
Alongside recognizing the needs of library users to utilize digital media effectively, librarians must understand the complications and negative factors of technology. One such challenge, known as the participation gap (Jenkins, pg. xi) focuses on the various abilities of children and all people to have the same quality and ability to access digital resources. This includes the ability to receive instruction on how to effectively utilize these materials, and increasing knowledge of credible resources. Walton-Hadlock (pg. 55) suggested that librarians can combat this gap of accessibility by providing digital links to story times for children unable to visit the library on their own. However, Borgstrom (2011, pg. 197) recognized that people may not have equitable access to internet, and that the price of obtaining both quality internet speeds and the materials to access online resources may not allow children and caregivers to participate with the library digitally. Jenkins (pg. xi) also noted that children and adults may not be aware of the biases and perspectives of the authors of information accessed through digital media. Della Penna and Lucey (par. 9) identified the need for librarians and educators to provide all users with equal access to digital devices, alongside giving informational sessions and programs about their usage and understanding of information bias. Children come from a variety of backgrounds, and have different experiences and interactions with media of all types, alongside different learning capabilities— all of which a librarian needs to take into account when providing resources and instruction (Prendergast, The role of new media, 2015, pg. 52). Additionally, caregivers and children alike may view digital devices solely as platforms for gaming and leisurely activities. Borgstrom (pg. 194) argued that creators of digital apps should consider the relevance of the material they provide to children, and its potential to distract users from learning. Librarians too should recognize whether a digital application or device provides educational value to young users, and demonstrate to caregivers how to assess the merit of technological resources. Haines and Kluver (pg. 63-64) provided an overview of potentially distracting or unnecessary elements of digital apps, including pop-ups and links to other websites where children may be encouraged to purchase items, alongside advertisements, the quality of the device and/or resource, and whether or not the app protects the user's privacy.

**Media Mentorship**
The drawbacks and skill sets described above necessitate that the librarian take on the role of media mentor. Inherent in the requirements of being a librarian is the ability to provide users with quality materials, instruction, and the capability to navigate resources effectively. These skills librarians have already fostered can be applied when assessing and discussing digital media and technology resources with children and caregivers. Campbell and Koester called for children's librarians to recognize, "we have the opportunity to break the paradigm of children interacting by themselves with a mobile device" (pg. 10) and encouraged librarians to help families interact with one another as they engage in the use of new media. Three approaches to media mentorship can be utilized in the library setting: librarian as mentor, student as mentor, and technology and mentor.

The library serves the entire community, engaging all users, and providing them with the opportunity to interact with one another as they also utilize the resources within the library (Dahlen and Naidoo, 2014, pg. 36). Essential to ensuring that library users have the competencies to utilize digital resources, children's librarians must meet and inform parents and caregivers about the opportunities and problems with using new media. Walton-Hadlock suggested that librarians should seek to meet caregivers on a variety of levels: modelling good practices during library sessions, inviting children and adults to learn about how to use technology, and providing workshops for finding and using digital media and resources (pg. 52-54). Equally important, librarians should engage children and their caregivers in utilizing traditional and digital resources. Dresang (par. 25) discussed that children need to be able to draw connections across a variety of media to make their understandings of the content relevant. Martens and Stoltz (2014) recognized that children and adults are oftentimes uncertain of what resource of type of media would be relevant to fulfilling their information needs, requiring that librarians provide readers' advisory and other services to familiarize these users with relevant information. Importantly, librarians help children and adults connect with one another, facilitating the use of media by both groups, while encouraging interactions and dialogue to create enjoyable experiences for both users (Campbell, Koester, Mills, and Romeijn-Stout, 2015, pg. 27; Campbell, Haines, Koester, and Stoltz, 2015, pg. 2-8; Hendricks, 2015, pg. 36-37). In a story time setting, librarians can also demonstrate to young users different print conventions, guiding them to recognize different components of stories in digital and traditional formats, and answering questions to increase understanding (Kuhn and Labbo, 2000, pg. 192). While librarians are seen by children and adults alike as authority figures, Campbell and Koester (pg. 15-21) suggested that children's librarians provide families with resources and ideas for utilizing various media, but allow the child and caregiver to create their own framework to incorporate this information into their daily lives in a meaningful way.

Children look to one another, and older children for advice, and also recognize that they can be role models. Realizing that young students at an elementary school and middle school children could benefit from working with one another to improve literacy skills, Preddy (2016) created a program where both groups could read with one another through the usage of technology. The author noted that young children anticipated reading with their older partner, while the middle school students enjoyed creating their own stories, taking on the role of author, and sharing their creations with the younger students (pg. 5). Preddy further discussed that younger children need reading role models, realizing that engaging with various texts and media can be a form of enjoyment or learning experiences (pg. 5). With the development of augmented reality (AR) devices, the role of both librarian, parent, and peer can be mediated with technology as a mentor. Children in a library with AR resources could utilize the technology as a mentor; AR may provide guidance in helping children form research questions, navigate databases, and help young users to find the resources in the library (Meredith, pg. 75).

**Methods of Viewing New Media Literacy and Examples**
Librarians may already be familiar with lenses of interpreting and encouraging digital media proficiency in youth (e.g. dialogic reading strategies, understanding the radical changes of children's picture books). The following sections are intended to give further insight into these understandings of new media's place in the children's library, and provide ideas and examples of

library programs already in use to encourage children's engagement, enjoyment, and understanding of technological resources.

Dialogic Reading: Originally intended for the use of bringing children and caregivers together to share in the experience of reading and interpreting a physical book, dialogic reading can also be applied to various digital media. Miller (2016, lecture) described the qualities of dialogic reading; adults read with a child instead of simply reading the book aloud without questions or discussion; the experience is meant to create a dialogue between the caregiver and child, with the adult allowing the child to lead the experience of the resource; the adult encourages interaction by asking children questions that help children to describe what they see, how the story makes them feel, what might happen later in the story, and make connections to the child's own experiences, and; adults give children positive acknowledgment for their contributions, expand on the child's ideas, and demonstrate enjoyment of reading the resource. Quenqua (2014, par. 12) further noted that dialogic reading is a back and forth process, where the child and adult take turns listening to and discussing the story with one another. The author discussed that e-books can be utilized to foster dialogic interaction; however, digital formats can incorporate entertainment qualities that detract from the relationship between child and caregiver (par. 15).

Moody (2010) provided information about a study conducted to evaluate children's involvement levels when interacting with e-books on their own, and interacting with adults (pg. 295). Children were grouped into three categories, one group reading physical books with adults, another using e-books without adult interaction, and the third using e-books with adults (pg. 297). The author discussed methods of evaluating child engagement with the reading exercises, noting that persistence included children talking with adults about what they saw, and providing discussion of their thoughts (pg. 302), all aspects of dialogic reading. The study results suggested that children showed greater persistence when paired with an adult as they read an e-book (pg. 306), though children interacting with the physical book labelled the illustrations to a greater extent, which may indicate greater conversation between the adult and child as they interacted with the book in this way (pg. 306). When children navigate e-book resources in the company of an adult, and with dialogic techniques of engagement involved in the reading process, digital resources may prove beneficial to enhancing the child's learning and social experiences.

In another study, children were separated into two groups: one section read traditional books, while the other group engaged with Fisher-Price digital consoles (Collins, Golinkoof, Hirsh-Pasek, Mahajan, and Parish-Morris, 2013, pg. 202-203). Both groups included an adult and child reading together, and the study assessed how the pairs interacted with one another. The results of the study suggested that children and adults were more likely to spend time engaging in dialogue with one another utilizing a physical storybook (pg. 205). The authors provided the conception that e-book interactions may prove distracting to dialogic reading efforts, as adults may spend a greater amount of time instructing the proper usage of the device, and commenting on the child's behavior than on interacting with the story and child themselves (pg. 207). This study demonstrates that children's librarians should provide assistance in choosing appropriate digital storybooks and materials that will encourage dialogic interactions, and model dialogic strategies to library users.

Dialogic Reading Activities in the Library: Effective media mentoring can lead caregivers and children to engage in dialogic reading, and to experience digital and physical formats together in an enjoyable process. Martens (2014, pg. 37) reviewed various children's library programs, including Angela Reynold's Milk and Cookies story session. In this activity, children and adults visit the library for story time, engaging with iPads and traditional books. Reynold's incorporates apps such as those that make animal noises, to engage her listeners, while also demonstrating to caregivers how to effectively mediate between physical and digital platforms to promote interaction and dialogue between the adult and child.

On the Association for Library Service to Children's (ALSC) wiki site, a collection of technology programs can be found. One example, entitled Read with the Browns (Molnar, 2008) enabled children to listen to football players from the Cleveland Browns narrate stories via telephone or online streaming. This program helps to encourage children to enjoy reading by experiencing well-recognized role models engaging joyfully in the experience of reading. This program could be made into a dialogic reading session if the child watched the reading with an adult, pausing the reading whenever the child had a question or idea to discuss with the adult.

Dahlen and Naidoo discuss incorporating technology into cultural programming in the library. Recognizing the Día programming utilized by many libraries, the authors suggested that the librarian read stories to children that highlight different cultures and experiences (pg. 87). As the librarian reads, he or she could incorporate dialogic reading strategies, calling the children's attention to aspects such as dances and songs. The children are then encouraged to engage with digital apps and resources to research songs, and to create and share their own music.

Radical Change Theory: Dresang began discussing radical change theory as the early influences of technology changed the ways in which children's picture books were written and illustrated. Dresang and Koh (2009) revisited the theory, examining how both traditional and digital stories possess certain traits unique to the introduction of digital media (pg. 27). The authors noted that current resources need to include aspects of traditional literacy skills, while also providing children with the chance to engage with and utilize the features of digital and technological media (pg. 29). Dresang and Koh recognized that children's literature now incorporates dynamic and vibrant graphical methods of conveying information, in relation to the ways online resources catch the attention and provide ideas to users (pg. 35). Pantaleo (2004, pg. 178) suggested that some of these incidents of digital influence on children's literature include narratives that do not follow a traditional beginning, middle, end convention; these media also incorporate various viewpoints instead of a story being narrated by a singular voice, and; the print and image layout of each page may reflect innovative approaches that may mirror those used on websites. The author stated that children need to be able to engage with a text critically, incorporating their own judgement and understanding of the material in order to decide how to follow the diversity of narratives and make predictions and understandings about the story (pg. 179-186).

Instances of digital technology's influence on traditional storybook conventions can be found in multiple forms. Dresang noted that authors and illustrators often reflect the ideas and environments of the times in which they create their stories, and will incorporate novel new media devices such as hypertext into their works (par. 7). Interaction between people, ideas, and different resources are characteristics of radical change literature, the author suggested (par. 11).

Recognizing that the internet allows children to permeate previous boundaries, such as geographical location and language differences, Pantaleo noted (pg. 179) that current literature incorporates unique formats, increased varieties of perspectives and ideas, and mutable boundaries between the book, technology, and reader. Dresang and Koh recognized that one such boundary-shifting digital incorporation into the storybook format could be found in hypertexts; the authors noted that links to various websites could allow children to follow a story across multiple locations, engaging with different cultures and ideas, while giving children the authority to make decisions about the information they wanted to find to further their reading experience (pg. 37-40). Children must now be aware of the textual qualities of printed materials, while also possessing the skills to jump between physical and digital resources to create an understanding of radical change resources and stories. Dresang suggested that it is the role of librarians and educators to act as media mentors, demonstrating how children can utilize both types of formats in conjunction with one another, supporting traditional literacy skills and values while also acknowledging children's competencies to navigate and utilize digital media (par. 19-20)

Radical Change Theory Activities in the Library: Jenkins described an activity developed by the Massachusetts Institute of Technology (MIT) where students chose to look at a fairy tale, and recreate it utilizing a variety of media sources (pg. 90). The students used technology such as instant messaging, Powerpoint, and video recordings and programs, to retell the fairy tale. To supplement their creations, the students researched how the fairy tales had changed over time and across cultures in traditional formats. The goal of the program was to enable students to understand how to convey the essential meaning and ideas of the fairy tale to an audience, acknowledging the capacities and drawbacks of each digital and technological resource to portray the story. Children in a school setting could collaborate with the librarian to learn about researching fairy tales, find different retellings of the stories, and check out media devices and learn about their usage to create their own interpretations.

Sarah Kepple and Dave Bullock's (2008) discussion on the ALSC wiki described her Animated Authors program. Children learn how to turn their own ideas into a video to be shared with others. Students would engage with various formats of alternative storytelling such as graphic novels and comic books, as they learned how to create the panels and layout their stories in a storyboard format. Throughout the program, children translated their written and drawn stories into a live-action video, watching other video creations to understand how they could incorporate elements such as music and camera angle into their narrative to create a particular perspective for their story.

Mills (2011) described an activity in which children listened to Roald Dahl's The BFG being read, then created their own interpretations of the text. Children began by drawing out a scene from a chapter of the story, "dr[awing] on [their] own experiences, and the material texts of [their] own life-world[s], to generate a visual text that interacts with Dahl's text" (pg. 59). Overtime, children learned how to create various other media interpretations of the text, including storyboarding, scriptwriting, filming, and editing to create an end product of a video clip of the student's interpretation of Dahl's text (pg. 60). Such activities as this and Kepple and Bullock's program, can encourage children to mediate between digital and traditional formats, while including their own perspectives, following their own interests, and utilizing skills that

they are already familiar with alongside those they learn through the programs, to create new media that they can share with others.

**Conclusion**

Despite the trivial nature of the consistent production of new devices and digital resources and platforms, librarians can apply traditional learning methods and strategies to new media to make these resources accessible and meaningful to children and their caregivers. Keeping in mind the skill sets children need to develop in both traditional and digital settings, librarians can find resources that help children to explore all types of media. Librarians act as mentors and models to both students and adults in their usage and incorporation of physical and digital resources in library settings, and can create unique programming to instruct usage of these resources while promoting creativity and children authorship using a variety of tools. When children interact with one another and other people online and in person, they can demonstrate their own understandings and ideas about text, and observe and realize a love of reading.

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# 14

# Tale Blazers: Digital Storytelling in Library Instruction

# Joe Richard

## The Evolving Landscape of Instruction in the Era of Web2.0

As the educational needs of leaners continues to rapidly evolve, instructors must be on the forefront of integrating creative and innovate technologies into the learning environment. The Web2.0 era in which library instruction firmly resides presents educators with a wide array of previously unimaginable technological opportunities. The creation of social media platforms such as Facebook, Twitter, and YouTube have drastically altered the digital landscape and the ways in which people interact with the internet; ultimately, shifting the focus away from content consumption and towards content production. In 2005, YouTube was launched as a video-sharing website. Promoted as a means of allowing users to upload, share, view, and comment on videos, YouTube quickly became one of the hallmarks of the Web2.0 era. The increasing availability of user-generated content on YouTube, combined with the rise of open education resources, has gifted instructors with a unique opportunity to access a wide array of videos and embed them directly into the course. The focus of this paper is to highlight learning theories that support visual/auditory methods of learning, review three cases studies, and discuss best practices for embedding online video content.

## Literature Review: Learning Theories

## Are YouTube Videos Appropriate for Instruction?

Before exploring this question in further detail, take a minute to think of a movie or television program that you previously watched. Hopefully, your memory is currently being flooded with emotions tied to that specific memory. When I was ten years old, I went to see "Honey I Shrunk the Kids" with my parents. Although I have not viewed this movie since (or much less thought about it), I still remember the emotions (e.g. sadness) that I felt when one of the main characters was killed. Furthermore, I can still recall the sense of excitement that I felt on the car ride to the movie theater. According to Berk (2009), this is because "emotions are often triggered or heightened by the mood created by specific visual scenes, the actors, and/or the background music" (p. 2). Therefore, introducing a video clip during class will serve to cement knowledge retention by creating emotional bridges between memory and information. The increasing availability of multimedia content on YouTube will enable instructors to effortlessly embed videos into instruction—strengthening knowledge creation and retention within learners. As explained by Berk (2009), online video content can "grab students' attention, focus student concentration, energize or relax students for learning exercise, draw on students' imagination, stimulate the flow of ideas, and create memorable visual images" (p. 2).

## Core Intelligences and Multimedia Learning Theory

Research into the role that visual learning has in the classroom has been explored by theorists for the better part of three decades. Within the last ten years, YouTube has changed the way visual learning is being embedded into classroom instruction. In this section, I will create contentions between online video content and learning theories.

**Core Intelligences**. In 1983, noted psychologist Howard Gardner published his groundbreaking work on the theory of multiple intelligences. In his book "Frames of the Mind: Theories of Multiple Intelligences", Gardner outlined 8.5 intelligences, three of which are directly applicable to the role that online video content has inside the classroom: (1) verbal/linguistic, (2) visual/spatial, and (3) musical/rhythmic. Online video content can stimulate all three core intelligences to strengthen the learning experience. For example, an online video of the play "Fences" (an important portrayal of African American life and race relations in the 20th century) by playwright August Wilson can engage all three intelligences by allowing learners to hear the words being spoken, see the body language of the actors speaking the dialogue, and hearing the rhythmic expression of the score that accompanies the play. By combining online video content (e.g. a video of "Fences" on YouTube) and required readings (e.g. the 1983 novel "Fences") instructors can encourage learning in both hemispheres of the brain. As noted in Berk (2009), "a video clip engages both hemispheres. The left side processes the dialogue, plot, rhythm, and lyrics; the ride side processes the visual images, relationships, sound effects, melodies, and harmonic relationships" (p. 3). Furthermore, online visual content has positive benefits for the brain wave frequencies of learners. As opposed to Delta and Theta brain waves, Beta and Alpha brain waves are active in the formation of knowledge. A short YouTube video will serve to awaken Alpha waves (located in the right hemisphere) by relaxing learners and enabling them to transition information from short-term to long-term memory. The Beta Wave, located in left hemisphere, can be thought of as the multitasking wave. For instance, showing a video in the middle of class can serve to snap learners to attention, reorient them to the learning environment, and improve concentration.

**Multimedia Learning Theory**. Advancing on the work of prior learning theories and theorists, Multimedia Learning Theory examines the intersection between auditory/verbal and visual/pictorial modalities of learning. In Berk (2009), the author cites Mayer's seminal work on the cognitive theory of learning; "… learning is activated through five steps: "(a) selecting relevant words for processing in verbal working memory, (b) selecting relevant images for processing in visual working memory, (c) organizing selected words into a verbal mental model, (d) organizing selected images into a visual mental model, and (e) integrating verbal and visual representations as well as prior knowledge" (p. 4). Therefore, online video content that incorporates elements of narration and storytelling are effective for creating knowledge bridges between learned experiences and new knowledge. For instance, an instructor teaching a class on wildlife preservation might find that learning outcomes are more readily attainable by incorporating clips from Discovery Channel's "Plant Earth" documentary (i.e. because of the blend of narration and visual/pictorial modalities) than simply lecturing from the textbook.

**Multimedia Content as Anchors and Enders**

Online video sharing affords instructors with the freedom to create Macrocontext (i.e. a learning spaces that can be replayed over an extended period of time and creates a richer discussion

between learners) and provide students with continuous knowledge reinforcement. In "YouTube Anchors and Enders: The Use of Shared Online Video Content as a Macrocontext for Learning", Bonk (2008) introduces readers to the learning theory of Dual Coding. As a learning resource, YouTube enables educators to present content through visual, auditory, and textual mediums of verbal and non-verbal communication (e.g. Dual Coding). Linking YouTube videos with required course readings and lectures creates an immense learning environment in which learners can retain and recall information through verbal and episodic memory channels. According to Bonk (2008), knowledge become less inert when it is presented in the context of a story. Therefore instructors should incorporate YouTube videos that integrate elements of humor, drama, adventure, action, realism, and sadness, and reflect the world in which learners currently reside.

While it is important to utilize multimedia content that is engaging, in order to create knowledge bridges, instructors must set the stage and know when and where to incorporate videos within the instruction. As noted in Bonk (2008), "when effectively embedded in instruction, shared online videos serve as an advance organizer and learning anchor while provoking students interest in a topic" (p. 5). The concepts of Anchors and Enders are not new to seasoned instructors, but can be reimagined within the context of online video sharing. Situated prior to or during instruction, Anchors prime learners and serve to connect new concepts with previous knowledge. For instance, a short YouTube video explaining the fundamental tenants of Creationism would build a scaffold between knowledge and new information while allowing instructors to save valuable instruction time. Similar to Anchors, Enders are located at the end of instruction and function as a point of reflection and discussion between-group and within-group.

**Learning through Multimedia: 3 Case Studies**

In the previous section, I touched upon the ways in which learning theories support the case for embedding online video content into classroom instruction. In this section, I have presented three case studies that detail the challenges and benefits of embedding online video content into classroom instruction. The studies presented are a mixture of two personal/reflective experiences from the perspective of educators and one research studies carried out by professionals outside of the course.

**Case Study 1**

In "YouTube: Educational Potentials and Pitfalls", Cuthrell and Jones (2011) explores YouTube as an instructional aid in teaching and planning. While the authors focused on multimedia content and how it relates to instruction in Social Studies, the principles disseminated in their article can be applied to a wide array of disciplines. The following section will be split into two subsections: (1) Using YouTube for instruction and (2) Multimedia selection.

Using YouTube for instruction. Although YouTube has become an immense resource for learners, the value that YouTube has as a resource for instructors is often overlooked. Viewed within the context of the teacher-as-a-learner framework, YouTube is an increasingly invaluable resource for instructors that experience difficulty in creating instruction materials from simply attending professional development seminars and reading lesson plan guides. As noted in

Curthrell and Jones (2011), "In such cases, the video can serve as a model for classroom activities or discussion" (p. 79). For instance, YouTube videos that were aimed at teaching one demographic (e.g. a high school history class) can be altered and adapted to fit the specific needs of most instruction sessions. Furthermore, YouTube has value as an open education resource—enabling instructors to locate lesson plans and share effective lesson plans with other users. Lastly, using YouTube's "comment" feature, instructors can connect with professions in the field and receive feedback on lesson plans. The benefits of YouTube for instructors are boundless and is applicable to a range of topics in classroom instruction.

Selecting multimedia videos. In Curthrell and Jones (2011), the authors briefly describe techniques for selecting appropriate videos; I will present a more in-depth guide to selection in best practices section of this paper. The universal availability of YouTube videos is both a benefit and pitfall to instructors–beware fool's gold. As emphasized in Cuthrell and Jones (2011), "… YouTube is also a vast wasteland of garbage and social parody that add nothing to the learning process" (p. 81). To highlight their point, Cuthrell and Jones (2011) presented the case between Conjunction Junction on ABC's School House Rock and the parody on Mad TV. While the instructor may be able to recognize the dissimilarities between these two portrayals, the issue arises when learners are unable to distinguish between original source material and parody; thus, creating knowledge founded on falsities and misinformation. Similar parallels can be drawn between authentic news articles that appear in the New York Times and sponsored content (i.e. content that is paid for by an organization or business) on BuzzFeed. In order to avoid creating confusion amongst learners, instructors must carefully examine the accuracy of the content covered in the video, the credibility of the creator (i.e. what information is available of their YouTube profile page), and the objectivity of the video (e.g. is there an obvious bias?).

**Case Study 2**

While YouTube has numerous benefits to instructors, it is worth noting that not all instructors are sold on YouTube as an open education resource. In "Learning the Five Lessons of YouTube: After Trying to Teach There, I Don't Believe the Hype", Juhasz (2009) is less optimistic about the prospects of embedding YouTube into class instruction. Some clarity is in order, by including the Juhasz article, I do not intend to discourage readers, but only to present cautionary tales that can serve to better prepare instructors to embed online video content. In addition, since lesson one and lesson five (i.e. YouTube shuns niche markets) are similar in scope, I have decided to only include lessons one through four.

**Lesson 1.** As noted by Juhasz (2009), YouTube's user interface has been designed to support popular videos. The less popular videos, deemed to be outside the mainstream, fall by the wayside and are often invisible to users. A video on the importance that proximity searching has in research would be more difficult to locate. This is because research processes are considered a specialized subject, and therefore, would not be able generate more advertising revenue for YouTube (i.e. YouTube would not aggressively promote videos that do not benefit the bottom line). A point that was not touched on in the article, was the importance of developing professional networks on YouTube to neutralize the invisibility of non-mainstream content. For instance, library instruction is a close-knit community where communicate and sharing of resources are the norm. Thusly, it would be beneficial for instructors just coming to YouTube to

subscribe to users that share a similar instruction focus and have more experience locating open education resources.

**Lesson 2**. Juhasz (2009) assumed that YouTube discourages interconnectivity and limits the expression of content. The YouTube interface serves to connect users to similar videos produced by likeminded individuals, providing nothing new in the process of forming knowledge. YouTube excels in the accessibility of easily recognizable knowledge and encrusted information. While it is true that YouTube does little to improve accessibility to videos that encourage creative thinking, YouTube does enable users to locate videos through a recommended if you like (RIYL) feature. For instance, once a user subscribes to a channel, they will be introduced to similar channels and videos.

**Lesson 3**. YouTube upholds the vox populi and discriminates against low quality videos. By stigmatizing low quality videos and reinforcing the perceptions about high resolution videos, YouTube places a premium on the bottom-line. According to Juhasz (2009), the "top down" approach of dissemination minimizes the visibility of stories of real people. For instance, a cell phone video from an activist protesting in Flint Michigan might receive less promotion than a news clip from CNN. Users often conflate the connection between trustworthiness and quality, and simply overlook the most important aspect to judging a video, bias. Instructors should take special care to evaluate each video not based on quality, but on content.

**Lesson 4**. YouTube's advertisement model is built on principles of generating revenue by moving users from "point A to point Z" as quickly as possible. As mentioned in Juhasz (2009), the advertisement model stands opposite to the deep reflection and critical thinking embedded instruction aims to generate. For instance, making matters worse, YouTube lacks discussion hallmarks, such as a dedicated bulletin board or private discussion feeds. In this aspect, I am in agreement with the author about YouTube's ability to create a safe space for users to communicate. Furthermore, YouTube's comment feeds are marked by racism, sexism, threats of violence, ageism, and hate speech against the LGBTQIA community. Admittedly, there is little instructors can do to change the structural of YouTube directly; however, all is not lost. By embedding online video content into platforms such as Blackboard, Canvas, and Padlet, instructors can create discussion boards that are independent of YouTube.

**Case Study 3**

While one may certainly see the rationale in Juhasz (2009), the far reaching benefits of YouTube outweigh the shortcoming of an imperfect platform. In "Open education videos in the classroom: exploring the opportunities and barriers to the use of YouTube in teaching introductory sociology", Tan and Pearce (2011) explore the applications of open education videos in core college classes. In their study, Tan and Pearce, embedded YouTube videos directly into the lecture, along with a permanent playlist for students to access at their leisure. The results of the study revealed a number of positive elements to embedding online content in classroom instruction. The data suggested that students who took part in the course supported integration because YouTube videos added an extra layer of reinforcement and furthered their understanding of course materials. The results of the study strength the argument for embedding YouTube videos into instruction, and provide weight to case for viewing online video content within the

context of Multimedia Learning Theories. Furthermore, students noted that one the key benefits of embedded videos was that it encouraged and facilitated group discussion. The study reinforces the belief amongst instructors that YouTube can be used as a resource to improve dialectic learning or critical thinking through conversation. Lastly, the survey revealed that there was a positive attitude amongst students about having access to online videos that presented a wide range of differing opinions. Once again, the study revealed that there is a strong correlation between YouTube as a mean of providing students access to a variety of opinions and critical thinking and engagement.

## Best Practices for Multimedia Integration

The latter sections of this paper have discussed learning theories and provided overviews of case studies. The focus of this section is to apply the various learning theories and create best practices for embedding YouTube videos directly into library instruction.

### Benchmarking and Content Selection

It is essential that instructors set standards that online video content must meet in order to be integrated into the classroom instruction. According to Berk (2009), three criteria for content selection are "(a) the students' characteristics, (b) the offensiveness of the video, and (c) the video structure" (p. 7).

**Learner-centered**. Embedding online content should led to the creation of a learning environment that increase discussion and information literacy; therefore, instructors should exert caution when selecting videos to share—content should be inclusive not alienating. Instructors should examine the socio-demographic characteristics of learners and choose videos that reflect age, sex and gender, disabilities, ethnicity, and language barriers. In addition, content selection should not be a one way flow of information; allowing learners to share content creates an environment where everyone is encouraged to participate.

**Offensive videos**. Instructors should take care to notice when videos are encouraging critical thinking and when videos are reinforcing stereotypes. Once students are offended by the material selected, they will withdraw from the learning environment. As is before, instructors should identify how students relate with their culture. A pre-instruction survey might be a useful tool for understanding the cultural diversity represented within the learning environment.

**Structure**. Although online videos can provide students with a break from classroom lectures, if the video is too long, students will begin to lose focus. Videos should supplement the lecture, not replace it. For instance, instructors should choose videos that are short (3-4 minutes in length), do not rely heavy on jargon, and build on the lecture by explaining difficult concepts or theories.

### Embedding Content into Instruction

There are numerous guidelines for embedding videos directly into instruction. Below, I have explained 5 common approaches that are present throughout most of the literature.

**Prime the learner**. Instructors should provide learners with an understanding of why a specific video clip or set of clips is being included in lesson plan. Priming the learner will allows the learner to begin the process of bridging learned experiences to new information.

**Emphasize key concepts**. Brunvard (2010) noted that "the availability of teacher commentary also enhances the ability of the viewer to notice relevant content…" (p. 5). Pausing the video after a key concept has been discussed, asking questions, and eliciting feedback is an important tool to enable learners to break from the material and reflect on content. In addition, instructors may wish to replay the clip multiple times or during an in-class exercise.

**Relate the applicability of the video to learners**. The education theory of Social Constructivism emphasizes the need for learners to be able to create knowledge through observation. Utilizing videos that have real world implications and relate to the world that learners reside will maximize the impact the clips have on learners.

**Break the cycle**. Instructors should consider where to place video content in the lecture by understanding when learners begin to drift from the conversation. For example, if the length of the instruction session is sixty minutes, instructors might find it useful to lecture for 3 cycles of 15 minutes—introducing short video clips between cycles, followed by a brief round of discussion between students.

**Frame the discussion**. Interaction is one of the fundamental principles of communities of practice. Allowing students the opportunity to separate themselves into groups and discuss the video clip will encourage a diverse learning environment where ideas are exchanged informally and brave minds are challenged to think differently. It is important for instructors to frame the discussion by providing learners with a set of ground rules for the discussion, supplementary questions, and the freedom to challenge or support opposing viewpoints. In Brunvard (2010), the author cited Piaget's well known support for incorporating various perspectives and his argument "that these experiences help promote mental maturation by providing leaners with new experiences and, thereby, requiring them to assimilate new information with their preexisting cognitive structures and reconcile any discrepancies that occur" (p. 6).

**Conclusion**

As one of the mainstays of Web2.0, YouTube can be utilized by instructors as a tool to facilitate group discussion, deepen engagement with the learning environment by providing students access to opposing opinion, and cement knowledge creation by using visual/auditory stimuli to create mental models. In order to maximize the potential benefits of YouTube, instructors should consider content, originality, creativity, and elements such as humor, honesty, and applicability to real world situations. In addition, videos should not be viewed as a replacement to discussion, but a means to allow students to break the cycle of monotony, activate brainwaves, and refocus on the information being taught.

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# 15

# School Library Topics in Two's

# Kerena Burns

It is apparent by now that technology and the financial climate in the United States have made it impossible for libraries to simply be book repositories. For the school library in a K-12 environment, this is especially true. The school librarian is responsible for an overwhelming amount of work. They teach, maintain the library collections, serve as a liaisons for technology services, create and present programs to students, and more. It can be incredibly difficult to also keep up-to-date on trends in the profession and create fresh programs and materials for students. Yes, there are plenty of tools available to help keep school librarians current, from social media to professional publications, but looking through all of the information available can quickly turn into a massive sorting task that costs the librarian precious time to sift through. The goal of this paper is to quickly address a variety of school library topics.

To accomplish this goal, this paper utilizes the power of two. First, the entire paper has been divided into two sections, one focusing on theories relevant to school librarians and one section focusing on practical applications for school libraries. Within each section, pairs of topics are introduced. In theories, two literacy theories, information literacy and critical literacy, are discussed as well as the paired combination of teaching and learning theories. For practical applications, each topic discussed has two real-life examples that illustrate how other libraries have addressed the issue at hand, so that you, the reader, can apply them in your library. Topics discussed in the practical application section are collaborating with other teachers, library programs, library goals, collection management, and evaluating effectiveness. Limiting the examples and topics to two should allow for a broad discussion without the entire paper becoming unruly or monolithic.

**Part One: Theories**

**Literacy**

Traditional literacy, that is, the ability to read, plays a highly important role in libraries; it would be a very nontraditional school library devoid of the written word. Equally important for the school library is the idea of multi-literacies. Inclusive of these literacies is information literacy and critical literacy.

The literature on information literacy theory alone is extensive, incredibly complex, and full of hair-splitting definitions. In an analysis of the literature defining what information literacy is, Secker and Coonan (2011) argue that information literacy should be viewed not only as a set of skills but behaviors that the educated exhibit as they seek, interpret, and question information. This can be a helpful way to frame the concept of information literacy for the school librarian. Being able to teach specific skills like identifying the types of information available from different databases, labeling primary and secondary sources, or knowing how to

use the internet to find information are practical and achievable goals in the classroom.  The addition of the concept that there are behaviors that become habitual is a way to keep the school librarian stretching the boundaries of teaching, keeping instruction fluid and individualized.

Critical literacy layers cultural, economic, and political considerations onto information literacy theory.  Students may frequently use technology to obtain information, but may not consistently question the political and cultural implications of that information (Asselin, 2013).  Critical literacy theory explains that it is vitally important for a politically responsible society to understand bias, question cultural assumptions and the validity of information sources (Smith, 2013).  In some countries these relationships have institutional merit; for example, in Denmark, the education of librarians emphasizes connections between information and knowledge as well as knowledge and culture (Martens, 2015).  If it is believed, as Smith (2013) posits, that the librarian should work to help citizens be socially engaged and independent thinking adults, then critical literacy can be an important theoretical frame with which the school librarian can plan instruction sessions.

Literacy, in all of its incantations, is the backbone of librarianship and is tightly woven into the daily work of the school librarian.  Additionally, the role of the school library has always been to provide information resources and to add value to the learning environment of the school.  This learning environment is influenced, sometimes dictated, by the Common Core Standards for K-12 education.  Today, among others, these standards strongly emphasize the need for students to be able to: 1) determine the validity of web based sources 2) navigate new information sources and 3) critically evaluate their sources of information.  When all of these considerations are factored together, what the library stands for, the role of the library, and the standards, strong support can be found for the idea that the school librarian is in a position to contribute more to schools and education than ever before.

**Teaching and Learning**

It could be argued that all librarians are teachers, but for those in K-12 schools it is part of the job description.  As a result, no discussion of the role of the school librarian would be complete without touching on teaching and learning theories.  Teaching and learning are inextricably linked and it has been suggested that what is to be learned should inform the decisions made regarding the way that it is taught (Brooks, 2015; Booth, 2011).  The spectrum of learning theories usually starts with behaviorism, which uses rewards and punishments to either increase the likelihood of a behavior or decrease the likelihood of a behavior.  Behaviorism in early grade school can help set the stage for future learning by helping to create habits, and to support literacy and word recognition (Booth, 2011).  As students move through the education system, different theories can better frame the ways that learning occurs and what the librarian needs to consider when teaching.  Well established learning theories of social constructivism and cognitive constructivism stress the importance of social engagement and theorize that previous learning informs new learning (Booth, 2011).  Designing lessons that foster social interactions like Think-Pair-Share or Carousel can help put these learning theories in action and provide a transition out of the behaviorist model.  Continuing through the grades, the connectivism theory may be a beneficial source of inspiration when teaching complex research lessons or when encouraging students to think critically about the information they obtain.  Main tenets of

connectivism include the following: technology impacts the way information is discovered, decision making influences the information that is transmitted and accessed, and learning occurs when connections between sources and knowledge are made (Siemens, 2011). These models, behaviorism, cognitive constructivism, social constructivism, and connectivism, each have a large body of literature written about them, and this brief overview is far from a complete examination of any of them. However, the intended take-away here, is that by considering the complexities of student learning, the school librarian can create effective lessons that address the goals of teaching information and critical literacy.

**Part Two: Practical Topics and Practical Applications**

**Embed in the Curriculum**

An embedded librarian is one who works alongside other staff, teachers, and administrators to support the goals of the institution at large. Moreillon (2015) writes, it is the responsibility of the school librarian to advocate for student-centered, inquiry based lessons. The keyword for becoming an effective embedded librarian is "collaboration." As a school librarian you already know you're an asset and with budget cuts being a top concern for many schools, embedding and collaborating make a lot of sense. With multiple experts working on a project, the stress of creating engaging learning opportunities for students can be diminished and having multiple perspectives on a topic can create innovative ways of thinking. All of this can positively impact student learning outcomes. The following stories illustrate ways that other librarians have been able to embed themselves into school curriculums and will hopefully offer inspiration for ideas you can put into practice in your library.

1. Virtual classroom tools can be effective means for making old lesson plans and teaching methods new and accessible to students today. Nailor (2013) details a personal experience where this technology was successfully utilized in a collaboration with an English teacher for a high school class. The English instructor was beginning a section on Emily Dickinson's poetry; the school librarian created a companion book list of contemporary young adult fiction that dealt with themes similar to the Dickinson poems and presented book talks to students; the idea was that by reading contemporary fiction of personal interest, students would have a better understanding of the Dickinson poetry. A web-based chat room was created for students to compare/contrast the books and poems and dialog was allowed to flow between students and between instructors, including the school media specialist. The book list that was offered included *Flight* by Sherman Alexie (2007), *The Christopher Killer* by Alane Ferguson (2006), *A Northern Light* by Jennifer Donnelly (2003), *Girl with a Pearl Earring* by Tracy Chevalier (1999), and *The Bean Trees* by Barbara Kingsolver (1998) and the poems were "Hope' is the thing with feathers" and "I dwell in Possibility."
2. Researchers in Hong Kong studied the learning outcomes for primary grade students participating in a collaborative teaching lesson among a school librarian and three other teachers (Chu, 2009). In this scenario, the librarian was working in collaboration with a general studies teacher, a technology teacher, and a language arts teacher. Students were placed in groups and assigned two general studies projects, the broad topics were the Earth and the history of Hong Kong and China; the role of the school librarian was to

teach and support the students' research skills.  The results of this experiment were favorable across the board, with students enjoying the process and parents reporting things like an increase in their perception of their child's communication abilities.  The benefit of this type of collaboration is that the school librarian has a context with which to guide the students' research.  Additionally, this took place in the primary grades, a time that can be easily overlooked in discussions about information instruction.

**Library Foundations**

Two overarching goals of a school librarian are to create spaces for lifelong learning and to instill a love of reading.  The American Association of School Librarians has written its own foundational outcome standards that includes goals such as fostering a population with attributes associated with lifelong learning, like curiosity and motivation to learn new things (Coatney, 2013).  Additionally, McPherson (2007) offers an extensive review of the research regarding reading and the young person, with overwhelmingly positive results.  There is a strong relationship between reading and achievement, reading and self-efficacy, and reading for pleasure increases reading comprehension, which creates "an upward spiral of achievement" (McPherson, 2007).  Reading and lifelong learning go hand-in-hand, and reading typically has a beloved place in the librarian's heart.  The following ideas can serve as a starting point for increasing literacy and encouraging lifelong learning in your school library.

1. Model lifelong learning. Engaging in your personal hobbies at work may be frowned upon in many settings, but it is a great way for school librarians to model the habit of studying for fun.  It can be a more powerful lesson for students to see the adults in the school actually doing instead of presenting (Parsons, 2007; Coatney, 2013).  As the school librarian you can create displays, write reports, or openly investigate topics that interest you and be seen reading for pleasure throughout the day.  You can also encourage language and literature teachers to set aside a few minutes every class for independent reading, during which time they also actively participate in reading for pleasure.
2. Collections should be diverse. Diversity in the library has many facets.  The format of materials, topics, and reading levels should all be considered when creating a collection.  In addition to novels and texts, comic books, manga, internet Blogs, and even computer game instructions were all sighted as necessary for having a diverse and accessible school library collection by McPherson (2007).  Patron (2013) notes that magazines in particular are a great resource to have in the library because students seem to be drawn to them, they can be very informational/educational, and they "fuel readers' interests."  Having stories that students can see themselves in can give them a sense of belonging, and be the key to instilling a love of reading in the young; while pairing a student with a story at their reading level can instill confidence and encourage future reading

**Programs**

The library is a special place in any school for a number of reasons.  "Library" is not a class, there is no judgement or assessment of the student's abilities made at the library and the library is a communal place that belongs to everyone in the school (Evarts, 2007; Bush, 2007).  Evarts

(2007) also notes that the cafeteria is the only other place that every student shares, but that the library is special because it lacks the social divisions that are exhibited in the lunch room.  One way that the school librarian can foster positive feelings for the school library is through programming.  Programming can draw students into the library, even those who normally don't engage with the library, and can encourage students to question their preconceived notions about what the library is.  And programs are fun…does anything else really need to be said about fun?  The following two program ideas can help you create a welcoming and inclusive atmosphere in the library.

1. It's Your Story: Postcard Exhibit at the Millikin University, a promotional video posted on the blog Mr. Library Dude demonstrates one program idea that could be implemented in any library. Students were invited to submit postcards, these took the form of drawings, collages, or just written words, that revealed something about themselves.  These revelations were anonymous and could be about any topic.  After a collection period, the librarian created a visual display/art installation in the library that featured the postcards that were submitted.  The idea behind a program like this is to create a community where solidarity could be found within a very personal and individual artistic expression.
2. Lunch in the library. Opening the library for lunch can benefit the entire school.  It can offer an opportunity for interaction among students who don't normally interact.  Faculty and staff can be invited to use this as a chance to socially engage with students and with each other.  Games, puzzles, and crafting supplies can be set out as an additional layer of interest for those eating in the library.  Events like this can help create the image of the library as a diverse place serving social as well as academic purposes.

**Evaluate**

Evaluate, assess, evidence-based practice…these words have made their way into the terminology of almost every profession, including school librarianship.  What may have started as a way to promote positive changes based on results has become a primary method for validating the worth and cost associated with the library; something the librarian of the past may not be equipped to do (Evans and Alire, 2013).  Much of the work done by the school librarian is qualitative in nature and difficult to quantify.  How can you say that dramatically improving the reading ability of one child isn't enough?  A school librarian may not be inclined to do so, yet that is what they are tasked with.  The following two ideas can help kick start an evaluation and assessment strategy for a school librarian who doesn't know where to begin.

1. Find a research partner. Research is a way to collect and interpret the data necessary to display the value the library adds to a school environment.  It is unlikely that the school media specialist has the time or maybe even the skills necessary for producing high quality, influential research.  In a list of ways that the school librarian can be successful, Wools (2013) suggests that a school librarian could gather this kind of information by partnering with research professionals at a nearby university or college.  Academic librarians are frequently held to the same publication and research criteria as university faculty and they may be willing, or even looking for, opportunities to investigate the same kinds of questions the school librarian needs to ask.

2. Hold a focus group. Perhaps the best way to find out if your library is effectively fulfilling patrons' needs is to ask them. A survey can accomplish this, but a focus group allows for a more open-ended discussion. The goal and purpose of a focus group is to discover group norms and to "elicit information about individual's thoughts and views about some topic or issue" (Evans and Alire, 2013). This can be an informal process, with groups of students being led in discussion by a moderator, probably the school librarian. Soliciting participation from students of out-going classes, like high school seniors or middle school 8th graders, could yield especially beneficial results because of their tenure; they may also be more forthcoming with negative comments than students who will have future interactions with the librarian. While it is possible that this could be an uncomfortable discussion, it could also be very informational for the librarian to see how the user views the library or library services.

## Conclusion

Being a school librarian is a juggling act of priorities, tasks, and services. There are pressures from stakeholders, including parents, schoolboards, and students, in addition to the budget concerns, programming, and teaching required of the school librarian. Not only that, but the librarian is frequently doing all of this alone or with little support staff and with very few hours to do it in. It is a lot, to say the least. Hopefully, this brief discussion has provided some practical ideas that are easily implemented or that it has introduced the reader to something new and useful. The following references are works cited as well as a few publications and websites of potential use.

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**Other Resources of Potential Interest**

Read Write Think. (2016). http://www.readwritethink.org

Offers free materials, such as print resources, lesson plans, and activities for instructors and educators.  Resources are especially geared toward language arts and reading.

The Harvard Graduate School of Education. (2016.) http://www.pz.harvard.edu/

The university's Project Zero is a long standing research program.  The homepage offers links to practical tips, case studies, activities and checklists to help you create your own meaningful collaborations.

We Need Diverse Books. (2016). http://www.weneeddiversebooks.org

An organization lobbying for books that honor all types of characters so that every child can relate to the stories they read.  The website has resource links that can help connect librarians to diverse selections.

# How Intellectual Freedom Can Be Highlighted, Integrated, & Safeguarded in Modern Public Library Instruction

## Rachel Reddick

Intellectual freedom is a staple of modern American libraries, particularly public libraries. The American Library Association (ALA) has a long history of defining and supporting intellectual freedom, and currently describes it as "the right [for all users] to seek and receive information on all subjects from all points of view without restriction and without having the subject of one's interest examined or scrutinized by others" (Intellectual Freedom, 2016). It is a moral outlined within the ALA Code of ethics that provides both security and revolution because its inherent goal is to guarantee safety for those seeking to understand, create, or promote ideas outside the accepted norm.

The general idea behind intellectual freedom is that a library cannot deny services, resources, or information based on personal biases. But how is this applied in an everyday setting? Several aspects of public librarianship encompass and protect intellectual freedom while also acting as either conditions of or outright complete instruction modules. These include collection management, understanding & acquiring new technologies, and workshopping.

The following sections will examine two main avenues of incorporating the principle of intellectual freedom into facets of library instruction. The first is to use factually questionable materials to highlight how to evaluate good sources, and the other is examine how intellectual freedom interacts with copyright law. The foundation of both of these concepts should already be incorporated into public libraries' everyday framework, but by also showcasing them in the forefront of specific instruction sessions, libraries have to opportunity to strengthen both their own policies and the public's everyday understanding of why intellectual freedom should be a valued commodity in their community.

**Collection Management:**

When building a collection, multiple perspectives should always be considered, regardless of the topic. Controversial topics may require special attention to fully enact this idea. Communities served by public libraries cannot be considered and are not ever homogenous entities. They encompass a variety of tastes, opinions, experiences, and ideals. Therefore, they cannot be expected to approach information in a uniform manner.

Interpretation is another mitigating factor that can limit how patrons are connected to information. It can depend on multiple factors, such as education level, political background, and reason for connecting with the information in the first place. Was it for a school project? Did they have a personal connection to the resource? Was it needed for a professional reason? Was the patron hoping to confirm an already preset belief or were they hoping to simply

obtain new information?  Did an agenda, political or otherwise, help the patron form their current opinion and if so, in what way?  Allotting for a variety of patron backgrounds & purposes when collection building can alleviate frustrations and limitations later on.

Recommendations and reader's advisory also need to be fitted for the individual, and every effort should be made to prevent the librarian's personal taste from affecting the answers they provide.  A vital function of librarianship is understanding how to find resources unique for every situation.  By limiting what one recognizes as suitable material to only what one find personally acceptable creates an environment small in scope and of little use to communities as a whole.

However, no collection is able to completely satisfy every patron and should not be considered a static or routine mechanism.  Collection management is an ongoing process, one that may need to be reevaluated as patron bases change or new resources become readily available.  Budget plays a significant role, as does overall community needs and marketplace trends.  A large urban system may have to consider several branches' requirements when creating a collection development plan that looks wholly different than a single rural independent library's.  But the idea behind both is similar: a balance must be reached between serving the general population and helping specific individuals.  Therefore, material cannot be dismissed solely on the basis that the majority will not seek it out, even if the majority has compelling reasons for ignoring it.

Controversial subjects such as abortion, climate change, and creationism often create instinctive knee-jerk reactions.  To have a fully realized collection, resources that cover both sides of an issue should be included whenever possible, but most especially when the topic is apt to incite decisive sides.  Intentionally leaving something off of the purchase list because of the perceived truthfulness of it is easily classified as a violation of intellectual freedom.  But it also requires clear standards for how to find the information specific to a situation easily, without wading through everything under the broader heading of its generalized topic.

**Cataloging Techniques for Intellectual Freedom:**

A significant part of orienting patrons to a library is teaching them how to find materials; process usually begins with how materials are cataloged.  By focusing specifically on intellectual freedom in the realm of cataloging, a library ensures the protection of that ethic from the moment materials are introduced.  Overall, American libraries have proven that they are willing to provide space for objectionable material, although it may be presented in different ways as standing conclusions regarding its content changes.

For example, the mid-1990s brought up a new subject heading in various classification systems to properly cite holocaust denial materials.  There was a substantial libel case brought forth in England between scholar Deborah Lipstadt and writer David Irving.  Lipstadt had asserted in a book that Irving was a staunch holocaust denier while Irving maintained that he was simply a historian with a minority viewpoint.  The court sided with Lipstadt, and as a result, 'holocaust denial' became an accepted phrase for extreme right-wing historiography regarding the holocaust.

Public libraries were often asked if they stocked any holocaust denial resources within its holdings, and if so, where was it found?  Most found that they had been actively collecting it, and then placing it in standard WWII history subject headings, or in some cases, in Jewish studies.  But the Lipstadt brought about the importance of the material being classified in its own right.  By 1997, the Library of Congress introduced two new call numbers, one for holocaust denial materials directly and one to be applied to critiques of holocaust denial materials.  The Dewey classification system followed suit in 2003 (pg 59).  Thus, libraries were able to showcase that they were providing the material and making it more easily searchable for those looking into that particular discipline.  Similar 'reclassifications' have occurred with subjects such as creationism and LGBTQ materials.

Moreover, the "correct" set of fact can be incredibly difficult to pin down.  Disciplines, such as both the hard and social sciences, frequently debate the validity of various theories, and over time, accepted doctrine can be challenged and overthrown.  It is often the scholastic conversation surrounding an idea that changes the public's perception of it.  Areas like history can be subjective, like an eyewitness discussing their experience, or it can be hard data, such as how many times an event occurred in a specific place during a certain time period.  But the two are not always presented in mutually exclusive territory.  It is impossible to evaluate the entirety of a source before adding it to a library's collection.

Therefore, it is important and practical for a public library to allow patrons access to a wide range of opinions about a desired topic.  Showing the progression of an idea can be as beneficial as producing an outcome.  School librarian Jole Seroff notes that "intellectual freedom is undermined if the … discourse becomes hegemonic" (p.21, 2015).  Competing viewpoints and multiple perspectives can help patrons understand how the evolution of thought can affect their own research or understanding of a subject.  It also helps them learn to evaluate sources themselves.  It empowers an individual to appraise resources without relying on another's insistence on what formulates the "right" information.  It also give the library staff the benefit of more independent patrons, freeing up time for more complex reference and research questions.

**Intellectual Freedom as Presented in Instruction:**

While the presence of intellectual freedom is generally understood within the direct contact of library resources, how intellectual freedom plays a role in instruction led or sponsored by the library is somewhat less clear.  Instruction within the library setting has become a consistent way to attract new patrons and inform current ones.  Libraries, at their hearts, strive to connect patrons to information.  Often though, the ability to actually perform that task becomes complicated based on factors such as the extent of the patrons' digital literacy skills, what resources a particular library has, and how much staff time can be devoted to solving an individual's question.  Instructional sessions are a way to bridge those literacy gaps and create space specific to how precisely that library can help connect their patrons to a designated set of information.

Library classes already integrate reference help into numerous topics.  By framing it as a matter of intellectual freedom, it opens up the institution up to discussing its commitment to that idea and how the application of it in a day-to-day setting.  Trending topics, hashtags, and breaking

news are often discussed on various kinds of social media sites, and can be used as examples of different kinds of legitimacy. Examining social media sites are an adept way to examine how bias, opinion, and research interact with one another.

Genealogy is another opportunity. How do you access personal records and why do some remain unavailable? How has the keeping of personal records changed over time? How has technology opened up genealogy research? Why are some individual's records easier to track than another's? This can be a favorable time to introduce how the absence of information can instruct nearly as much as a plethora of resources.

**Technology, Copyright & Intellectual Freedom:**

Maybe your library wants to produce programming and instruction about fanfiction. That can become a perfect moment to talk about how libraries balance intellectual freedom and copyright. Some authors heavily fight against the unlicensed use of their characters while others vigorously defend the right for anyone to write whatever they wish. How can the library classroom respect both of these viewpoints and encourage their own patrons to become a part of that ongoing conversation?

After noting that while students have a basic understanding of using other's original content, Seroff concludes that they have less comprehension regarding their own legal rights regarding copyright. She asks "how can we empower students to fully exercise their intellectual freedom as content creators, while still instilling a respect for intellectual property?" (p.22, 2015). Workshops can be designed to clear up confusion regarding copyright, open access, and creative commons licensing, as well as how it affects individual pieces of original works. For instance, there are currently six types of creative commons licenses, and they vary in level of restriction and general functionality (Fargo McKinnon & Helge, p. 13, 2014). How would that affect what you are asking your students to produce? Give them an overview and specific examples to help illustrate the differences.

Discussion in instruction sessions regarding internet filters is a wonderful segue into examining intellectual freedom. Does the public library use any filters? Why do the disadvantages of using one include comprising a foundational property so highly regarded by libraries? Furthermore, what has contributed to such a long-standing respect in regard to intellectual freedom within the profession? Do other professions share similar positions?

More and more public libraries have begun building makerspaces and purchasing 3D printers, making an expensive technology readily available for public use. Supplying instructional overview to patrons looking to use this service should be standard along with providing basic directions how to actually utilize the machine. The functionality of the machine and the responsibility of how to use it should be considered inseparable when training employees who supervise the machine.

Libraries need to understand the full scope of ideas that can be rendered using a 3D printer. Guns and other weapons are the most common argument against supplying one for seemingly unrestricted public use. The guns produced are currently in what many consider to be

an ethical gray area because they require neither a license to own or provide a number to register it with any governmental agency (Griffey, p. 22, 2014).  Furthermore, they have the potential to get through metal detectors undiscovered because they are made from plastic, not metal.  But they are fully operational instruments comparable to their traditionally manufactured counterparts.

There is also the possibility of other questionable material being produced through the library's 3D printer.  Sexually explicit material could be produced, with no regard for the age of the patron requesting its production.  Adaptive parts for pre-existing items are easily found online; one that have the potential to change the legal standards that official manufacturers are held to when making products to be sold in the United States.

It is essential that libraries carry through their foundational principle of intellectual freedom to more than traditional literacy and its associated sources.  It must be transferred to new and emerging technologies that libraries either acquire or advocate for.  Laws and other legal frameworks may take a considerable amount of time to catch up to these legal inconsistencies, and it is therefore up to communities and companies to assess how to establish best practices.  Libraries have an unqualified opportunity to shape how new technologies can be used in conjunction with intellectual freedom.

**Resources & Organizations:**

There are numerous support systems in place to help promote intellectual freedom, particularly within a library setting.   The Free Expression Policy project is an online organization that questions the often routine censoring of materials focused on children and young adults.  The Freedom to Read Foundation (FTRF) is set up to specifically help libraries and individual libraries advocate for intellectual freedom by offering grants and legal counsel as well as arranging access to current studies and emerging information regarding intellectual freedom.   Banned Books Week, sponsored and organized by the ALA, is an oft celebrated part of fall programming, and provides materials that discuss censorship and campaign for open access (Greechie, p. 90, 2016). These are all organizations designed to promote, protect, and explain intellectual freedom.

**Conclusion:**

It is often overlooked how the practice of instruction and the theory of intellectual freedom can be intertwined to provide better services for all patrons.  A better understanding of how intellectual freedom is implemented helps librarians better discern how their collections benefit and interact with their patrons.  It had the potential to create stronger development policies and exemplify the trust between patrons and libraries.  And it maintains the public library's duty to remain a neutral, safe place to ask questions and seek knowledge.

By building collections and cataloging those materials with intellectual freedom at the forefront, public libraries model neutrality and understanding of a community's diversity in backgrounds, purposes, and ideas.  It fortifies the concept that a public library holds a place for anyone who wishes to use it and empowers every individual to further their own understanding of the world.

Take advantage of librarianship's willingness to pursue as valuable a commodity as intellectual freedom. Test its flexibility and question its limits. When used correctly, it can both safeguard against censorship and rally for the undeveloped idea. By actively teaching it within the field, it gains support in the very communities we serve and dispels rumors that it can be easily set aside. It can be demonstrated in everyday scenarios today and be a step in future plans to help project their success. Intellectual freedom is multi-purpose and helps everyone navigate how to achieve their own version of success. Do not let it become a theoretical nicety but instead implement it in every aspect of the profession.

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# Health Literacy in Public Libraries

## Tiegan Ziegler

There are various reasons users seek out health information – whether it is for themselves, someone they know, or they just heard about a local public health concern. A good source of information people turn to is the public library. This paper discusses how librarians can work to decrease barriers to health information literacy and better help patrons access the information they need. Many barriers that are encountered in the public library during health information interactions are defined. Then possible solutions to decrease those barriers are discussed. Not all solutions fit with every library, so librarians can decide which ones they would like to implement to better serve their community in health related questions.

Health literacy has become increasingly important in public libraries, because public libraries are where people go to find health information. Some motivation for this phenomenon is that "…consumers likely perceive public libraries as an 'unobtrusive and inexpensive channel' for finding valuable information. …[t]hrough these channels consumers learn more about their health issues, improve communication with their health care providers, make informed treatment decisions, and obtain emotional support to help alleviate their anxiety regarding health concerns" (Yi 46). Public libraries, then, are good sources of information for those who have health questions, because they offer many different sources of information – databases, librarians, books, and journals. Yi (2015b) found that "…about 6% of American adults perceive public libraries as their primary or valuable source for health information" (17). The reason for this perception stems from the internet access public libraries provide, as well as medical books and journals. Librarians are also good sources for help finding information – usually. But it is not enough to just provide these materials to library patrons – librarians should also provide some healthcare contacts to help patrons find answers to their questions, because there is difficulty in understanding health jargon. "The [Institute of Medicine] estimates that 90 million people in the United States have difficulty understanding and using health information" (Zionts et al. 351). This means "…a focus on 'guiding consumers to high quality health information on the web' is needed" (Zionts et al. 351), and there are many options out there for librarians to help patrons find quality information.

The National Network of Libraries of Medicine (NNLM) defines health literacy as the "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" (National Network of Libraries of Medicine). This definition is one librarians should know to better help patrons develop their health literacy skills. Being able to make these distinctions and help patrons learn these skills is important because "…today people are becoming increasingly proactive about their health care" (Yi 46). "Without access to quality information and education, consumers are unable to make appropriate and informed decisions about their health and how their health care dollars are spent" (Hessler 335). This an issue librarians should seek to eradicate by helping library users with health literacy – it has become a library issue because "…within public

libraries 47% of users who accessed the Internet used it to search for health information. …
Consumers also look for health information in libraries' collections and databases" (Yi 47). But
these are not the only places consumers go to for help with health information. Librarians are a
big resource people like to utilize. "[L]ibrary users seek health information through face-to-face
reference interviews, virtual reference services, and phone or e-mail reference services" (Yi 47).

**Barriers to Health Information Literacy**

*Librarian Barriers*

There quite a few barriers in public libraries that have caused problems with patrons' access to
and understanding of health information. "Interviewees expressed difficulties understanding
health care terminology, locating and accessing information, and asking a librarian for
assistance" (Yi 53). One of the most significant issues is that librarians may be insufficiently
trained in helping patrons find quality health information, because they are often unaware of the
resources available (Hessler 339). Training is important, because it helps librarians become
better equipped in helping solve patrons' confusion. In one study by Yi (2015a), interviewees
expressed concerns over the help librarians were or were not able to provide when looking for
health information. One interviewee even stated "'I believe librarians need to get specific health
training or [have a medical] background to be able to direct people' (Interviewee 6)" (Yi 54).
This is a valid concern for patrons who are searching for answers to their health questions and
are not able to get satisfactory help from a librarian.

*Patron Barriers*

There are also plenty of barriers that stem from the patron and how they communicate with the
librarian. These include "language/cultural differences, inadequate literacy (including
information, technology, and health literacy), sensitivity and emotional issues (e.g., mental
illness), age-related issues (e.g., problems seniors have with accessibility or technological
literacy), and physical difficulty (e.g., accessibility)" (Yi 48). It is also hard for some to ask a
librarian for help finding information on a health question that is personal – people have quite a
fear of being judged and don't want to talk to a stranger about something so personal. On the
other hand, these barriers can be faced in nearly any interaction with a librarian. While these
issues can make it difficult to understand the patron's question enough to find the right
information, it is not impossible. It is helpful if librarians can maintain patience in order to better
help the patron get the information they need, no matter the difficulties that arise in the
transaction.

*Library Barriers*

Libraries present barriers of their own by way of the materials they hold in their collections. In
the study by Yi (2015a) referenced above, "[h]alf of the interviewees mentioned limited
resources" (Yi 53). This means that half of the interviewees from Yi's (2015a) study were not
satisfied with the amount of health resources available in a public library. This is a very valid
concern, and certainly does play a part in the problem of finding quality information. Some ways
to help this are to partner with healthcare organizations and have a list of contacts for patrons to

utilize to get their questions answered. Among the information that patrons can access there are problems in understanding the terminology used. This can be helped by librarians who have a fair understanding of health jargon and can explain some of it to patrons. It might also help to have some lists for healthcare professionals to contact for help with the terminology. Libraries could also provide access to some medical dictionaries so patrons can find definitions on their own.

*Web Barriers*

All of the barriers discussed stem from needs expressed by patrons. Another important barrier related to the availability of high quality information is the need for access to health information. "The downside to the availability of computers and the accompanying easy access to abundant health information is that not all of the available information is credible, pertinent, or correct" (Zionts et. al 350). While it is easy to find health information online, it is not easy to find quality information from authoritative authors – this is where librarians come in. "[L]ibrarians, with the proper training, present an opportunity for consumers to receive help in locating desired health information and in evaluating website credibility, relevance, and applicability" (Zionts et. al 351). This same issue presented itself in the study conducted by Yi (2015b). "Study participants rated higher on their ability of '*how* to find helpful health information in the library' than the abilities of '*where* to find helpful health information in the library,' or knowledge of '*what* health resources are available in the library,' which asked more specific abilities" (Yi 22). It is then important for librarians to demonstrate health literacy skills to help patrons learn where to find quality information and what information is available in the library and what needs to be sought elsewhere (i.e., healthcare professionals).

It is critical for libraries to improve access to online materials – both in the library and remotely (Hessler 340). Having access to materials online is important in this digital age, when more and more people expect to find the information they need on the internet. Individuals may expect to be able to access that information wherever they want, rather than needing to go into the library to use databases. This means that libraries should work to provide online access to health information, while maintaining an online presence – through chat reference or email help – to answer patrons' questions. This ensures that people know they can turn to a librarian for help in answering questions, or at least guiding them towards sources that can answer their questions. "Online access is a critical need for those seeking health information. The results of a 2013 Pew study revealed that nearly 60% of U.S. adults have looked online for health information in the previous year, and 35% circumvented the medical establishment, at least initially, by looking online to try to determine what may be ailing them" (Hessler 336).

While many people want to access information online, some individuals also feel that print materials are good sources, and a lot easier to navigate. "[T]he users reported that printed books were easy to browse, and printed journal articles were appropriate resources to get in-depth health information" (Yi 26). It can also be easier to assess authoritative authors and high quality information when using print resources, because it take some work to be published, whereas it is easy to provide information online. When choosing the type of resource to guide a patron toward, it is important to assess the type of question the patron has, because "…most of the interviewees who preferred short and quickly readable health information, as found in

magazines, were healthy or reported that they did not have serious health issues; their concerns were age-related, such as a joint problem or macular degeneration. They did not need in-depth or specific health information" (Yi 53). In contrast, "…interviewees who had severe health issues reported looking at printed medical textbooks, journals, and particular websites for authentic and in-depth health information" (Yi 53).

There are various reasons users seek out health information – whether it is for themselves, someone they know, or they just heard about a local public health concern. "[U]sers seek health information in order to 'identify, alleviate, and remedy diseases and ailments; … to preserve health and prevent disease; and … to access supporting services in their communities that can assist them in coping with the financial, social, and economic impact of illness'" (Yi 19). When people are able to better inform themselves, they can help inform others, making for a more cohesive community. When the library plays a role in providing patrons with health information and contacts, it becomes an important part of the community by helping connect people with information and other key organizations in the community.

When it comes to health literacy, there are some things librarians want to keep in mind about their patrons. The first is the difference between female and male patrons in searching for health information. In the study conducted by Yi (2015b), it was found that "…the difference in health literacy ability between males and females is statistically significant. …female users were likely to have greater health literacy abilities than male users" (21). Yi (2015b) did not state why this difference might occur, but it is something to keep in mind when working with patrons. Female patrons searching for health information may not need as much help, and may be better at determining quality information. This is not always the case, and there are male patrons who have good health literacy skills, as well. This is just some information to keep in mind when helping patrons find health information. Not as surprising, Yi (2015b) also found that "…college graduates are likely to have higher health literacy ability than high school graduates" (22). Finally, Yi (2015b) found "…there is no significant association between health literacy ability and age" (22). This last piece of patron information is something to keep in mind regarding any type of literacy. Once someone has been taught the skills, they are able to conduct research on their own. While it may take some more time with older patrons, – it is necessary to teach them how to use a computer and navigate the internet and the library databases – once those skills have been taught, anyone can conduct research.

**Recommendations for Libraries and Librarians**

*Collaboration*

In order to remedy the problems that arise when searching for health information in public libraries, there are many possible solutions that public libraries can implement in order to better prepare librarians'. One possible solution is collaboration with health agencies. "In order to lower the barriers to assessing the quality of health information, public libraries need to seek out collaboration among all types of libraries and organizations in a community, thereby integrating the community's health information services" (Yi 60). This not only helps improve librarians' ability to help patrons find quality health information, it also helps libraries be connected to their community. "Collaboration with national or state level agencies like the regional [National

Network of Libraries of Medicine] or any cooperative medical libraries in the vicinity of the public library can be a boon for public libraries and their users" (Hessler 339). Not only are libraries connected to important organizations in the community, but they are also helping connect their patrons to good sources of information, because "…creating public library-public health partnerships can enhance the ability of consumer to procure health information" (Zionts et al. 351).

The Medical Library Association (MLA) is a good organization for librarians to connect with to help provide their patrons with information. "Networking through the MLA, particularly one's regional branch, connects public librarians with a plethora of resources and contacts" (Hessler 339). Access to those resources and contacts is crucial for patrons seeking health information that cannot be found in the public library. Also, having at least one librarian on staff who is a member of the MLA is good for the library. "MLA membership indicates specialized consumer health information training and provides credibility to libraries with an MLA member on staff" (Zionts et al. 354). Patrons then know that library has a librarian on staff who is well-versed in health literacy and can help guide them toward quality information, as well as being able to help connect them with professionals who can provide them with health care advice. This allows patrons to feel better about their library, because librarians are skilled at connecting patrons with health information or healthcare professionals who can answer their health questions.

*Expanding the Collection*

Librarians can also look into other materials for healthcare information. "While medical reference and MedlinePlus are a good start, there are other materials we do not often consider. The memoirs of someone living with a disease, for example, can be more helpful to a user than a series of densely written articles" (Hessler 340). There are plenty of routes librarians can take to find health information. While memoirs are not an obvious choice, they really can be helpful if a patron is looking for information because someone they know will be experiencing this health issue. Memoirs are more personal experiences and are easier to read than a medical textbook or journal – there is much less jargon that can be hard to understand for someone unfamiliar with the medical field. A librarian can recommend memoirs to patrons looking for health information as first-hand experiences that give personal information that will not be found in a medical textbook or journal. Librarians can also create book displays of memoirs written around health issues, so patrons can more anonymously interact with the material if they wish.

Many patrons do not require in-depth research articles or textbooks for answers to their health questions, but would benefit much more from a simple, concise fact sheet. These can be easily prepared by librarians on "hot topic" health questions – i.e. providing fact sheets on the swine flu. "When it comes to such 'hot topics,' users prefer clear and fast facts to assuage anxiety and be better prepared" (Hessler 340). Keeping up with popular health questions can help librarians prepare these fact sheets, so they can provide patrons with them. Quick fact sheets are extremely useful, and even help answer questions some people might not know they had about a "hot topic" health question. These can easily be presented in spots around the library, so patrons will see them and can access them anonymously.

*Training*

There are also a lot of options out there for librarians to learn health literacy skills. "Resources, websites, webinars, and manuals are available to librarians, covering patron needs, effective strategies for overcoming reference barriers, and general health literacy information to improve the librarian's own understanding of health and wellness" (Hessler 340). The Medical Library Association has a Professional Development page that links to a lot of sources for librarians to utilize to increase their health literacy skills. There are webinars and online classes, continuing education courses, a discussion group program, an independent reading program that counts for continuing education credit, specialization courses, and mentoring opportunities. The American Library Association (ALA) also has Health and Medical Reference Guidelines available through the Reference and User Services Association (RUSA). Taking initiative to develop health literacy skills is good professional development. It helps the library continue to be a place people can count on for being helpful and providing them with good information. Beyond helping patrons find high quality information, "…appropriate assistance from someone who could guide them, thus helping to manage their anxiety and resolve the confusion, would be ideal" (Yi 60). This really stems from the fact that "…a librarian's role is not answering their health or medical questions … neither should they interpret the health information for users nor give health care advice to users based on their personal knowledge" (Yi 27). A librarian should not give health advice, but should merely guide patrons to good information and provide them with healthcare contacts who can give health advice.

*Focus Groups*

Another suggestion for librarians is to lead community focus groups in order to open up a conversation with patrons. "Neighborhood or community focus groups can illuminate the specific needs of local health information users" (Hessler 341). Including the community in the conversation on health literacy is really important. It gives them a chance to talk about their needs and give suggestions on how librarians can help meet those needs. Some of those suggestions might even include that "…public libraries could develop on-site support groups to encourage health information seeking and sharing and help reduce anxiety and uncertainty. They could also develop health literacy workshops and seminars with health care professionals" (Yi 60). Bringing healthcare professionals into the library to lead seminars on health questions is a good way to get patrons health questions answered by someone who can legally answer them. This also helps connect patrons to healthcare professionals who are open to being contacted, answering health questions, and providing patrons with more health information that they won't find in a public library.

*Online Reference*

Libraries should maintain an online presence for users who either cannot or do not want to come in to the library to ask their health related questions. Being able to use chat services helps with a patron's anonymity, as well as providing them with quick directions on how to use databases and find information. Having access to these kinds of services is nice for patrons who want to keep their privacy, but also want a librarian's help in finding health information online. This helps ensure that patrons know they can turn to a librarian for help in answering questions, or at least that a librarian can guide them to a source that can answer their health questions – whether that is an article or a healthcare professional.

## Conclusion

Health literacy is an important skill for librarians to have and be able to teach in public libraries. There are many ways for librarians to prepare themselves for helping patrons find high quality information and connecting them with healthcare professionals who can answer their health questions. It is important for librarians to hone their health literacy skills because, without preparation patrons feel as though they receive inadequate help, which causes a barrier between the patron and the library. Librarians need to be able to help patrons with health questions, because many people see the public library as the place to go to find information. Partnering with healthcare organizations in the community helps connect people with healthcare professionals who can answer their health questions. This also helps ensure that the library continues to be a place people can rely on as an institution that can connect them with quality information. Overall, it is important for librarians to remain engaged with their community, to be able to search for quality health information, and to teach patrons health literacy skills so they can search on their own and assess the quality of the information they find.

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# 18

# Using Digital Resources for Student Instruction

# Rebekah Thurston

The modern classroom is an area where many teachers are electing to incorporate increasing amounts of technology into their curriculum. (Mardis, at al., 2012) The correlation between technology and the teaching and library professions is clear; increasing amounts of teachers use computers, educational software and the internet to grade, plan, and even deliver content. Technology as the primary modus for the delivery of content via internet libraries, museums, and archives is the focus of this brief essay.

The use of technology and the internet in the classroom is growing. (Mardis, et al., 2012) Some teacher librarians have begun to use digital libraries, museums, and archives (also referred to simply as "digital resources" or "digital artifacts") as a component of their curriculum. With such a vast array of digital resources available through the internet, instruction can be tremendously enriched when a teacher incorporates the right digital resources into their lessons. (Clough, 2013) This overview discusses the topics of of how to effectively utilize digital resources, like online libraries, museums, and archives in classrooms and libraries. Also included is a discussion of the positive effects that increasing the use of digital resources can have student learning, as well as a list of some excellent online resources that can be useful to teachers who are beginning to incorporate more digital artifacts in their classroom.

This article is intended to give educators, teachers, and teacher librarians basic advice and a starting point for incorporating more digital media into their curriculum. Citations of sources utilized for research of this article follow in the Resources section. In addition to consulting a variety of educational research sources, the author relied on her own experience as a high school teacher who incorporated many digital resources into her U.S. History curriculum to inform this article.

**The Advantages of Digital Resources:**

One way that digital resources can be empowering is that they allow students to access information needed for research and assignments in or outside the classroom, as well as prepare for class on their own time and in their own way. (Sarifabadi, 2006) Research indicates that the number of students who have reliable access to the internet continues to increase. The Pew Research Center survey reports that 96 percent of young adult Americans have some form of access to the internet. The report also indicates that internet usage has grown over the past 15 years among Americans of all ethnicities, ages and genders. (Perrin and Duggan, 2015) While it might be argued that a textbook allows a student the same capability of 24/7 access to information, a textbook pales when compared to the wealth of information available for student consumption on the internet. Educators who chose online resources to supplement learning are allowing students access to a nearly limitless amount of content, at any time of the day, seven days a week. The same availability cannot be said of any library's physical holdings.

Furthermore, students at higher levels of education increasingly require flexible schedules; college and even high school students often maintain a jobs while pursuing an education (Bureau of Census), so offering resources with scheduling flexibility is key for any teacher who wants to ensure the success of all their students.

While this article does not prescribe to the school of thought which opines that "anything digital is superior to analog," it is true that computers, cell phones, and other internet equipped devices are more visible and prevalent in today's classrooms than any time in the past. Often teachers, especially at the middle and high school levels, lament the loss of attention that these devices have causes in their classroom. (Thomas, O'Bannon and Britt, 2014) However, where these teachers are seeing an obstacle, they should see an opportunity. The distractive power of technology is readily harnessed towards furthering student learning when information rich digital resources such as digital museums, libraries, and archives are inserted into the curriculum. A 2009 article by Fang suggests that there are many options for teachers to incorporate technology into the classroom. This study suggested that even student's cell phones can be used in the classroom to leverage student's access to resources via the internet, and for the quick, easy communication that cellphones offer. (Fang, 2009)

Another advantage of incorporating digital resources into curriculum is the amount of time and energy that these resources can save teachers, if properly used. Imagine that a seventh grade world history teachers is guiding students through a unit on Ancient Egyptian History, and has set aside a day for the students to examine the art of Ancient Egypt. What options does the teacher have for resources related to Ancient Egyptian Art? Overhead slides, a powerpoint, textbooks, and photographs are all possibilities for delivering the desired content. However, what about a trip to the library or computer lab? Granted that the teacher has access to a space where there are at least enough computers for small groups of students to work collaboratively (or even one student per computer), the teacher could let students explore Ancient Egyptian Artwork at their own pace! In fact, there are several websites that are verified, scholarly sources of reliable information about Ancient Egyptian Art; the Metropolitan Museum of Art as well as the British Museum offer digital resources related to Ancient Egypt and Ancient Egyptian Art. These websites contain not only pictures of artwork, but also videos of the artwork and 3-D replicas of busts and pyramids. If the teacher chooses this technology-based method, all students are able to look through the digital collection at their own pace. Students can expend their time on the artifacts which interest them most, contributing to a more meaningful and productive learning experience.

To add to the advantages of teaching this way, the internet at large provides a wealth of information about Ancient Egyptian Art, meaning that students will be able to practice answering their own questions throughout the class period, while simultaneously increasing their research and web navigation skills! By teaching in this fashion, an instructor manages to teach not only the content of Ancient Egyptian Art, but can also allow student time to practice information literacy skills.

The aforementioned example is one of an thousands of instances where a teacher could effectively use an online library or museum as an excellent tool for increasing student's learning. Though the payoff is great, this is not to say that this method of teaching is necessarily easy or

planning-free for an instructor. Once a teacher or librarian has decided that they wish to use more digital resources for content delivery in their lessons, there is an array of issues that the instructor must consider before diving in to the world of teaching with digital resources. The remainder of this essay provides basic information about how to guide students to internet resources, tips and troubleshooting for using digital resources, and finally, recommendations about how to find high quality, information rich internet resources to include in curriculum.

**The Basics – How to Guide Students to the Resource You Choose:**

One of the lessons a teacher is conveying to students when they take learning online is that the internet is a valuable learning tool that can be used for education. Students should not simply be engaging with the internet to learn content; but should be should be mastering technology and information literacy skills simultaneously. For a framework of these skills, the American Library Association publication Information Literacy Competency Standards for Higher Education can be a great reference point. Teachers should be deliberate in how they guide students to online resources.

When a teacher has chosen a specific website or webpage they want the students to use during a lesson, the instructor must plan how they are going to get students to that specific page. Posting the URL in a powerpoint or writing it on the whiteboard may be the easiest way to show students the link, but it is not the best. Typing in long URLs manually is difficult, confusing, ripe for error, is not professional, and uses too much class time. An alternative to this method is for teachers and librarians to create their own webpage to provide students with these links.

Some instructors may be wary of engaging with students over the internet. News stories where educators are disciplined for the their direct engagement and communication with students over the internet are not uncommon. There are potential liabilities when engaging with students over the internet. (Weaver, 2010) Certainly teachers need to be familiar with a school's teacher/student internet communication policy, but the amount of platforms for educators to start webpages with is numerous and there are various options. Instructors do not need to create educator websites with a 'social aspect' that facilitates teacher/student communication unless they desire to.

Some teachers and librarians may wish to create a Twitter handle, and post links to web resources via tweets, or use a Facebook account to connect students with resources. These examples of teacher incorporation of technology include social aspect, many refer to this as 'web 2.0.' With methods like these, students can not only see the materials that the teacher wishes for them to connect with, but would have the option to comment on the material and share their thoughts with the rest of the class, in addition to sending messages to the teacher and perhaps other students in the class.

Other teachers may wish to mitigate any liability that a webpage on a social platform entails and opt for a more traditional website without 'web 2.0' elements. With these types of webpages, students simply visit the page for the latest links, readings, homework assignments, and reminders. An analogy would be that websites like this are basically online bulletin boards that do not give students the ability to comment, 'like', or 'retweet' an educators posts. Websites like

these are not as engaging as 'web 2.0' sites where students can react to content online, nor do these sites allow the students to communicate directly with each other or the teacher. However, these types of educators websites are still valuable as an option for students to access educator resources outside of the classroom.

Some schools districts and educational institutions have predetermined platforms for teacher use, and will include a link to a teachers webpage from the school homepage. In either case, as long as students have access to a teacher's webpage page, teachers can make it easier for students to reach educational resources, both in and out of the classroom.

**Tips and Troubleshooting – How to Incorporate Digital Resources:**

While it may be the case that when using online resources students have more freedom to explore the material at their own pace, this in no way means that an educator is not responsible for planning a lesson which incorporates a digital resource as a key part of teaching. And, just like teachers do with textbooks or assigned readings, incorporating a digital resource as part a part of the curriculum or course means a teacher must complete considerable research on these sources.

**Vetting Resources:** Digital libraries and museums are great resources for students. That said, reliability and accuracy of resources that are online may be harder to ascertain than the reliability of a textbook produced by a distinguished publisher and approved by a school district or other educational governing body. For teachers who want more digital resources in their classroom, separating high-quality resources from less desirable options may be time consuming. (Mardis, et al, 2012) After all, websites, including those that are hosted by digital libraries, museums, and archives, are created with more ease than a book is published; there may be less editing and oversight with the creation of a website. Therefore, a teacher wanting to use such an online resource must do adequate research to ensure that the information provided in their chosen resource is accurate.

A good way to engage in this vetting process is to, as the instructor, ensure that all content contained on the website has been reviewed before assigning the webpage to be used in or out of class by students. Look at a map of the website, examine each image or exhibit as well as the accompanying information, and look for bibliographies and sources cited which informed the creators of the website. Just like a teacher should be familiar with any assigned reading in analog form, so should the teacher be familiar with all the elements of a website to be used for education. Teachers should make sure that they can assist students with website navigation confusion, and answer questions about any information found on the website, or at least be able to direct curious students to another source for more information about their question.

Another aspect to consider when incorporating digital resources into the curriculum is technological compatibility. A resource that worked great on your home internet connection via Safari on a Mac may not necessarily work as well in the computer lab, via Internet Explorer on eight year old PCs. For this reason, it is highly encouraged that an educator test websites on the computers students will use. Will accessing the source require any downloads or logins? If so, what are the school policies on downloads to student computers?

Additionally, an instructor should take the aforementioned elements into account when assigning students to access a resource outside of class. Students may be hesitant or unable to install certain software on their personal computers, or may not want to give personal information required to create an account needed to access a certain resource. Internet resources that require minimal downloads and can be used without an account (or possibly through school account) are recommended over those which do require these things, if the quality of information is comparable.

Finally, teachers should take into account the type of resources they will be exposing students to through any given digital resource. Are the sources on that resource primary, secondary, or both? Teachers should evaluate the lesson goals and objectives, and ensure that the types of information in their selected digital resource will enable students to accomplish those goals and objectives. In the article Teaching in Objects and Photographs: A Guide for Teachers, Hatcher (2012) offers a examples of the many ways which teachers can use objects, which are often primary sources, in their teaching. Though this article often references having the physical objects in the classroom, there is no reason that teachers cannot adapt the methods to suit the use of digital resources.

**Maintaining Familiarity with Resources:** When a new addition of a book is published, or an article is revised and the content is changed, this is easy information for an educator to track. Changes on websites, however, are not always as easy to spot. Thus, the malleability of a webpage is both an asset and a liability. (Mardis et al., 2012) Websites are easier to change than publishing new editions of books, so internet based resources are likely to contain the most recent and up-to-date opinions, interpretations, statistics, news and facts. However, this also means that a website could easily change from being usable to unusable for a certain educational purpose overnight.

For example, when a teacher has been using the same digital museum exhibit in their lessons for two years, and on the third year the content is changed dramatically making it no longer a suitable resource for their audience or lesson without the teacher's knowledge of the change, this may throw the entire lesson into chaos.

For this reason, educators are advised to make sure that they periodically check the online resources in their lesson plan cache. Ideally, this check should be done early enough so that if the resource has been altered to make it no longer suitable for the intended purpose, the instructor will have ample time to revise their lesson plan and locate either a substation website, another type of resource which will suit their needs. The importance of planning means that the night before a teacher intends to have students complete a scavenger hunt through a digital museum may not be the ideal time to make sure the museum exhibit still exists in the state it once did.

Some online resources may offer users the option to subscribe to the website RSS feed; this is great way for teachers to stay up to date on changes to the website. RSS (Real Simple Syndication, or Rich Site Summary) does the work of checking websites for changes in content continually. When a teacher subscribes to a particular website's RSS feed, that teacher will be notified when the content on the site has been altered or supplemented. Teachers using many websites in their curriculum can save time by subscribing to their favorite sites' RSS feeds and

eliminating the task of checking these websites for changes manually. More information about the use of RSS feeds for educators can be found in Richardson's "The ABCs of RSS," which is a great introductory article.

**Ensuring Grade and Skills Level Appropriateness:** Books and other analog resources are often considered 'safer' when compared to internet resources. After all, ensuring that you know all the content of a book can be done by thoroughly reading the book, while ensuring one is familiar with all of the content of a web page can be much more difficult to discern. Additionally, at present, there are fewer resources for teachers to turn to when creating lessons around websites as compared to creating websites around books. There are numerable resources that tell teachers not only what activities they can pair with assigned reading from a book, and often sometimes decades of prior teachers' experience with these books and activities, suggestions from expert teachers, as well as modifications for advanced or special needs classrooms. Some websites come with instructional guides for teachers, but this is not always the case.

In this way, teachers who intend to make digital resources an integral part of their curriculum are embarking on a challenge which could be avoided by sticking to more traditional, 'tried and true' methods of instruction. For the daring teacher who does so, a few things to consider are:

Ensure reading level appropriateness: When using digital museums and libraries, often a large part of the draw is that these sources can provide pictures and videos of the subject being taught. Pictures are great! However, educators should not forget to read any information accompanying pictures. Is the written content engaging and rigorous enough for the students? Will students be able to use the verbiage to help inform their interpretation of the images, or will it be too challenging to read? If students cannot use the worded information to inform their knowledge of the pictures and help them contextualize any images, then a large part of learning stands to be lost. Teachers may choose to compensate for this by going over difficult readings as a class, or guiding students through the exhibit instead of allowing each student or group of students to peruse a resource at their own pace.

Straying too far into the 'too easy' or 'too hard' realms means students will lose a lot from the resource or lesson. Too easy, students may be bored, and too hard, students may become frustrated.

**Check comment boards and user contributions:** Due to anonymity and ease of use on the internet, there is unfortunately no shortage of mean-spirited or offensive material posted on the web, and comment boards or website forums are notorious locations for such negative content. A teacher should check any comment boards or forums on the digital resource they are using for offensive content, as students will likely be able to view this.

Negativity on a comment board or forum does not necessarily mean an educator cannot incorporate the resource into a lesson, but the teacher should know in advance and consider preparing students for encountering this type of content. Perhaps a teacher could use negative comments as a opportunity to teach students about the importance of web etiquette, or how to disagree respectfully.

Keep in mind that being diligent about comment boards and forums that are part of your digital resource can be extremely important if you are teaching a sensitive topic.

**Look into bias and funding agencies:** Just like a teacher would do for any book or article they are going to assign, a teacher should examine any web content they want to use for potential bias or conflict of interest. Again, an online resource that presents a bias isn't necessarily unusable, but a teacher should be ready to discuss with students potential biases and use them as a tool for teaching.

**Final Advice – How to find the best Online Resources for a Lesson:**

For educators who want to incorporate online resources into their classroom, finding such resources may be an overwhelming task, given the large number of websites available on any topic. (Mardis et al., 2012) Suggestions for finding an excellent resource for your class are much the same as how you find suitable teaching resources of any kind.

**Surfing the web:** The internet is the best and easiest place to find digital resources. Even beginning with a simple search on Google for " (desired subject here) digital museum" can yield some great results! If a teacher wants to view not just individual online museums, but lists of potential online resources for a topic, they can try searching "(desired subject) online resources for teachers" or "(desired subject) online museums for students." A teacher can also modify searches by grade level and content area.

**Ask peers:** Often, the best place to look for help is other educators. Many teachers are happy to give advice, resources, and even lesson plans to their colleagues. Many teachers contribute to forums or run their own blogs about their curriculum and to help other teachers by giving new ideas and advice. If an educator has not yet looked for any communities of teachers online, this is worth a shot. Websites that are helpful for lists of online museums, archives, and libraries can be found in appendix A.

It is worth remembering that when an educator takes ideas, resources, or lesson plans from another educator, that teacher should always be sure to check out the digital resources personally to ensure it will suit their student's needs. Use common sense too, even if another teacher says the lesson worked "perfectly!" educators should rely on their own interpretations of how the resource will play out in their particular class.

**Talk to a librarian:** Librarians are a great resource when it comes to looking for materials to put into lesson plans. Some schools have a librarians who can assist with locating materials for curriculum. Otherwise, educators can seek out a reference librarian at a local public library. Even if a librarian does not know a source that can helpful right away, they may be able to give insights on how to search for the right type of resource.

**Museum, government agency, and library sites:** A great place to start looking for digital resources are museum, government agency, university, and library websites. Websites like these often feature permanent or temporary online exhibits, often created as the result of grants, and this money may can increase the quality of the site. Another advantage of digital resources that

originate from the aforementioned sources is that the information found on these sites may be more reliable, or easier to verify.

## Conclusion

The overall growth of internet and technology use, as well as the increasing amount of students who have access to the internet, suggests that teachers can strengthen their teaching by incorporating technology into their curriculum. Online, there are a wealth of digital museums, libraries, and archives which are great resources for teachers to incorporate into their teaching. The resources listed after this article may be consulted for more information about how to best incorporate digital resources into the classroom. Additionally, the appendix provides multiple sites that teachers can use as a portal to some great online educational resources. Like all teaching practices, planning and practice and central to success of both the teacher and the student. Best of luck!

## Resources

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**Appendix A: Suggested Websites for Finding Online Resources**

Educational Technology and Mobile Learning: 20 Wonderful Online Museums and Sites for Virtual Field trips to Use in Class. http://www.educatorstechnology.com/2014/01/20-wonderful-online-museums-and-sites.html

Eduscapes: Digital and Virtual Museums http://eduscapes.com/tap/topic35a.htm

Free Tech 4 Teachers: 7 Good Virtual Tours for Students. http://www.freetech4teachers.com/2013/04/7-good-virtual-tours-for-students.html#.Vt5HoFKnllI

Literacy Net: Online Science Museums http://literacynet.org/science/museums.html

Making Teachers Nerdy: Best Online Interactive Museum Exhibits for Students. http://mrssmoke.onsugar.com/Best-Online-Interactive-Museum-Exhibits-Students-2871369

Open Education Database: 250+ Killer Digital Libraries and Archives. http://oedb.org/ilibrarian/250-plus-killer-digital-libraries-and-archives/

Teach Hub: Google for Teachers: Using Art Project for Virtual Field Trips. http://www.teachhub.com/google-art-project

The Teachers Guide: Virtual Field Trips, Virtual Tours http://www.theteachersguide.com/virtualtours.html

# 19

# Library Burnout: Recognizing the causes and dealing with the effects

# Kathryn Bodnar

It's no secret that job stress can build up over time and lead to emotional exhaustion and eventual burnout. Despite the fact that librarianship is often stereotyped as a low-stress job, there are still many employment factors within the profession that can cause stress and eventually lead to burnout. Of these, emotional labor contributes largely to feelings of burnout and many librarians suffer from the emotional consequences related to any sort of work with the public, teaching, or customer service. There is a plethora of research and literature related to the burnout phenomena, but this is often focused on careers that are more commonly perceived as high stress by the public such as medical or law enforcement careers. It is important to recognize that burnout can and does affect library professionals. The teaching aspect of instruction librarianship in particular certainly requires a high level of emotional labor, which numerous studies have linked to burnout . This paper will provide an overview of the aspects of instruction librarianship that can lead to burnout and also a variety of methods for preventing or at the very least coping with the consequences of professional burnout.

Job burnout is a psychological occurrence related to excess stress in the workplace or even prolonged exposure to lower levels of stress. The Maslach Burnout Inventory, originally developed by Christina Maslach and Susan E. Jackson in 1981, is still one of the most frequently referenced tools used to measure burnout among professionals. In the original Maslach Burnout Inventory manual Maslach and Jackson identified three factors of burnout, which are emotional exhaustion, depersonalization or negative feelings about clients, and a reduced sense of personal accomplishment (Maslach & Jackson, 1981). While the presence of these factors among employees does not necessarily imply a feeling of burnout, a high level of any factor or a combination of these factors is how Maslach and Jackson attempt to quantitatively define burnout in the workplace. Burnout factors can, of course, be present in any profession but research has shown a high level of correlation between jobs that require emotional labor and the factors defined in the Maslach Burnout Inventory.

The term "emotional labor" was first coined by Arlie Hochschild in her book T he managed heart: Commercialization of human feeling. In this work, Hochschild (1983) defines emotional labor as a type of labor which "requires one to induce or suppress feeling in order to sustain the outward countenance that produces the proper state of mind in others" (p. 7). Literature suggests that both sincere and insincere attempts to act in a way that pleases clients can lead to job burnout. Hochschild believes that employees who are too invested in providing friendly, personalized service are at the most risk for burnout. She suggests that this type of employee, by being overly eager to provide personalized service, has a harder time distancing themselves from inappropriately personal behavior towards them. This leads to increased stress in the workplace and Hochschild believes that because of this stress the employee "stops caring and becomes

more detached from the people she serves" (p. 187). This description aligns very well with Maslach Burnout Inventory, which identifies depersonalization or a sense of detachment from the clients being served as a key factor in cases of burnout. On the other hand, recent studies such as that conducted by Andela, Truchot, and Borteyrou (2015) have also shown that attempting to fake personalized customer service can also contribute to burnout.

A 2015 study by Andela, Truchot, and Borteyrou looked into the connection between emotional labor and burnout and the effects of surface acting and emotional dissonance specifically. Andela, Truchot, and Borteyrou (2015) explain that surface acting is when employees "work at suppressing their true feelings and display more emotions than they feel by amplifying their emotions or feigning the required emotions" (p. 322). The authors go on to explain that surface acting has been linked to emotional exhaustion and depersonalization as well as difficulty recognizing personal achievement. They also found the same relationship between these effects and emotional dissonance, which they define as "the conflict between felt and displayed emotions, manifest or potential" (p. 323). Librarians and instructors often have to employ emotional labor in order to project a countenance that is welcoming to patrons and encouraging to students. While there is not much literature linking emotional labor and librarianship in particular, a study by Julien and Genius (2009) looked at this relationship by reviewing diary entries written by instruction librarians. In reviewing the they found that some participants in the study "revealed significant dissonance between their instructional experiences and their feelings" caused by job expectations requiring these librarians "to display emotions consistent with organizational goals" (p. 932). These findings show that librarians clearly take part in emotional labor as well as surface acting both in their instructional roles and in their professional relationships. Considering the correlation Andela, Truchot, and Borteyrou (2015) found between surface acting and all three components of the Maslach Burnout Inventory, it is clear that the emotional labor of librarianship can contribute to job burnout.

Unfortunately for librarians, societal conceptions of the profession have led many people to believe that burnout is not an issue in libraries. Burnout is often considered a hazard of "high--stress" professions such as those of doctors, lawyers, or firefighters. Librarianship, in contrast, has for various reasons been stereotyped as a "low-stress" profession. This is an old stereotype, but also one that is not showing any signs of changing. In fact, the website CareerCast has listed librarian as one the ten least stressful professions in both 2015 and 2016. These lists of most and least stressful jobs from CareerCast are often cited in articles from major news providers such as Forbes and Time Magazine, so it is unsurprising that the public is often unaware of the stress librarians experience. Interestingly enough, instruction librarians have to deal with these same perceptions even though teaching is often seen as a fairly high-stress profession.

Nancy McCormack (2013) in her article M*anaging burnout in the workplace: a guide for information professionals* addresses the discrepancy between perceptions of instructors and instruction librarians and states that:

not only were librarians who teach not given the respect that is accorded to fulltime instructors, they sometimes felt resented by their own colleagues or administrators…As a result, the teaching librarian was often made to feel that she neither really part of the faculty nor really one of the staff. (p. 87).

Despite the fact that teaching is a key component of an instruction librarian's work, they are not seen as instructors on the same level as school teachers or university professors. This is often because of the inconsistent and ambiguous professional status of librarians who, depending on the institution, are sometimes considered faculty and in other cases considered staff. Another factor that contributes to this stereotype is the nature of instruction sessions at many institutions, in which librarians provide a oneshot lesson and then move onto another class. Not only does this model prevent instruction librarians from becoming more visible as instructors, but it can also cause these librarians to feel stress that contributes to burnout.

On her blog, instruction librarian Maria Accardi (2015) addresses the harm that can come from oneshot instruction sessions and points out that as an instruction librarian "you may never see a student again, let alone know the true impact of the session… it is difficult to perceive the rewards of the hard work of teaching" (Librarian Burnout). University professors see their students consistently over the course of a semester, or even longer, and so they have the opportunity to observe any progress their students make. Instruction librarians generally only see a student for one class session and will most likely not be able to see how their teaching made a difference in the education of these students. The Maslach Burnout Inventory specifically identifies a reduced sense of personal accomplishment as one of the key components contributing to professional burnout. If instruction librarians are unable to see the impact their work is making they could easily fall into the trap of believing they haven't accomplished enough in their instruction sessions.

There are other problems that can arise from the one-shot model of library instruction session as well. These classes often teach students the basics of conducting research and how to use library resources and so, even when working with students from vastly different disciplines, these introductory instruction courses often become extremely repetitive. In their publications, Sheesley (2001), Ray (2002), McCormack (2013), and Accardi (2015) all point to the harmfully repetitive nature of library instruction as a professional stressor. McCormack specifically suggests that in these situations instruction librarians experience "little intellectual stimulation", which can lead to dissatisfaction with their work (p. 87). Teaching, of course, is not the only stressful aspect of librarianship and in contrast with the stereotypes of the profession, there is plenty of research to suggest that libraries have their own unique stressors just like any other workplace.

In addition to the aforementioned stereotypes librarians face, the evolving nature of libraries as technology progresses is often cited as a source of stress as well. Harwell (2008) references a variety of technological problems including computer malfunctions and network connectivity difficulties as a source of stress for many librarians (p. 384). While some libraries have information technology specialists to troubleshoot these issues, librarians are generally the ones on the front lines and they are the ones who patrons will turn to when something goes wrong. There are also plenty of libraries who don't have IT staff on site or at least not at all branches, meaning librarians are often responsible for attempting to get technology back in working order. Even when libraries do have the benefit of onsite IT professionals, this can cause its own problems. The roles of separate departments are often confused either by patrons or by the employees themselves who are stuck trying to provide a myriad of different services. Librarians

nowadays also have to navigate the current transition to or addition of electronic materials in a system that is still straddling the line between print and digital collections.

The addition of digital resources in a library that is still maintaining a print collection as well can strain the library's budget. Even conversion from print to digital materials can be a long and costly process as well. Both the technical work and budgetary decisions involved in the evolution of modern libraries can put strain on the employees. At state funded institutions the stress of this process is frequently compounded by shrinking library budgets. Until libraries move to a completely digital system, librarians are forced to juggle the responsibilities of maintaining print and digital collection simultaneously. In addition to this, librarians have to deal with the recent inundation of speculation about the future of libraries. McCormack (2013) says:

It would be startling to come across an article predicting the end of policing, nursing, teaching or firefighting as professions. That's not true, unfortunately, for librarians. On a regular basis, those who work in the information professions see articles predicting the end libraries, librarians and books themselves. (p. 57)

While trying to gracefully maneuver the application of emerging technologies in the library field, librarians also have to address the concerns and criticisms of a public that often questions the very validity of their profession. Instruction librarians in particular often have the added responsibility of assessment. While the assessment can be used for personal improvement, it is more often required as a way of quantitatively proving the value and impact of library instruction. The obligation to constantly justify their work is certainly a contributing factor to job stress among librarians.

It is essential to identify and continue to look for aspects of librarianship that could contribute to burnout within the profession. Determining the sources of workplace stress is one of the first steps in finding ways to manage it before burnout occurs. Identifying sources of stress within librarianship can also lead to a discussion of ways to improve education and training in library fields. Job stress will always be a reality and it important that librarians know how to handle this reality, but there are certainly improvements that can be made. Nancy McCormack (2013) found that library schools do little to prepare librarians for management positions (p. 63) and suggests that even in supervisory positions librarians are stuck acting as security guards trying to enforce behavior policies with little to training in this type of work (p. 7576). For instruction librarians specifically, Sheesley (2001) suggests that preparation for teaching is inadequate and this fact, combined with the high hopes that these new librarians often have for themselves, can be a significant source of stress (448). Library science schools should certainly take these findings into consideration, but in the meantime there a myriad of different ways in which current librarians can deal with workplace stress and even feelings of burnout.

Although some librarians may have the impression of leaving school unprepared for some aspects of their positions, continuing education and workshops can help with these feelings. Organizations can help their employees by encouraging these efforts or even hosting their own workshops. An increase in options for online courses, either formal graduate courses or webinars, also presents a great opportunity for librarians to pursue further education without

having to invest as much time or money for travel as in a traditional graduate program. Sheesley (2001) also suggests that librarians can look to others in the library field for support and says:

Engaging in group projects with other teaching librarians either formally, through local, regional, and national professional organizations, or informally, by collaborating with a colleague on the writing of an article, contributes to intellectual stimulation and can lessen feelings of isolation. (p. 450).

This collaboration can help librarians discover not only provides a chance for a sort of continuing education but can also offer librarians a chance to connect on a personal level. This support can give librarians to discuss similar experiences or even just share their feelings about their work.

Having a support network, or even just a place to vent, can be a great help in coping with job stress. Particularly since emotional labor, which is generally an aspect of librarianship, can force employees to fake their emotions or hide their true emotions, having a space to discuss work - related feelings sincerely is extremely valuable. Social media and Web 2.0 tools as a whole have expanded the opportunities for librarians to connect with others. Maria Accardi's blog, *Librarian Burnout*, focuses not only researching burnout but also seeks to provide a place for librarians to share their stories. She states that:

Sharing personal narratives about burnout serves numerous useful functions… it is helpful and cathartic to commiserate through sharing stories… It can also lead to productive problem solving… But perhaps most importantly, sharing burnout narratives also has the effect of reclaiming one's sense of humanity. Dehumanization is one of the more troubling effects of burnout, but stories are what make us human. (2015).

As mentioned in the article, burnout can cause dehumanization and it is listed as one of the key components of the Maslach Burnout Inventory. This aspect of burnout is also one that very clearly affects not only the librarian experiencing burnout but also the patrons they are trying to serve. When librarians stop seeing their patrons as fellow humans and individuals, they will inevitably stop providing the best quality of service. Of course there is also the problem of patrons forgetting that librarians are also individuals and not just a means to receive the service they need. Communicating with others within the librarian profession and also outside of it can remind both librarians and library patrons of their connections to others and that we are all human.

Of course there is not one correct way to deal with stress and burnout, and while collaboration and connections with other librarians can be helpful for some, getting away from the professional sphere can also help fight burnout. Dehumanization is one aspect of burnout but a decreased sense of personal accomplishment is also a contributing factor. For some, constant comparison with others in the library profession can actually be harmful because it causes them to diminish their own accomplishments. Karen Jensen, on the Teen Librarian Toolbox website, talks about the importance of unplugging to cope with burnout and states:

Part of taking a break means unplugging from your job, but also form the library world. One thing that can contribute to burn out is the constant social comparison we are able to do, that we do without even thinking, because of the ubiquitous access we have to other librarians and their successes. (2013).

Social media, in this case, functions as a doubleedged sword, allowing librarians to easily connect with their colleagues but also inundating their personal life with workrelated material.

Similarly, continuing education can be a great way to become inspired, but it also fine for librarians to admit that sometimes they just don't have the motivation to completely revamp their methods or invent a great new program. Taking a break from work is often a recommendation for dealing with stress and burnout, but this isn't always an option. Jensen (2013) recommends coasting, or relying on what has already been done, as a way to cope with burnout. When inspiration does strike, it can useful to write down new ideas and keep track of successful programs or instructional sessions. These records can a great resource to fall back on when experiencing increased stress or burnout. In the same way, putting together a file of ideas from library colleagues can serve as a backup for librarians who need a break.

Job stress is a reality of life and although librarianship is often seen as a low-stress job, it has plenty of its own unique stressors. Instruction librarians deal with all the stress related to teaching but are often not given the same respect that is awarded to full-time teachers or professors. Many librarians, including instruction librarians, spend much of their time working with the public and like most customer service positions, this requires emotional labor that can be taxing. Librarians have also expressed that they don't always feel prepared by their library schools for the actual work they are expected to do such as teaching for working in a managerial position. On top of this lack of preparation, these librarians are working in a field where they must constantly justify their value to society as news articles predict the end of libraries. While there is no quick solution to these problems, it is important that library employees realize how the professional environment can lead to burnout and learn to manage workplace stress. Whether they do this by seeking to form connections with their colleagues or by allowing themselves time to disconnect from the library world, library professionals must find a way to cope with workplace stress to preserve their mental and emotional well being.

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# Biographies

**Student Biographies**

**Saleh Aljalahmah** is an international student from Kuwait. He grew up in Kuwait City and has a Bachelor's and Master's degrees in library and information science from Kuwait. He is currently a graduate student working towards a Master's in Library and Information Science at the University of Denver. He likes sports especially swimming, and music and Arts in general. For more information, please check his portfolio: http://portfolio.du.edu/saljalah/page/56091

**Kathryn Bodnar** is an MLIS student at the University of Denver graduating in June 2016. She also holds a Master of Arts in Spanish from the University of Wyoming and speaks French as well. Kathryn currently works in a public library but is interested in moving into academic libraries after graduation. She is especially interested in using her knowledge of French and Spanish to improve foreign language collections and services in libraries. Kathryn can be contacted through her website: https://kathrynbodnar.wordpress.com/

**Michael Bovee** is a graduate student in the Library and Information Science program at the University of Denver. He earned a Bachelor's degree in Philosophy from Regis University, where he primarily studied political theory and ethics. He's currently interested in critical librarianship and archival studies. Michael mostly enjoys spending time outdoors and would like to pursue a career at an academic institution somewhere that would enable him to do so. He can be contacted at michael.bovee@du.edu.

**Kerena Burns** is a graduate student at the University of Denver working on a Master's in Library and Information Science. She has always enjoyed working with children and young people and hopes to put her own education to good work someday soon as a teacher librarian in any K-12 setting. She can be reached at: Kerena.burns@du.edu

**Andrea Copland** grew up in Castle Rock, CO and has her undergraduate degree in Oboe Performance from the Lamont School of Music at the University of Denver. She currently works at the Bonfils-Stanton Music Library and is enrolled in the Master's of Library and Information Science program at Morgridge College of Education. Following her MLS from Morgridge, she will be applying to conservatories to pursue masters and doctoral degrees in music. Ultimately, she hopes to contribute to music information literacy and instruction by incorporating performance practice into scholarship.

**Meghan Damour** is an MLIS candidate at the University of Denver planning to graduate in 2017. She currently works at the Anschutz Medical Campus Health Sciences Library in Aurora, Colorado as an Education and Reference Intern. Meghan is a Colorado native and attended the University of Colorado Boulder for her undergraduate degree in Linguistics and Spanish Language & Literature. Her interests and hobbies include public health, health literacy, travel, animals (including cats), and the arts. She plans to pursue a career in medical or academic librarianship after graduation. For more information and contact details, please visit https://www.linkedin.com/in/meghandamour

**Meghan Ecklund** graduated with her undergraduate degree from the University of Colorado-Boulder in Anthropology and Studio Art. Currently, she is a first year graduate student at the University of Colorado-Denver, Library and Information Sciences. She has always had a passion for museum and library work. Upon graduation, she hopes to begin her career as an archivist. Meghan has lived in Colorado most of her life. In her free time, she enjoys spending time with her family, creating art, reading, going to musicals, hiking, skiing, and playing with her kitty. Meghan can be contacted through her portfolio:  http://portfolio.du.edu/mecklund

**Chelsea Heinbach** is a MLIS student at the University of Denver graduating in June of 2016. She is a research and instruction graduate assistant in Outreach and Education at Auraria Library serving the University of Colorado, Denver, Metropolitan State University, and the Community College of Denver. Chelsea is interested in instruction and reference in an academic library and her research interests include inclusivity in academia and information literacy pedagogy. She can be reached via her LinkedIn at: https://www.linkedin.com/in/chelseaheinbach

**Cyndi Landis** is a graduate student at Emporia State University's School of Library and Information Management. She has a Bachelor of Arts in Spanish, Advertising, and International Studies from Kansas State University. Upon graduation, she hopes to become a Liaison Librarian in an academic setting. Cyndi can be contacted via LinkedIn: https://www.linkedin.com/in/cyndilandis

**Rachel Reddick** is a Denver native with a BA in English and a minor in History from the University of Northern Colorado.  She is set to graduate from the University of Denver in the summer of 2016 with an MLIS.  Her focus is in public librarianship, particularly adult and teen services. In her spare time, she enjoys knitting and quilting.  She can be reached through https://www.linkedin.com/in/rachelreddick

**Joe Richard** is a second year Library and Information Science graduate candidate at the University of Denver's Morgridge College of Education. His research interests include, the Micro-library movement and DIY librarianship, community engagement, and inclusive programming. Joe can be contacted at @thatismyhat on Twitter.

**Renate Robey** is a graduate student in the University of Denver's Library and Information Science Program. Before studying at DU, Renate was a newspaper reporter for The Denver Post and a freelance journalist.  Renate's focus now is outreach programming for public libraries. She is passionate about working with seniors to address the generational digital divide.  Renate can be reached through LinkedIn at  https://www.linkedin.com/in/renaterobey

**Cortnye Rusch** is a graduate student in the Library and Information Sciences program at the University of Denver. She earned her Bachelor of Arts in Art History and English from the same university. After graduating, Cortnye would like to pursue her master's in elementary education. Cortnye can be reached through LinkedIn: https://www.linkedin.com/in/cortnyerusch

**Joanna Stankiewicz** is a graduate student in Library and Information Science at the University of Denver. She has a Bachelor of Arts in English and History from Augustana College. Upon graduation she hopes to become an instruction librarian in an academic setting. Originally from

Eastern Europe she is passionate about folk dancing and advocating for ESL, ELL, and LEP students in American classrooms. Joanna can be contacted through LinkedIn: https://www.linkedin.com/in/joanna1228

**Rebekah Thurston** is a graduate student in the University of Denver's Library and Information Science Program. Rebekah's undergraduate degree is in History, and before studying at DU, she worked as a high school U.S. History teacher. Rebekah is passionate about effectively using technology in instruction to increase student success.

**Brittiny Tirapelle** is a graduate student in the Library and Information Science program at the University of Denver. She received her Associates of Science in Library Technology from Pasadena City College and her Bachelor of Arts in History from Sonoma State University. As a first-generation, low-income college student, Brittiny is also a former McNair Scholar and presented her research on Elizabethan English choirboys at the Annual SSU Symposium in Spring 2015 – the publication of which is to be released later this year. Upon graduation, Brittiny hopes to combine her love of history and art within an academic library setting. Brittiny can be contacted via LinkedIn: https://www.linkedin.com/in/btirapelle

**Kate Wimer** has a degree in history from Harding University, but has dabbled for the last six years in the worlds of theatre and MIS. When not color-coding the reference office at the University of Denver libraries or catching up on homework for the Masters of Library Science at DU, she can often be found exploring the mountains with her husband. Kate can be contacted on LinkedIn at https://www.linkedin.com/in/KateWimer

**Paul Worrell** is a graduate student in Library and Information Science at the University of Denver.  He worked as an elementary educator for the past five years  and brings this teaching background into his present goal of becoming an instruction librarian in an academic setting.  Currently he works as a Graduate Assistant in Research and Instruction at Auraria Library, teaching information literacy skills to undergraduate students from three distinct campuses. Paul can be contacted via LinkedIn: https://linkedin.com/in/paulworrell

**Tiegan Ziegler** is a current graduate student at the University of Denver in the Library and Information Science program. She has a tremendous love of learning, which is a huge perk of joining the library profession. With the way the field is constantly changing and evolving to fit with society's needs, one has to be able to be flexible and change with the library – this means constantly striving to learn new things and help others learn them, too. Whether this means helping people stay up-to-date on technology, or helping them in their day-to-day research needs, or even exploring an unfamiliar genre to help find a new a book – she is ready and willing to help. Tiegan can be contacted through her LinkedIn profile: https://www.linkedin.com/in/tiegan-ziegler-938672104

**Teacher Biography**

**Alison Hicks** is a PhD Candidate in Information Studies at Charles Sturt University, Australia, and the Romance Language Librarian at the University of Colorado Boulder. With an MA from the University of St Andrews, Scotland, and an MSIS from the University of Texas, Austin, Alison's research centres on the idea of transition within information literacy practices, including in higher education, intercultural and workplace contexts. Originally from the UK, she is fluent in French and Spanish and is happiest when she is hiking. Alison can be found on Twitter @alisonhicks0 and contacted through her website: http://alisonhicks.weebly.com/