



LOEX QUARTERLY

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Since we are at a time of year when there is a decent amount of turnover and movement for librarians at the various LOEX institutions, I'd like to remind people that LOEX members are just that—institutional members. If your institution, no matter how big or small, pays the annual membership fee (less than \$100 total per year), ***all*** librarians and staff at that institution are considered members. That means each person is free to join the LOEX E-list (to get notifications when the Currents and Quarterly are published, along with notifications about the conference) and also get other benefits such as priority and discounted rates to the annual LOEX conference. Simply email contact@loex.org if you want to join the e-list, and if you want the membership benefits for the conference, just make sure your institution is a member when registration rolls around in February.

In this issue of the Quarterly, we have a review of a book on Collaborative Learning—a particular useful topic with the amount of group work required in a modern classroom. We have an article on anticipatory sets, which help make sure your instruction sessions start on the right foot. Also, we have two authors examine how to use more than one framework (i.e., beyond the ACRL Framework) in your instruction. In TechMatters, our columnist highlights a few extensions that would make a tool used daily by instruction librarians, the internet browser, more useful. Lastly, we end with an interview with a librarian who has been the chair of a key ACRL task force while also working to best handle increasing and varied responsibilities at her library.

Happy instructing,

Brad Sietz
Director

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**Book Review: Collaborative Learning Techniques:
A Handbook for College Faculty (2nd ed.) by Barkley, Cross, and Major (2014)**
Megan Hodge, Virginia Commonwealth University

In the 1930s, psychologist Lev Vygotsky hypothesized that students who worked with other, more capable students learned more than if those students worked alone. Research in the decades since then has supported Vygotsky's foundational work: collaborative learning is positively correlated with retention, higher-order thinking, and accurate and creative problem solving. Indeed, after a review of over 500 studies of pedagogy in higher education, it was determined that the most effective teaching method is "depends on the goal, the student, the content and the teacher", but that the second most effective teaching method is "Students teaching other students" (p. 16). The benefits of collaborative learning are particularly strong for women, minorities, adult students, and international students (p. 27).

Collaborative Learning Techniques: A Handbook for College Faculty (2nd ed., 2014) by Elizabeth F. Barkley, K. Patricia Cross, and Claire H. Major provides a one-stop guide to implementing this highly effective learning strategy. The authors have varying academic backgrounds—education, psychology, and music history—but all have published and in some cases been nationally recognized for their research into active and collaborating learning and pedagogical approaches. In the authors' definition of 'collaborative learning,' two or more students work together on an activity that has been intentionally designed for a particular learning outcome, during which all group members contribute relatively equally but not equitably (p. 4). This definition contrasts with cooperative learning, where disagreement and competition are discouraged. Barkley, Major, and Cross also emphasize the difference between the larger, more generic category called group work and true collaborative learning: "Shifting responsibility to students and having the classroom vibrate with lively, energetic small-group work are attractive, but it is educationally meaningless if students are not achieving intended instructional goals" (p. 5). This type of understanding of learning theory undergirds all parts of the book, from the guidelines for forming groups to each activity's introduction. *Collaborative Learning Techniques* will therefore be especially welcome to instruction librarians confident in their ability to foster an engaging classroom and who are now desirous of increasing the effectiveness of their instruction.

The authors note that most of what they present is not innovative or new; indeed, familiar activities such as think-pair-share and peer editing are included here. Instead, the intent of the book is to collect a variety of collaborative activities whose effectiveness has been demonstrated in the literature, and to help readers brainstorm how they might implement each activity in their own classroom by supplementing activity instructions with examples and ideas. This is the same format as was used in the landmark *Classroom Assessment Techniques: A Handbook for College Teachers* (first published in 1988), which was co-written Cross, a *Collaborative Learning Techniques* co-author.

Logistics of Designing and Implementing Collaborative Learning

A significant portion of the book is dedicated to a review of the literature on collaborative learning and general information on the logistics of designing and implementing a successful collaborative activity; as the authors readily admit, it can be skipped (or at least skimmed) by readers who have greater familiarity with collaborative learning. The second section of the book following this literature review provides guidance for designing learning tasks, including the stipulations that tasks should stem from the planned learning outcomes (advice that will be familiar to anyone with cursory knowledge of backwards design) and that tasks should clearly support those learning outcomes to avoid students perceiving them as busywork. Because students can be reluctant to participate in active learning techniques if they are not accustomed to them or have had negative prior experiences with them, the authors also provide a variety of activities that can be used to increase student comfort. The icebreakers and activities that focus on introducing course policies and procedures are geared towards instructional scenarios where time can be spared for activities which do not serve more than one pedagogical function (e.g., semester-long courses). However, activities in this section that are included as a way of introducing a course can be used even within the time-constrained confines of a one-shot in the form of "bell work" as students trickle in before class and as a way of activating students' prior knowledge, which should be done by all teachers before introducing new information. One example of this is the "Common-Sense Inventory," where a table of statements about a course topic (e.g., source differentiation or source evaluation), and a column each for true and false, are projected on a whiteboard. Students get in small groups and put hash marks in what they think are the appropriate column for each statement; this can be followed by an instructor-led class discussion of each statement.

Comprehensive guidance is also provided for forming groups, a logistical detail that can be especially difficult in the one-shot classroom. Designing groups to be heterogeneous is the most pedagogically effective grouping mechanism overall for groups, but it can marginalize underrepresented groups (women, minorities, etc.) and prevent lower-achieving students from taking on leadership roles within their groups. Group homogeneity, conversely, can increase student comfort when discussing controversial or sensitive topics. Multiple strategies are provided for quickly creating freeform groups, which can be especially helpful for breaking up cliques whose members are unknown to you in a one-shot situation. Suggestions for forming groups within a variety of classroom settings (lecture hall, seminar room, and so on) are provided as well.

The final part of the introductory material is a section on avoiding and resolving problems common to collaborative learning, though most of the suggestions will work best, and

perhaps only, in the for-credit classroom. For example, student resistance to group work can be overcome by planning an extensive orientation to the activity; the difficulties created by students with poor interpersonal skills can be navigated by assigning each group member a role; and students can be incentivized to assume leadership roles via additional grade points. However, several pieces of troubleshooting advice will be of use even in the one-shot classroom: off-task behavior can be avoided by setting a hard-to-reach time limit, while also preparing ‘sponge’ activities that expand to fill the allotted time if there are still groups which finish earlier.

Techniques for Collaborative Learning

What follows this background and foundational information is the book’s third section: a review of 35 collaborative learning techniques, or CoLTs. Each CoLT shares a template that includes the activity’s characteristics (group size; time on task, i.e., classroom time needed; group duration); its description/purpose; what must be done in preparation; the implementation procedure for face-to-face classes; the implementation procedure for online classes; examples of how the CoLT has been used in the fictional classrooms of faculty from a variety of disciplines; variations and extensions on the activity; observations and advice; and primary resources for those who wish to read more about the CoLT in the literature. The characteristics (e.g., “**Group Size:** 2 then 4; **Time on Task:** 15-30 minutes; **Duration of Groups:** Single Session”) are very helpful for determining at a glance whether a technique would work in a one-shot instructional scenario.

As the authors note, “The easiest approach to incorporating collaborative learning is to look at what you do now and see if one or more activities could be done collaboratively” (p. 138). To make that review process easier, the CoLTs are organized by activity type into chapters:

- reciprocal teaching,
- problem-solving,
- discussion,
- graphic information organizing,
- collaborative writing, and
- gaming.

Within each of these six chapters, activities are organized from least to most complex; for example, the discussion chapter begins with Think-Pair-Share and ends with Critical Debates; the reciprocal teaching chapter begins with Note-Taking Pairs and ends with Test-Taking Teams.

Discussion, for example, can be an effective instructional strategy for helping students think through new ideas and to examine their own conceptions, but can make for an uneven learning experience if a handful of students dominate the conversation and others listen passively while others participate. Discussion can also be off-putting to students who are English language learners or who otherwise need more time to think before responding. The six discussion CoLTs address these issues.

One discussion CoLT, Three-Step Interview, ensures participation from all students, helps them more deeply understand both course content and their fellow classmates’ perspectives, and generates ideas that can be used later on in the class—think of it as a more involved Think-Pair-Share. Students form pairs and each student takes a turn asking the other a series of instructor-provided questions, such as “If you were looking for information on [topic], what are some characteristics you would look for to ensure the source was trustworthy?” and “Where else would you go, beyond the site itself, to evaluate a site’s trustworthiness?” In addition to the instructor-provided questions, students can follow up with questions of their own, asking in a nonjudgmental way to help clarify their partner’s responses. After 5-10 minutes, each pair of students then finds another and the four students take turns describing their teammate’s thoughts to the other student pair; this act of “summarize and synthesize” (p. 175) helps students understand the information at a deeper level. After the activity has concluded, students can be asked to volunteer to the class some of the ideas that were shared in their groups. In this source evaluation scenario, group responses could be categorized thematically, such as those in source evaluation acronyms like CRAAP (Currency, Relevance, Accuracy, Authority, and Purpose) or the five Ws (Who, What, When, Where, and Why) that could be used to guide further class discussion on the topic; other responses could prompt a brief introduction to concepts such as the importance of lateral reading. The use of this particular discussion CoLT is likely to elicit a wide variety of responses because all students must participate. Because this required participation is low-stakes, however—students share their own ideas with only one person, then share the thoughts of their classmate with another group—it is less intimidating to shy students and English language learners.

Conclusion

Collaborative Learning Techniques is the ideal resource for librarians with at least a few years of instruction experience. While most of the activities are not complex, they do all require thoughtful planning and familiarity with the instructional scenario in which they will be used; the authors further note that its easiest to implement CoLTs when the underlying activity—discussion, reciprocal teaching, etc.—is already being used in your classroom. For this reason, inexperienced teachers may prefer and find greater success with more prescriptive and library-centric collections of instructional activities such as *The Library Instruction Cookbook* (2009) and *Teaching Information Literacy: 50 Standards-Based Exercises for College Students* (2010).

On the other hand, those who like me have been providing library instruction in either one-shot or for-credit form for several years may be finding the highly specific activities in many books specifically directed at instruction librarians to be of decreasing use. Reading *Collaborative Learning Techniques* was a revelation because many of the CoLTs inspired multiple ideas for their use. More experienced librarians who already have a repertoire of go-to activities could find themselves supplementing (if not replacing) their dog-eared copies of such texts with this single volume.

Anticipatory Sets: Setting the Stage for Learning

Brandon K. West, State University of New York at Geneseo
Anne C. Deutsch, State University of New York at New Paltz

Have you ever started a class only to be met with blank stares and seeming indifference? Or wished that you had diagnostic information to help guide your instruction? Whether you are leading a 50-minute one-shot or conducting the third class of your semester-long course, you want to get each instruction session started on the right foot. Anticipatory sets are activities aligned with student learning objectives (SLOs) that set the stage for immediate learning opportunities. Also called hooks, bridges and attention grabbers, these activities engage students' prior knowledge and interest at the very beginning of a class period.

As an example, consider an information literacy instruction session for a first year course in the fall semester. To launch the class, you ask students to reflect on a meaningful, recent task that every student would be familiar with: the research process they undertook to choose a college. After several minutes of reflection, you have students discuss that process with their neighbor and then have the whole class share out. You then facilitate a discussion comparing and contrasting the information resources mentioned to information resources collected in an academic library. With this anticipatory set you immediately engaged students, uncovered and recognized their existing knowledge, and began connecting that knowledge to new knowledge.

In her 1982 classic *Mastery Teaching*, Madeline Hunter refers to the first few minutes of class time as "prime time" (p. 27). She encourages teachers to take advantage of this time by starting with an anticipatory set *followed* by meaningful learning objectives (pp. 27-29). Hunter outlines three possible goals of anticipatory sets (not all sets will address every goal): focus students on learning; give students practice to help them accomplish learning objectives; and give you diagnostic information about their prior knowledge (p. 28). Many of us have been taught to begin class sessions by reviewing SLOs and many of us have observed students disengage as we perform this task. Anticipatory sets that precede and are aligned with SLOs provide context and meaning for learning from the very beginning of a class session. Successful sets have a prompt or trigger with clear instructions/expectations and an activity (e.g., writing, drawing, discussing, completing a task, solving a problem).

Notably relevant for librarians, anticipatory sets are particularly useful for single session information literacy instruction. We often enter the classroom knowing little to nothing of what our students know and, as a result, what they need to know. One of the most useful outcomes of utilizing anticipatory sets within this context is that the activity both engages prior knowledge, a proven pathway to learning, while also revealing that knowledge. This allows us to set the stage for learning and also collect valuable information about students. Additionally, anticipatory sets can give us a much needed opportunity to establish both rapport and relevance; not an easy task when enter-

ing someone else's classroom. They are also a great way to integrate the Framework for Information Literacy for Higher Education into your sessions (refer to the examples section to see how this can be accomplished).

As mentioned, anticipatory sets rely on one of the most studied aspects of learning—the importance of engaging prior knowledge to facilitate the creation of new knowledge. For an excellent overview of research in this area see Ambrose, Bridges, DiPietro, Lovett and Norman (2010). While prior knowledge is a powerful bridge to new knowledge, a word of caution is in order. If existing knowledge is inactive, insufficient, inappropriate or inaccurate it can actually impede learning (Ambrose et al., 2010, pp. 13-14). This is important to consider as you're designing the prompts. Do your best to be clear and try to keep within territory that you are fairly confident students can navigate. Further, it's essential that you provide immediate feedback when necessary to keep students on track.

Examples

Below we offer examples of anticipatory sets ranging from basic to advanced that we have used successfully for information literacy instruction. Rather than suggesting that these are the best or only sets, we offer them as a starting point for both understanding and practice.

Basic Approach To Anticipatory Sets

Strategy #1: Use of an analogy to activate prior knowledge

Related SLO: Students will identify main concepts in a research question and brainstorm synonyms and related concepts in order to search strategically for information resources.

Related Frame: Searching as Strategic Exploration

Description of Anticipatory Set:

Analogies can be a great tool for activating prior knowledge, since they are used to show similarities between related concepts. In information literacy instruction, there are many ways in which the research process can be related to everyday situations. Logistically, this is as simple as an anticipatory set gets—an analogy can be projected on a screen, drawn on a board, or stated aloud. You can increase the depth by asking students a question about the image or statement and ask them to think-pair-share. This will get students thinking and chatting right away.

Example: Comparing the Research Process to Putting a Puzzle Together

1. Project an image of a puzzle.
2. When class begins, ask students, "How do you start a puzzle?"

3. Ask students to think about strategies they have used and share with their neighbor.
4. After a couple of minutes, have students share out with the whole class.
5. Ask the students, “How are these strategies helpful for putting the puzzle together?”
6. After students share out, explain that putting a puzzle together is like the research process. If you spend time connecting corner pieces together and grouping like colors, you save time and have an easier time putting the puzzle together. Research is similar: If you spend time figuring out keywords, and choosing the right database, then your time spent finding information sources will be easier and less time consuming.
7. State your learning objectives and begin the lesson.

Intermediate Approach To Anticipatory Sets

Strategy #2: Use of a Cartoon, Pop Culture Reference, or Video Clip

Related SLO: Students will apply various theoretical lenses to a current event in order to transfer this skill when evaluating and reading research articles.

Related Frame: Research as Inquiry

Description of Anticipatory Set:

Information literacy extends far beyond the walls of the library, so beginning an instruction session with topical events via cartoons, pop culture facts, or a brief video clip can bring relevance to the students’ lives or help you connect to the subject matter of the course. You can use this as a prompt to interact with the students through call and response, think-pair-share, or an interactive poll. This will activate their prior knowledge, while helping to break the students’ blank stares and get them talking. After a couple of minutes, you can then move on toward your SLOs and introduction, and you will be able to build off the momentum from the generated discussion.

Example: Political Cartoon in a Theory-based Political Science Course

1. Have the cartoon projected on the screen as students walk in.
2. Ask them “What’s this cartoon referencing?” Ask them to share out.
3. Ask them how the meaning of the cartoon changes if they view it through the lens of a political theory, such as constructivism, radicalism, or liberalism.
4. Have the students think about it and share out again. Make sure to only apply one theory at a time.
5. Explain that as they look for research, they will not typically find articles that apply the political theories; rather, they will need to apply the theoretical lenses to the research, just as they did the cartoon.

Advanced Approach To Anticipatory Sets

Strategy #3: Replicate a Familiar Information Task

Related SLO: Students will utilize filters and advanced search strategies in order to narrow or broaden their searches in a database.

Related Frame: Searching as Strategic Exploration

Description of Anticipatory Set:

Most students are well-versed in consumer-research: they shop online, seek ratings on films and restaurants, and find information that interests them. Their experience with this type of search means that they are not “blank slates” when they enter the classroom, and it offers you an opportunity to capitalize on their prior knowledge of conducting research. When you seek diagnostic information about what students already know about an information literacy concept or skill, it can be helpful to engage students in an in-depth anticipatory set that requires them to replicate a task related to your lesson. While this generally takes more time, the resulting discussion can be weaved throughout the entire lesson.

Example: Online Scavenger Hunt for the Perfect Pair of Brown Boots

1. Tell the students you need their search prowess to find a specific item.
 - a) When deciding ahead of time what item to use in your lesson, consider that items with a unique design are excellent choices, since they will force students to think about how they describe an item; an example is a specific pair of patterned brown boots.
2. Tell the students to locate the pair of boots projected on screen, while documenting a few pieces of information along the way, such as what websites they visited, words they used for their search, and so on. We suggest telling them Google reverse image search is off limits, as that requires no strategy or activation of concepts of knowledge about the image and its context.
3. After students struggle for a few minutes, ask them about the strategies they used, including keywords, limiters, and websites. Write out these strategies on the board.
4. Discuss why they chose a specific website and briefly mention the concept of evaluating information.
5. From here, the anticipatory set is “over,” but refer back to the list of strategies that the students have utilized as you continue the lesson.

Conclusion

Not only are anticipatory sets engaging for students, they are also a great creative outlet for teachers, which can help infuse your instruction with new energy. As a teaching strategy, they provide endless possibilities for launching a class session. You can go high tech or low tech depending on the instructional need. You can also incorporate topics that interest you to help interject your personality into the lesson and build rapport

TechMatters: Browser Extensions and Add-ons for Library Instructors

Krista Graham, Georgia State University

As library instructors, we are always on the lookout for new technologies that can aid us in our efforts to improve our teaching and increase student learning. In the ongoing quest for the latest and greatest in educational technology, however, we can sometimes overlook the tools that we use on a daily basis, assuming there is nothing new to discover about them. For me, the web browser is one such technology. Recently, I was reminded of the power of browser extensions to expand the functionality of this simple tool that most of us use every day.

As a refresher, a browser extension/add-on is “a plug-in that extends the functionality of a web browser” (https://en.wikipedia.org/wiki/Browser_extension). They can be used to add features, modify page content, and integrate with other applications or services. All of the major browsers including Chrome, Firefox, Microsoft Edge, Opera, and Safari allow the use of extensions and provide “stores” that you can use to find and install them (see “Where to Find Browser Extensions” list at the end of this article). Because Chrome is by far the most used browser with a worldwide market share hovering around 60% (<http://gs.statcounter.com/>), this tool’s extensions will be our focus. That said, extensions are often developed to work with a variety of browsers, and even if that is not the case for a particular extension, you are likely to find a comparable option designed for your browser of choice.


Installing Extensions

Typically, installing an extension is as simple as pressing a button. If your extension is found in the Chrome web store, click the blue “+ ADD TO CHROME” button, and then select “Add extension” from the resulting dialog box. Alternately, if you discovered the extension while you were on the web site of another application, you will probably find an embedded button. Either way, the process is more or less the same and always fairly straightforward. Now that we’ve got the installation mechanics squared away, let’s explore a few extensions that can be particularly useful for library instructors.

ScreenCastify

<https://www.screencastify.com/>

Instructional videos and tutorials are regularly created by librarians for use both online and in the classroom. Very often such videos include an on-screen demonstration of a search tool or web application. With the ScreenCastify extension you can easily initiate a screen capture session directly from within your Chrome browser.

Once you install the extension, an arrowhead-shaped video camera icon () will appear on the toolbar to the right of the address bar. Navigate to a page that has content you want to record (e.g., a LibGuide you want to demo) and then click the ScreenCastify camera icon. If it is your first time using the tool, you will need to go through the quick setup process where you sign in to your Google account, set permissions to use your

camera/microphone and/or enable the drawing and animation tools (both are optional), and then answer a few high-level demographic questions (e.g., are you an Educator or a Corporate User; what is your education level).

ScreenCastify will give you the option to record your current browser tab, your entire desktop, or your web cam (provided you have one and have granted permission to use it). You can capture audio from either your microphone (again, provided you have one and have granted permission to use it) or the system audio or both. You can also embed your web cam if you want to appear in person within the video. You can use the drawing tools to mark up the video (e.g., circle a part of the screen you want to draw the viewer’s attention to) as it plays. Click the camera icon again to stop recording, and your video will be automatically saved to Google Drive.

With the free version of the tool, you are limited to 10-minute videos, can only create 50 videos per month, and videos will include the ScreenCastify logo. With the premium version (\$24/year) these restrictions are lifted, and you can also crop/trim videos, and export them as MP4s or animated GIFs.

InsertLearning

<https://insertlearning.com/>

InsertLearning is an extension that allows you to create and embed “interactive lessons” into any web page. When you first add the extension, you will be prompted to “Sign up with Google”, indicate whether you are a teacher or student, and—if you want—provide a name for your class.


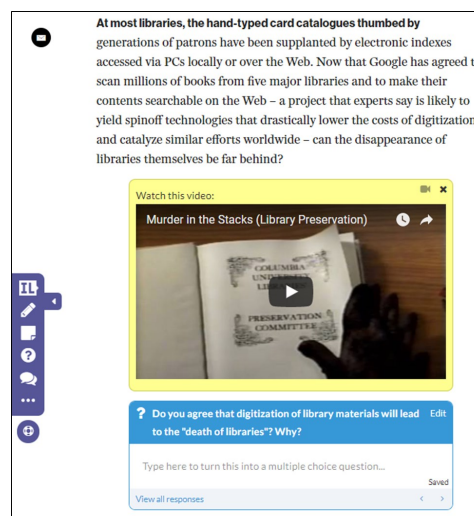
When you open the extension by clicking on the IL icon (), a toolbar will appear on the left-hand side of the screen (see Figure 1). With these tools you can highlight important text, add a sticky note into which you can add comments and/or embed additional content such as YouTube videos, insert questions for students to answer, and/or add a discussion board.

Figure 1: Use the InsertLearning toolbar to add content (such as the video and the question below).



After creating a lesson, you need to share it with your students, which you do by assigning it to a class that you have created from within the “Teacher Dashboard.” Please note that in order for students to interact with your lessons, they will need to enroll in your class with a Google ID and class code (unless you use Google Classroom) and install the InsertLearning extension in their browser.

With the free version of InsertLearning you can create a maximum of five lessons that can be used with an unlimited number of students. In order to create unlimited assignments, an annual subscription (\$40/year) is required.

Zotero Connector

<https://www.zotero.org/download/>

Many of us use, and/or teach our students to use, Zotero as a reference management tool. The Zotero Connector is a browser extension that can make your use of this tool more efficient as it can “automatically sense” and identify citation information as you browse the web and allow you or your students to save information directly into a Zotero account with the click of a button.

With the extension installed, you will notice an icon that will change depending on the type of content (e.g., article, web page, book, etc.). For example, if you are looking at a journal article, the icon will look like a tiny page from an article (📄). When you click the icon, any metadata that the extension can detect will be pulled down into Zotero where you can then review it, make any necessary changes or additions, append notes, and/or assign tags. If you are viewing a PDF, the button will change its appearance (📄) and when you click, it will download a copy into Zotero along with any metadata that it can detect.

OneTab

<https://www.one-tab.com/>

For anyone who engages in “parallel browsing” or “page parking” (see: <https://www.nngroup.com/articles/multi-tab-page-parking/>) strategies while conducting online research, this is an indispensable little tool. With a click of the funnel icon (see Figure 2), you can reduce a screen full of tabs down to a list of links on a single page (see Figure 3). As anyone who works with many tabs open knows, the problem is that they can start to eat up your computer’s resources and make it almost impossible to do any work.

OneTab allows you to reduce your open tabs down to a single page so that you can reclaim your computer’s processing power without losing all of your work. If you want to return to a page, you can do so by clicking on any one of the links which will open it in a new tab, or you can click on “restore all” to bring back your all of your tabs at once. Brilliant!

Even if you close your browser or turn your computer off, you can still retrieve all your previously open tabs; OneTab saves “tab groups” (you can even give them a name, e.g., “Library News Sites”) that you can access whenever you need them. You can add and remove sites from these groups at your convenience.

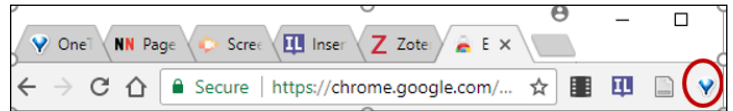


Figure 2: Chrome browser with six open tabs ; click the funnel icon on the right to get a list of links on a single page.



Figure 3: Multiple tabs reduced to one page of links by OneTab.

Extensity

<http://sergiokas.github.io/Extensity/>

Although Chrome extensions can be incredibly useful, they can also significantly increase the load on your computer’s memory, and occasionally conflict with one another in ways that can destabilize your browser. One way to mitigate these issues is to disable extensions when you are not using them. This can always be done by navigating to “More tools -> Extensions” option on the Chrome menu (it will take you to `chrome://extensions/`); once on this page, you can toggle the extensions off and/or on. Note: You can also fully remove an extension using this menu.

Alternately, you can use Extensity to quickly enable/disable any of your installed extensions. To do so, just click on the two-tone icon (🔘) in your extension toolbar and then select the extension you want to disable—one click is all you need. Using the icons at the top of the Extensity menu, you can turn all extensions off/on at the same time, go directly to the extensions management screen or change how Extensity groups & displays the extensions. It’s as simple as that!

Conclusion

The Chrome extensions described here represent only the tip of the iceberg when it comes to the potential utility of these tools for students and instructors. Remember, extensions (aka add-ons) are available for all of the major browsers and you can find them by searching the “stores” listed below. Check them out and you are certain to find a variety of options to help you engage students, improve learning, and/or simply make it easier for you to get your work done!

A Multi-Framework Approach to Teaching Data: A Case Study in Modern Languages

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When the ACRL Framework was adopted in 2016, it officially moved teaching information literacy (IL) from applying a prescriptive set of skills or learning outcomes based on standards (ACRL, 2000), to a paradigm built on “interconnected core concepts, with flexible options for implementation” that are demonstrated through knowledge practices and dispositions (ACRL, 2016). And while the Framework presents instruction librarians with pedagogical challenges, its “big picture” philosophy supports experimentation with learning principles from various disciplines and frees librarians to adapt their teaching in ways that the previous prescriptive ACRL Standards did not allow. As a result, even before the Framework was officially adopted, instruction librarians began to discuss its applications. Some voiced concerns over its clarity, practicality, research basis, and ability to reflect the diversity of learners or disciplines (ACRLog, 2015); others began to offer pedagogies for teaching it (e.g., Bravender, McClure, & Schaub, 2015; CARLI, n.d.; CUNY Academic Commons, n.d.; Kuglitsch, 2015). Although many of these pedagogies have typically centered on information literacy as a discipline, as opposed to a network of disciplines, librarians are recognizing the need to revitalize teaching pedagogies by capitalizing on the flexibility of the Framework and employing other contextual and disciplinary models for teaching information literacy. For instance, some point to an example of how decoding and backward design are used to “revise learning outcomes for information literacy” (ACRLog, 2015), while others suggest that constructs such as *transfer* or *CoRe* could be used to contextualize threshold concepts (Kuglitsch, 2015; Shinnery-Kennedy & Fincher, 2013).

At Carnegie Mellon University, the library liaison for the Department of Modern Languages and the CMU Libraries Research Data Specialist decided to work together to blend the Framework with principles from a different framework, Data Informed Learning (DIL). The latter developed as a way to address contextual concerns and has three main assumptions:

1. That new learning must build on prior knowledge or experience.
2. That learning about data must occur within a disciplinary context.
3. That learning should discover new ways of using data within their discipline. (Maybee & Zilinski, 2015)

This article illustrates a new method for teaching best data and research management practices using a two-framework approach: The Framework and DIL. Students are asked to think critically about the information creation process as they discover their own learning thresholds and chart out strategies that suit their research needs. This approach provides another example of how multiple frameworks can offer librarians better options for teaching and learning, in this case in a research data management (RDM) environment.

About the Workshop

Each fall, about a dozen graduates attend a workshop on data literacy and research management, which is a component of a required graduate professional development seminar (82-780) taught in Modern Languages at Carnegie Mellon University. The seminar focuses on second language acquisition and is an opportunity for graduate students to present their projects and receive constructive feedback. Before the workshop was revised in Fall 2015 with a two-framework approach, its lesson plan focused solely on principles drawn from the ACRL Framework, specifically addressing the second frame, Information Creation as a Process, which states that:

Information in any format is produced to convey a message and is shared via a selected delivery method. The iterative processes of researching, creating, revising, and disseminating information vary, and the resulting product reflects these differences (ACRL, 2016).

With this frame in mind, the two learning goals for the lesson stated that attendees will:

- effectively identify, define, and document reproducible data (*knowledge practice*) by understanding “good” data practices and the research data life cycle involved in its creation, dissemination, and reproducibility (*disposition*).
- learn to efficiently use Mendeley as an example of a research management tool (*knowledge practice*) to understand its role in reflecting, or contributing to, scholarly practices in the discipline (*disposition*).

Workshop activities generally consisted of input/modeling and guided practices. In other words, the library instructor would solicit input from attendees on their research practices through a series of prepared tasks where students might explore how they began their research, visualize the path taken during their research process, and reflect on their data collection and management practices. After each task, based on the input gathered, the librarian would model in front of the class additional or alternative options: for example, students might learn about available library resources that could serve as a starting point, or they may discover library services or tools that could help them at various stages in their research. The discussion culminated with a guided practice where participants would be asked to think about their specific projects and consider possible starting points, additional resources, or tools that may help them accomplish their objectives. In the end, however, while attendees satisfactorily demonstrated their understanding of the “big picture”, such as starting points and the need for an iterative process, they generally encountered obstacles when it came time to create new knowledge or apply it in an interdisciplinary context. For instance, while students understood the broader concept of gathering research data to support their project, they often struggled to determine how their practices func-

tioned in more specific contexts, like documenting their research steps for dissemination, reproducibility, or visualization.

Two Frameworks Come Together

In 2015, the Liaison for Modern Languages enlisted the help of the Research Data Specialist, in order to address issues from past years, like those discussed above. After some discussion, the workshop instructors set to revise the lesson plan by considering threshold concepts from a personal lens and blending learning principles from the Framework and DIL. The revised workshop goals still incorporate Information Creation as a Process but now center on two aspects derived from DIL: 1) demonstrating knowledge practices and dispositions by building on prior experience and disciplinary reflection, and 2) through reaching new perspectives on the research process as a whole. They state that:

- Students will examine their current information creation practices as they learn to effectively identify, define, and document data (*knowledge practice*) by understanding “good” data practices and the research data life cycle involved in its creation, dissemination, and reproducibility, relevant to their discipline (*disposition*).
[adjusted for DIL principles 1 & 2]
- Students will brainstorm possible range of tools and purposes for RDM practices within their discipline by learning to efficiently use Mendeley as one example these tools (*knowledge practice*) and understanding the tools role in reflecting, or contributing to, scholarly practices in their discipline (*disposition*), and
[adjusted for DIL principles 2 & 3]

This second set of principles allowed us to pull from students’ prior experience and situate our learning goals in an RDM environment.

The Lesson Plan

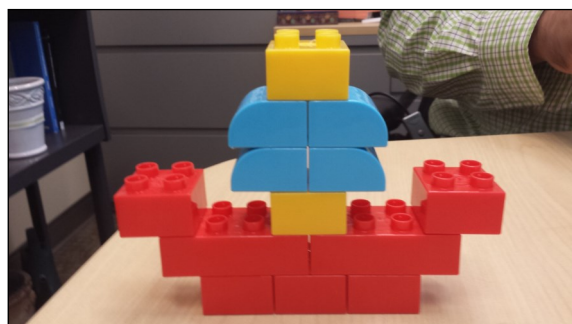
In the workshop, participants completed a series of activities that targeted the revised goals:

1. Demonstrating knowledge practices and dispositions by building on prior experience and reflecting on disciplinary practices:
 - a. Mega Blok™ Construction: Two groups were assigned to view a block construction shape for 30 seconds before disassembling it (see Figures 1 and 2).

Figure 1



Figure 2



Next, they were given about a minute and a half to write instructions for reconstructing their object using only five action words or phrases (no long or complete sentences). Finally, each group had two minutes to use instructions from another group to rebuild these objects.

- b. Reflections on Reproducibility: After the first activity, attendees were asked to describe problems encountered in re-building the object and possible ways these problems could be resolved.
 - c. Data Sharing & Management Snafu (a video watching activity): This video activity on data sharing asked viewers to think about the first activity and how various practices of colleagues in Second Language Acquisition may help or hinder the information creation process (<https://www.youtube.com/watch?v=N2zK3sAttr-4>).
2. Reaching new perspectives on the research process as a whole:
 - a. Mendeley Basics Activity: Participants were instructed on Mendeley, a tool for collecting and sharing research. They completed a series of tasks that enabled them to demonstrate basic knowledge of the tool.
 - b. Reflections on Research Management: In this activity, attendees were asked to think about a research project they planned, or are planning, and discuss changes they may make in the immediate, future, and long-term practices.

Discussion and Conclusion

This case study demonstrates how not being constrained to one framework permitted two librarians to utilize a “big picture” philosophy while also finding a practical approach to teaching information literacy by addressing knowledge practices and dispositions as a reflection of prior experience within a research and data management context. Workshop attendees used their prior experience to uncover potential blocks (thresholds) in their research practices and were challenged to renew their views on how these practices reflect, contribute, and even complicate the process of information creation.

The blended method used in the revised workshop enabled librarians and workshop attendees to dive deeper into RDM

(Multi-Framework...Continued on page 10)

(Multi-Framework...Continued from page 9)

practices. For one thing, instead of relying on attendee input, librarians could observe first-hand how participants satisfied their data and research needs and what struggles were encountered. Attendee input gathered in previous iterations of this workshop were more abstract, unclear, and less reliable as first-hand observation. The revised activities shed light on the nuances of the information creation and organization process and pointed to “threshold” areas more concretely. For example, when groups attempted to follow instructions for rebuilding objects, they quickly realized the importance of language taxonomies and the need for clarity and terminology consensus when working collaboratively. While similar points were concluded from discussions in previous workshops, the method used in the revised workshop provided tangible instances of the key talking points. In this case study, the ACRL Framework provided a good basis for lesson design, but the disciplinary context-focused framework helped with clarifying the lesson goals. That said, there were still challenges, such as addressing other ACRL frames directly due to time limitations and the narrow scope of the workshop.

As we move forward and produce more examples of multi-framework use for teaching information literacy, librarians should think about potential as well as limitations of various approaches. They might examine, for instance, the compatibility between framework models and ask which work well together and in what context: do multi-frameworks work well when teaching about information creation as when we teach searching as a strategic exploration? There’s certainly much work to be done when it comes to assessing learning with the ACRL Framework, so perhaps we can also consider whether or not multi-framework philosophies aid or complicate assessment.

(TechMatters...Continued from page 7)

Where to find Browser Extensions

Chrome Web Store

<https://chrome.google.com/webstore?hl=en>

Firefox Add-ons

<https://addons.mozilla.org/en-US/firefox/extensions/>

(Anticipatory Sets...Continued from page 5)

with students. If you are not feeling creative or are stuck, colleagues can be good spring boards for testing ideas or brainstorming possible scenarios. Consider starting with a basic anticipatory set if you want to experiment with them in your instruction. Once you are comfortable, scale up to an intermediate or advanced set. However you decide to start, this is an opportunity to have fun and explore new ways of making sure your instruction sessions are effective right from the start.

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Microsoft Store

<https://www.microsoft.com/en-us/store/collections/edgeextensions/pc>

Opera Add-ons

<https://addons.opera.com/en/>

Safari Extensions

<https://safari-extensions.apple.com/?category=productivity>

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flexibility in order to accommodate all these institutional ecosystems. I relied on my experience as an educator when working with the task force and embraced active listening, outcomes setting, and clear and consistent communication. It's tough to pinpoint one or two takeaways since I believe the experience will continue to influence my work, but I did have a renewed assurance that our profession is proactively evolving, and I was inspired by the collective passion for the future of our profession, the institutions that we serve, and our users.

How might instruction librarians use the instructional elements of the Standards for Libraries in Higher Education? How might this be contrasted with the Framework for Information Literacy for Higher Education?

I've engaged in many conversations with instruction librarians struggling with their identities—are we an academic unit or a service unit? Why chose when we can demonstrate the value we bring to both roles? One way academic units demonstrate their value is through successful student learning assessment. For instruction programs, the Framework can serve as a tool for demonstrating student learning. It gives you a flexible structure with which to hang your pedagogical successes. Along similar lines, Principle 3, Educational Role, from the *Standards for Libraries in Higher Education* illuminates the value of developing partnerships with faculty and exemplifying our expertise as educators, amongst other important roles. This is not only important to our profession but also to our institutions. In the broadest sense, both documents are powerful tools that guide our work and help demonstrate our value.

As a library leader how do you champion the value of your instructional services to campus stakeholders? Do you utilize your work with either the Standards or the Framework?

My immediate response is that I try to champion our value as frequently as possible! I use a variety of communications that are audience-specific. I share success stories internally through meetings, the staff newsletter, and reports to our administration. I also distill those reports into one-pagers that I give to department chairs and program directors across campus. Perhaps most influential are the face-to-face discussions with potential stakeholders, including faculty, administrators, and support offices—those discussions usually start with a summary of our programmatic student learning outcomes, which are influenced by the *Framework*, and examples of teaching collaborations with other departments to demonstrate the various techniques and flexibility of our program. While I may not

always point directly to the *Framework* or the *Standards for Libraries in Higher Education*, they underpin all the work that I do. I find that these documents help us remain focused on our priorities instead of drifting into areas better handled by our colleagues.

What books or articles have influenced you?

So many great publications come to mind, but I'll limit to three books—each influencing different aspects of my work:

- *Say It in Six: How to Say Exactly What You Mean in Six Minutes or Less* (1996) by Ron Hoff

As a manager, you are often asking for things, and this book guided “asks” that mattered significantly to the department. For example, I've successfully requested additional personnel and classroom space, made significant changes to our long-standing curriculum committee, and formalized teaching as a departmental priority. While success cannot be guaranteed, the strategies in this book have served me well on many occasions.

- *Transforming Information Literacy Instruction Using Learning-Centered Teaching* (2012) by Joan R. Kaplowitz

A few years ago, I requested copies of this book for everyone in the department, which I hope signaled a commitment to and confidence in the influential content. If you are aiming to develop a student-focused teaching team and cultivate an educator mindset, this book is for you. I especially love the teacher self-assessments because they have the power to generate reflective conversations amongst colleagues. Admittedly, I've read this book more times than I know. Whether you are new to teaching or have decades of experience under your belt, you will learn something.

- *Reframing Academic Leadership* (2011) by Lee G. Bolman and Joan V. Gallos

When I first took a middle management position, I struggled to resolve miscommunications and to explain decisions. This book helped me better understand the difficult yet powerful role middle managers play in our organizations. As a result, I altered my interpersonal approach to focus on what I can do differently, which included being direct with colleagues as soon as difficult situations arose.

The Quarterly Interview: Andrea Falcone

Auraria Library, University of Colorado Denver

-Edited Transcript-

LOEX: *Where do you work? What is your job title and main responsibilities? How long have you been in this position?*

Falcone: Over the last three years, I've been a library faculty member at the University of Colorado Denver. I was drawn to the Auraria Library because it serves three distinct institutions: Community College of Denver, Metropolitan State University of Denver, and the University of Colorado Denver. I stepped into a newly designed role—Department Head for Education and Outreach Services—with the aim of evolving an ad-hoc instruction program into a strategic and sustainable one serving over 40,000 students with a broad spectrum of curricular needs ranging from guaranteed transfer courses to doctoral programs. As the department head, I established program-level student learning outcomes, embraced shared information literacy curricula and assessments, rebalanced faculty workloads, solidified newly remodeled teaching spaces, formalized a peer teaching observation program, and developed two new positions (Pedagogy and Assessment Librarian and a Graduate Teaching and Learning Librarian). I also formalized our partnerships with campus support offices, which led to a consistent library presence at campus events and trainings. Our talented team made these accomplishments possible; I'm fortunate to work with colleagues that strive for continuous improvement.

In August 2017, I was appointed Associate Director for Education and Public Services whereby I have the pleasure and challenge of envisioning and managing information services more broadly. This includes engendering academic success in and beyond the classroom and the strategic development of library learning spaces and integrated service points. This work is often about responding strategically to user needs and bringing library departments together to achieve similar aims.

In your current position, you are the manager of a division that includes an "Education and Outreach" department, and also an "Access and Public Services" department. How do you see these services as working to benefit each other? What challenges, if any, are the competing demands of each department?

The two departments may seem dissimilar at the outset—one is primarily comprised of staff and addresses immediate needs of patrons on a daily basis, and the other

consists of faculty and a small team of graduate assistants who facilitate planned learning experiences focused on curricular needs. However, these two units are quite complimentary and embrace the shared goal of student, faculty, and staff success. The challenge working with these two departments is determining how quickly to implement change and how best to communicate. It's imperative that procedural improvements and new services and initiatives be shared, but it's all the more important that we discuss the potential impact on other library units before moving forward. To be successful, I rely on informal discussions and strategic communications to maintain healthy relationships and build consensus.

As mostly an instruction librarian in your career, have you encountered any challenges in managing non-instruction librarians?

As an educator, I have an intimate understanding of what motivates many instruction librarians to design and deliver exemplary learning experiences. When I began managing teams with very different responsibilities and in unfamiliar content areas, I spent time trying to understand their unique motivations for doing good work. For example, one of my urgent tasks was to ensure consistent coverage of our circulation desk. Having never served in a circulation position, my first instinct was to increase the desk shifts for our existing personnel. Upon further reflection, I realized I needed to learn about the people themselves rather than simply taking an operational approach. Having one-on-one conversations about past experiences, perceived self-confidence, and future goals were an important part. This seemed daunting, but I had been developing this management philosophy for years. I spent much of my time determining how to motivate students and determining ways to bring their existing knowledge and experiences into the fold.

Over the past couple of years, you have been the chair of the ACRL Standards for Libraries in Higher Education Review Task Force. What is your biggest takeaway (or two) from your participation on this task force?

Chairing the Review Task Force was the most influential growth opportunity for me thus far in my career. I needed to encourage and balance differing perspectives from across all types of academic libraries. All organizations have unique missions, personnel structures, and strategic plans. The Standards need to balance specificity and

(Interview...Continued on page 11)