School Public Special Academic

LIRT

LIBRARY INSTRUCTION ROUND TABLE NEWS

Volume 38, No. 4 June 2016

FROM THE PRESIDENT

ANDY REVELLE, LIRT PRESIDENT

Growing & Evolving

In order to keep growing in the changing landscape of library instruction, LIRT has to evolve. Necessary changes to long-standing practices have been the focus of the efforts of the Executive and Steering committees over the past year. Many of the changes have been internal in nature, such as additional online meetings between conferences to increase committee engagement and a shift in the structure of in-person Steering Committee meetings in order to foster discussion and debate. However, we are making some changes that will impact all LIRT members.

LIRT held its Organizational and Planning Retreat during the 2015 annual conference in San Francisco. One of the issues that rose to the surface over the course of that day was a need for increased communication and engagement with LIRT members. To this end, we are reconfiguring our LISTSERVs to be sure that all current LIRT members are subscribed to a list that can be used to publicize LIRT events and initiatives. LIRT-L will continue as is, but we have formed a new LIRT-Mem list that will include all LIRT members. As people join LIRT, they will automatically be added to the list while members who drop their membership will be removed from the list.

Over the past few years, LIRT has established a number of social events at conferences designed to increase engagement with current members as well as create connections with instruction librarians who are not members of the roundtable. The LIRT Membership Committee has continued our well-attended Bites with LIRT. Our Transitions to College Committee has established a happy hour, which occurs

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ISSN 2161-6426

JUNE 2016

LIRT empowers librarians from all types of libraries to become better teachers through sharing best practices, leadership and professional development, and networking.

on Friday night at both Midwinter and Annual. Also, the Membership Committee provided coffee service for attendees of the conference program at Annual for the first time in 2015. We have also established our LIRT Awards presentation as a separate event, providing yet another event to engage with LIRT members in a social and professional setting. Of course our annual conference program has served to create engagement with LIRT members and instruction librarians of all type for many years. Not only does the conference program inform and enlighten, its topics and presentations are chosen to reinforce LIRT's core mission of "empower[ing] librarians, from all types of libraries, to become better teachers through sharing best practices, leadership and professional development, and networking." All of these events have been well attended and will be repeated at Annual this year in Orlando. Having attended all of these events over the past few years, I can confirm that the conversations about library instruction have been informative and stimulating. As you set your schedule for ALA Annual in Orlando, please plan to attend all (or some) of our LIRT events.

Over the past year, I have been fortunate to be able to work with the fantastic librarians on the LIRT Executive and Steering Committees to enact some of these measures that came out of our retreat. I am sure that incoming LIRT President Jeff Knapp will continue and expand upon these efforts over the next year.

Thank you and I look forward to seeing many of you in Orlando!

Andy

by Barbara Hopkins

From the Editor

Keeping up with the best in instruction-related articles can be challenging. However, LIRT has made that task just a bit easier because our Top Twenty committee reviews articles and recommends the best for you to read. Make sure to take a look at their work in this issue.

Also, if your interests head more in a teaching and technology direction, make sure to read this month's Tech Talk. This article focuses on digital literacy and how being "literate" in this area can make you more valuable in your current position.

You'll also want to meet one of LIRT's rising stars, Mark Robison. He's the focus of this month's Member-A-LIRT Spotlight. His comments are insightful and refreshing (nice to know grandparents are still taking their grandchildren to the library).

Finally, please join us in Orlando for what is sure to be a wonderful program focusing on "Pedagogy and Practices to Inspire Teaching" as well as our other scheduled events, which are listed in this publication or available in the online ALA scheduler.

Thanks for being a member of LIRT! We need your ideas and your input. Don't hesitate to contact us with articles and feedback. We do appreciate you.

Sincerely,
Barbara Hopkins, LIRT News Editor

Barbara

BITES WITH LIRT IN ORLANDO

LIRT will host *two* tasty gatherings in Orlando in June, 2016!

LIRT is organizing two "Bites with LIRT" groups for lunch during the ALA Annual Conference in Orlando. This is your opportunity to meet other librarians interested in library instruction while enjoying lunch in a local restaurant. LIRT welcomes anyone who has an interest in instruction from all types of libraries. You need not be a member of LIRT to participate. We hope you will join us in this opportunity to exchange ideas and experiences about library instruction in a relaxed setting. Enjoy a stimulating and fun lunch with LIRT—good food, good company, and interesting conversation. We will make the arrangements; all you have to do is reserve a spot and come join us!

Reserve your spot by June 20 at
http://www.ala.org/lirt/bites-annual

Saturday, June 25th: 12 Noon - Taverna Opa http://opaorlando.com/

Sunday, June 26th: 12 Noon - Café Gauguin at Rosen Centre Hotel
http://www.rosencentre.com/dining-and-recreation/

LIRT News is published quarterly (September, December, March, June) by the Library Instruction Round Table of the American Library Association.

ISSN 2161-6426
http://www.ala.org/lirt/lirt-news-archives

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Contributions to be considered for the **September 2016 issue** must be sent to the editor by **July 15, 2016.**

Production editor: Susan Gangl

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2016 LIRT Awards Ceremony and Reception

Sunday, June 26
5:30 - 7:30 p.m.
Rosen Centre Hotel, Salon 18

LIRT Innovation in Instruction Awards Committee:
Michael Saar, Lamar University (Chair)
Sherri Brown, University of Kansas
Beth Fuchs, University of Kentucky
Joshua Vossler, Southern Illinois University Carbondale

LIRT Librarian Recognition Awards Committee:
Jonathan Dembo, East Carolina University (Chair)
Jacalyn Bryan, Saint Leo University
Emma Oxford, Rollins College

In recognition of the accomplishments of librarians and libraries who promote information literacy, the Library Instruction Round Table (LIRT) will host an Awards Ceremony and Reception from 5:30 to 7:00 p.m. on Sunday, June 26 during the ALA 2016 Annual Conference in Orlando. The event will be held at Rosen Centre Hotel, Salon 18.

This year we will be honoring **Caroline Sinkinson**, Teaching and Learning Librarian at the University of Colorado Boulder; Ms. Sinkinson is the recipient of the 2016 LIRT Librarian Recognition Award. LIRT will also recognize and honor the **SUNY Geneseo Milne Library**, winner of the 2016 LIRT Innovation in Instruction Award.

Award recipients will be presented with a $1,000 cash prize and a plaque during the ceremony. The honorees will briefly discuss their work in forwarding information literacy, followed by a reception with refreshments.

This is the third year that LIRT has offered the Library Instruction Awards. All conference attendees are welcomed and encouraged to attend.

Above: Milne instruction librarians, SUNY Geneseo Milne Library

Right: Sue Ann Brainard and Dan Ross, Milne Library

The Wonderful World of Library Instruction

Pedagogy and Practices to Inspire Teaching

Sunday, June 26, 2016
8:30-10:00 a.m.
Orange County Convention Center, room W104

Join the Library Instruction Round Table (LIRT) panel presentation to discover best practices and pedagogical principles supportive of information literacy. Featured presentations will highlight activities and assignments inspired by threshold concepts and the new ACRL Framework, discuss use of action research to improve and evaluate instruction, and share proven strategies to support lifelong learning in underserved communities. This program will feature a panel of three innovative instruction librarians from academic, public, and the K-12 school setting who will discuss a range of instruction techniques designed to engage library users, enhance critical thinking, and inspire lifelong learning.

Featured Presentations

Silvia Lin Hanick is First Year Experience Librarian and Assistant Professor at LaGuardia Community College, a City University of New York (CUNY) institution.

With a shift toward conceptual teaching, we can teach our students to reimagine the conditions of their entire information landscape. This presentation will share activity and assignment ideas inspired by threshold concepts and the ACRL's Framework for Information Literacy, designed to be used in first year and one-shot academic library instruction and elsewhere. For more information about her work on threshold concepts, including recorded presentations and handouts, please visit http://www.ilthresholdconcepts.com.

Jennifer Underhill is the K-12 school librarian at Florida State University Schools (the FSU Lab School) in Tallahassee, Florida.

Action research helps educators reflect on current practices, solve problems, and collect data that can be shared with administrators and colleagues. In a school library setting, a small action research project can make a big impact on information literacy instruction and library programs. The process can be intimidating and overwhelming, but it doesn't have to be. This presentation will share examples of successful action research projects and outline a process for action research that can be replicated in any library.

Andrea Sáenz serves as First Deputy Commissioner for Chicago Public Library, a system of 80 neighborhood branches that serve Chicago's 2.6 million residents.

In a global environment, libraries remain community hubs and trusted places for learning and exploration. They can serve as pivotal resources for individuals seeking to advance their skills, build their knowledge, and apply their learning. For libraries to do this well requires, not only investment in quality programming, tools and content, but also training librarians so that they can remain up to date with evolving learning resources, methods and tools to continue fulfilling the mission of the 21st century library. This presentation will share case examples of Chicago Public Library's work to meet evolving patron needs across programmatic areas that support lifelong learning, with a specific emphasis on STEM and digital skills for underserved communities.

LIRT Meetings & Events @ 2016 ALA Annual Conference

Meeting/Event	Title	Start Time	End Time	Location
	Friday, June 25			
	LIRT Transitions to College Social event	7:00 p.m.	10 p.m.	tba on LIRT-L
	Saturday, June 25			
137021	Steering Committee I (LIRT)	8:30 a.m.	10:00 a.m.	HYATT/Barrel Springs II
137062	All Committee Meeting (LIRT)	10:30 a.m.	11:30 a.m.	HYATT/Barrel Springs II
	Bites with LIRT	12 noon		Taverna Opa (see p. 3)
	Sunday, June 26			
135471	**LIRT Program: The Wonderful World of Library Instruction: Pedagogy and Practices to Inspire Teaching**	8:30 a.m.	10:00 a.m.	OCCC/W104
	Bites with LIRT	12 noon		Cafe Gauguin (see p. 3)
137123	**Annual Awards Ceremony & Reception (LIRT)**	5:30 p.m.	7:30 p.m.	ROS CENTRE/Salon 18
	Monday, June 27			
138214	Steering Committee II (LIRT)	8:30 a.m.	10:00 a.m.	OCCC/W202C
138219	Executive Committee Meeting (LIRT)	10:30 a.m.	11:30 a.m.	OCCC/W240B

HYATT = Hyatt Regency Orlando
OCCC = Orange County Convention Center
ROS CENTRE = Rosen Centre Hotel

2017 ALA ELECTIONS
CALL FOR NOMINATIONS FOR LIRT OFFICES

LIRT is seeking candidates to run for office in the 2017 ALA Elections for terms beginning after Annual Conference 2017.

- Candidates must be current members of LIRT and have served for at least one year on a LIRT committee.
- Officers must be able to attend all ALA Midwinter and Annual Conferences for the duration of their commitments.
- All officers serve on LIRT's Executive Board.

The terms of these offices are:

Vice President/President-Elect
serves a three-year term as part of a three-year commitment to the Executive Board as Vice President/President-Elect, President, and Past President. July 2017-June 2020.

Vice Treasurer/Treasurer-Elect
serves a two-year term as part of a two-year commitment to the Executive Board as Vice Treasurer/Treasurer-Elect during the first year and Treasurer the second. July 2017 - June 2019.

Secretary/Archivist-Elect
serves a two-year term as part of a two-year commitment to the Executive Board as Secretary during the first year and Archivist the second. July 2017 - June 2019.

Complete the Nominations Form at http://www.ala.org/lirt/lirt-request-nominations
or contact Jennifer Corbin at jcorbin@tulane.edu with the name of a prospective candidate.

Image source Cliparts.co

Member A-LIRT:

Mark Robison *First-Year Experience Librarian, Valparaiso University*
mark.robison@valpo.edu

What brought you to LIRT?

I first got involved with LIRT in 2013. I was looking for an opportunity to get involved at the national level, and since my library work includes tons of teaching, LIRT seemed like an obvious choice. The people at the LIRT All-Committee Meeting were incredibly friendly and welcoming, so I knew the Round Table would be a good fit. My dedication to LIRT has only grown as I've seen the great work our organization does in supporting instruction librarians.

What was your path to librarianship?

When I was four years old, my grandma used to pick me up from pre-school, and we'd spend the rest of the afternoon together. Usually, this involved a trip to the public library. There I would get immersed in the children's section, and I was obsessed with the *Mister Men and Little Miss* books. So, I learned to love not only reading, but also libraries as spaces very early in life. When I got into high school and college, I spent countless weekends and evenings in libraries, where the heavy quietness and smell of aging paper put me in a study trance and helped me focus on my work. When choosing a graduate program that would help me find satisfaction in my work, I thought, "Hey, why not become a librarian?" At the time I didn't realize how well my career choice would align with my passions: helping others, solving problems, learning continuously, working in a college environment, and being really organized. Every day I know I made the right choice.

Tell us about your current position; what do you like most about it?

As First-Year Experience Librarian at Valparaiso University, my job is mostly reference and instruction work. I coordinate our outreach to, and oversee the IL program for, the campus's two first-year programs. I also work with several social science departments and wear the hat of Gov Docs Librarian. My favorite aspect of the job: the students! Maybe it's a Midwestern thing, or maybe it's because the university is a small liberal arts college, but Valpo students are just different. They are motivated, hard-working, and incredibly respectful. The best hours of my week are spent working one-on-one with a student on a research project.

In what ways does it challenge you?

At a small university, a librarian gets to take on a far greater variety of work than at a large university with more hierarchy and more branches. With only 12 librarians, my colleagues and I are often quite busy with internal work, especially committee tasks, affecting everything from collections and assessment to programming and teaching space redesigns. While I enjoy the committee work, and am learning a lot, sometimes it would be nice to have a few extra librarians to share some of this work.

Throughout all your educational experiences, what teacher inspired you the most and why?

This question is really difficult, as I've had so many inspiring teachers, especially most of the faculty in the History Department at Purdue. But one in particular was Mike Ryan, who taught the "Four Horseman of the Apocalypse" course at Purdue. We learned about the late medieval and early modern periods, looking at that history through the lenses of apocalypticism, i.e. interpreting famine, war, the Bubonic Plague, and religious strife as signs of the end of the world. Prof. Ryan assigned some very hard readings, but because the in-class discussions were so rich, I really wanted to read and be prepared. He was also the first professor I ever had who put books on reserve at the library; this revolutionized my life.

Image: Wikimedia Four Horsemen of the Apocalypse, Saint-Sever Beatus, 11th century.

Member A-LIRT, continued on page 6

When you travel, what do you never leave home without?

A good book! I am an admittedly slow reader, but I do my best reading on airplanes. Because this is such a stereotypically librarian answer, my secondary item is cologne.

If you could change one thing about libraries today, what would it be?

I hate QR codes and want them to go away forever. I have never seen a Millennial student scan a QR code ever… ever. So, it frustrates me when I see QR codes used in library marketing. This was more of a momentary fad circa 2011, but they are still hanging on in tiny pockets. Please stop using QR codes.

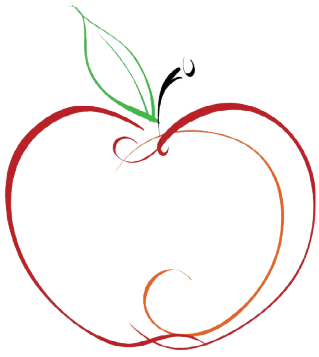
Tell us one thing about yourself that most of us probably don't know.

Throughout my years at college, I spent every vacation and holiday working at a sheet metal fabrication shop. I would design, cut, bend, and create all sorts of products out of stainless steel sheet metal and tubing, mostly related to agriculture: cattle feeders, horse fencing, the occasional custom ladder rack or water tank. I wore steel-toed boots and came home every day covered in dirt. It was amazing.

Connecting Librarians for K-20 Transitions

LIRT's Transitions to College Committee is pleased to announce its updated web portal: Connecting Librarians for K-20 Transitions. This page enables you to identify and reach out to other librarians in your area who are interested in collaborating on issues related to easing students' transitions from high school to college and beyond. Interested in bringing your high school students to visit a local university library? Curious about the IL skills being covered in high school library workshops? From instruction design to assignment design, from arranging campus visits to simply chatting about the "big picture" of library instruction, this web portal can help you connect with other librarians in your area.

Visit the portal at: http://www.ala.org/lirt/connecting-librarians-k-20-transitions where you will find a map of librarians in your area, as well as instructions for adding yourself to the map. The portal also includes talking points and successful case studies of libraries that have collaborated on transitions projects.



Have you created an instruction program or developed a unique classroom strategy? Please share your experiences with LIRT. Send your articles to Barbara Hopkins (barbaraw.hopkins@gmail.com)

20 LIRT Top Twenty for 2015 2015

2015 TOP TWENTY COMMITTEE
Sherry Tinerella (Chair)
Steve Brantley
Eveline Houtman
Paula Johnson
Rachel Mulvihill
Amy Pass
AnneMarie Smeraldi

Beilin, I. (2015). Beyond the threshold : Conformity, resistance and the ACRL Information Literacy Framework for Higher Education. *In the Library with the Lead Pipe*. http://www.inthelibrarywiththeleadpipe.org/author/ianbeilin?print=pdf-page

Ian Beilin's article in the blog "In the Library with the Lead Pipe" presents us with a cogent analysis of the ACRL Framework for Information Literacy for Higher Education, and the concurrent discussion surrounding it in the academic librarian community. He also offers a reading of the Framework through the lens of critical information literacy, an analytical perspective that examines and critiques the inequitable power relations inherent in the creation, production and dissemination of knowledge and its products. Beilin provides a summary of the responses to the Framework that describe it as a disruptive and problematic document that could undermine years of work in institutional IL programs. It is also described as inaccessible to its audience because of its use of "jargon" from other disciplines, and some responses have critiqued the threshold concept theory itself as incoherent and contradictory. Beilin presents these and other critical arguments, but the thrust of his article is hopeful about the potential effects the Framework can and will have on the critical librarian's ability to engage students in questioning basic assumptions of authority and knowledge production, even (and especially) those within the academic environment in which the students are subjects. The article establishes this by pointing out the contradiction in the critical librarian's acceptance of information literacy as a concept in the way that it reifies the established power structures of our societal and academic institutions. By teaching students the skills that will help them succeed in the existing systems are we not reinforcing those systems rather than resisting them? Beilin makes his way out of this conundrum by emphasizing that critical information literacy should be a *both and* proposition rather than an *either or* problem. For Beilin, the Framework encourages the position that "accepts the existence of a particular regime of knowledge," but requires us as critical information literacy librarians that we help our students and faculty become adept at navigating this regime as "dynamic, critical and progressive" agents within it. SB

Belanger, J., Zou, N., Mills, J. R., Holmes, C., & Oakleaf, M. (2015). Project RAILS: Lessons learned about rubric assessment of information literacy skills. *portal: Libraries and the Academy, 15*(4), 623–644.

In this article, the authors who collaborated on the Rubric Assessment of Information Literacy Skills (RAILS) research project, argue that a rubric is one of the most important tools for assessing information literacy learning. A rubric allows students to understand expectations and provides clear, meaningful feedback; it allows librarians to communicate learning values and outcomes and to reflect on their teaching goals and practices. In addition, a rubric is an inexpensive, reusable tool that promotes valid and reliable scores and provides useful descriptive data. Drawing on their experience in Project RAILS, the authors present practical recommendations for implementing rubric assessment, focusing on four areas: 1) building collaborative relationships; 2) developing assignments; 3) creating and using rubrics; and 4) using assessment results to improve instruction. In each area they provide two concrete recommendations, which are discussed in depth together with examples of practice. Taken together the recommendations constitute a checklist of best practices (see appendix) that will prove helpful to any librarians implementing rubric assessment. EH

Booth, C., Lowe, M. S., Tagge, N., & Stone, S. M. (2015). Degrees of impact: Analyzing the effects of progressive librarian course collaborations on student performance. *College & Research Libraries*, 76(5), 623–651. http://doi.org/10.5860/crl.76.5.623

Librarians at the Claremont Colleges used rubrics to assess the research papers produced by students in a first year seminar course. The librarians had varying degrees of collaboration with the courses instructors, and findings indicated that the greater the degree of collaboration – either with the IL-related instruction and/or the syllabus and assignment design – the more positive the impact upon the students' performance. The authors speak to the need to assess their instruction

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efforts authentically, and to do so in the challenging service environment of seven contiguous yet independent institutions that surround their common library. In 2011, the Library's Instruction Services department was successful in standardizing course interventions and programmatically integrating IL instruction into first-year seminars in its five undergraduate colleges. However, just as previously, there were fluctuating levels of support invited by the different course instructors. A key motivation for this research was to determine whether and to what extent this variance impacted student research success. Using a mixed-methods analysis of 99 final research papers, the librarians hoped to accomplish a holistic assessment. While student and faculty perceptions of instruction efficacy are often skewed toward the positive regardless of the intensity of librarian instruction collaboration, the results showed a pattern of proportional performance increase with increased collaboration. An additional observation is that in working more closely with faculty, there develops a shared understanding of information literacy as an institutional priority. PJ

Bruehl, M., Pan, D., & Ferrer-Vinent, I. J. (2015). Demystifying the chemistry literature: Building information literacy in first-year chemistry students through student-centered learning and experiment design. *Journal of Chemical Education, 92*(1), 52–57. http://doi.org/10.1021/ed500412z

This paper presents a case study of two curriculum modules developed for first-year chemistry students. The intention of the modules is to expose the students to the scientific literature and its role in experiment design and scientific discovery at an early stage in their undergraduate careers rather than delaying until their final years in college as is more common. Student-centered learning and inquiry learning are at the core of the module design, integrated with the ACRL competency standards. The two modules are described in some detail, with supplementary material available online. As well, the authors report the results of a longitudinal survey that assessed the impact of the modules on the students' learning; this strongly suggests that introducing such modules in first year benefits the students' performance. Although this case study is situated in the discipline of chemistry, its approach is likely to have broader applicability. The paper is also notable for being published in a SOTL (scholarship of teaching and learning) journal rather than a library journal. EH

Buchanan, H., Webb, K. K., Houk, A. H., & Tingelstad, C. (2015). Curriculum mapping in academic libraries. *New Review of Academic Librarianship*, 21(1), 94-111. http://doi:10.1080/13614533.2014.1001413 Abstract: http://www.tandfonline.com/doi/abs/10.1080/13614533.2014.1001413

In this article, librarians from four diverse academic institutions attempted to assess their information literacy programs using four different approaches to curriculum mapping, or, the systematic evaluation of an educational program to ensure the ability to achieve stated program goals. The institution's provided information literacy instruction in different ways, necessitating a different curriculum mapping model for each library. All four mapping projects are described in detail as are the results. The article provides insights on the process for each case that allows readers who may attempt a similar mapping to avoid missteps. For each case it was determined that changes to instruction design would benefit students in every program and avoid, either a complete lack of IL instruction, or the redundancy of skills instruction across multiple classes in a program. The limitations expressed for each case had to do with inconsistent course sequencing in programs, widely varying levels of cooperation with faculty, and a lack of authority in curriculum development. However the obstacles to efficient curriculum mapping during the initial pilot created opportunities for improvement in the IL programs, including the establishment of learning goals, using the curriculum maps to facilitate conversations with faculty and curriculum coordinators, and revising existing learning objects to fill instructional gaps and target specific courses or learning goals. SB

Catalano, A. (2015). The effect of a situated learning environment in a distance education information literacy course. *Journal of Academic Librarianship*, 41(5), 653-659.

Catalano's article concerns itself with situated learning in the distance environment. The author posits that situated learning through authentic activities can facilitate knowledge transfer, whereby students apply what they have learned in class to a real-world situation. The concepts of transfer and situated learning environments, as applied to information literacy and distance education, are explained and explored in the literature review.
Focusing on information evaluation, the author's research study involved 85 students enrolled in an online, one-credit

LIRT Top Twenty, continued on page 11

library skills course. A pre-test/post-test design and a transfer task scored with a rubric were used to evaluate whether a situated learning environment better enabled knowledge transfer than traditional lecture-based instruction. The experimental group's curriculum included expert modeling, an assignment that required students to generalize what they learned, a problem-based learning activity, and peer feedback where students commented on each other's discussion posts. The control group students filled out a worksheet that posed several questions to consider when evaluating sources. The worksheet was graded by the course instructor and feedback was given if necessary. In addition to a pre- and post-test, students were given a "far transfer" task to measure their ability to transfer knowledge in order to make it applicable in a new situation. This hypothetical task was scored by two raters using a rubric. Another rubric was used to evaluate the level of student engagement with the course material, given the occasional disconnect that can happen in online classes. This score and a motivation questionnaire were used to control several factors outside the realm of the experiment.

Results show that situated learning was a predictor of far transfer of knowledge. This article is unique in that it applies Situated Cognition theory to both information literacy and distance learning, and uses a quantitative method to measure the efficacy of situated learning on knowledge transfer. RM

Chen, Y. (2015). Testing the impact of an information literacy course: Undergraduates' perceptions and use of the university libraries' web portal. *Library and Information Science Research*, 37, 263-274. http://doi:10.1016/j.lisr.2015.04.002

Chen's study aims to show that user training can positively impact undergraduate students' perceptions and use of a library web portal. With the popularity of Google and internet search engines, the author suggests that the library web page may be underutilized. Based on studies showing that user education has a positive influence on the acceptance and use of information technology, Chen predicts that an information fluency course would have a similar impact on student use of the library web page and the resources contained there. The author conducted surveys and interviews with 239 undergraduate students enrolled in a 3-credit course, "Internet and Information Access." The research study was longitudinal in nature, attempting to capture whether any short term gains continued several months after the for-credit information literacy course concluded. Chen's article includes an in-depth literature review, very clear hypotheses and, and thorough discussion of the study's results. An increase in perceived usefulness, perceived ease of use, and satisfaction was demonstrated at the end of the semester-long course. When testing long-term changes, the quantitative portion of the study showed a marked decrease in each of these factors three months later, although comparisons of use outcomes indicate that students still used the library web portal when the need arose. RM

corrected entry:

Cook, D. B., & Klipfel, K. (2015). How do our students learn ? An outline of a cognitive psychological model for information literacy instruction. Reference & User Services Quarterly, 55(1), 34–41.

Authors Cook and Klipfel explain that it's important to understand how students learn, so as to apply the most effective methods for teaching them. Cognitive and educational psychology offer insight that can help educators improve their teaching strategies. This is especially important for instruction librarians to consider as they plan their teaching activity. Based upon two major educational goals – retention and transfer – the authors have developed five "principles for structuring information literacy instruction" to help librarians not only improve retention and transfer but provide instruction that helps meet long-term student learning outcomes and facilitates a deeper understanding of information literacy concepts.

Each principle is grounded within the educational and cognitive psychology literature and is helpfully paired with concrete examples of how to implement the strategies within the classroom (physical and online). Strategies presented include: tying instruction to a concrete problem, covering fewer concepts within library instruction sessions, storytelling, and providing opportunities for meaningful practice of skills. AP

Farrell, R., & Badke, W. (2015). Situating information literacy in the disciplines: A practical and systematic approach for academic librarians. *Reference Services Review, 43*(2), 319–340. http://dx.doi.org/10.1108/RSR-11-2014-0052

Socio-cultural learning theories posit that students learn best through authentic activities situated in communities of practice. This conceptual article draws on socio-cultural approaches to expand our understanding of information literacy

LIRT Top Twenty, continued on page 12

(IL) and to provide ways of situating IL in the disciplines that constitute the students' communities of practice. It argues that the development of IL as an independent, generic construct has not helped librarians in developing learning opportunities that allow students to situate themselves as practitioners of their disciplines. The authors describe a practical approach to situating IL in the disciplines used at the City University of New York, which they call the CUNY IL integration model. This model avoids the use of IL standards and frameworks, instead positioning the faculty as the owners of discipline specific information literacies. The model takes a focus group approach to develop a picture of the IL skills, fluencies and habits of mind specific to a particular discipline. The authors use a sociology department as an example. While the authors do not advocate for abandoning one-shot or generic instruction, especially for novice students, they do suggest their "inside-out" approach can help librarians to situate IL within the disciplinary curricula where the majority of students' learning takes place. EH

Holliday, W., Dance, B., Davis, E., Fagerheim, B., Hedrich, A., Lundstrom, K., & Martin, P. (2015). An information literacy snapshot: Authentic assessment across the curriculum. *College & Research Libraries, 76*(2), 170–187. http://doi.org/10.5860/crl.76.2.170

Responding to the current call in higher education for greater transparency and accountability in assessing student learning, librarians at Utah State University performed an authentic assessment of student work using a revised version of the Association of American Colleges and Universities' Information Literacy VALUE rubric. In all, 884 papers from four different courses were examined. The courses were selected to run across the curriculum and at varying skill levels, i.e., ENGL 1010, ENGL 2010, PSY 3300 and HIST 4990. In making this choice, the researchers hoped to get a good "snapshot" of student learning as they progressed through their education - a more practical approach than a longitudinal study. Their reasons for using the IL VALUE Rubric were: Utah State already utilizes the "Essential Learning Outcomes" that are addressed in the Rubric; the Rubric was developed using a shared understanding of IL by faculty experts and librarians; and it is designed to work at the "meta" level providing assessment criteria covering a span of disciplines and levels, rather than just a single course or assignment. Rating procedures were selected to match the different population and sample sizes for the courses, and a norming process was followed. Encouraging results indicated that as students progressed they exhibited improved IL skills overall, except in the areas that required critical thinking. While this was a sizable undertaking, the librarians found that doing a comprehensive an assessment was worthwhile on several fronts. Librarians learned more deeply about student performance and assignments and the structure of the curriculum at Utah State. Insights gained contributed to their feeling confident to make recommendations regarding revising assignments and even curricular changes. PJ

Keegan, T., & McElroy, K. (2015). Archives Alive!: Librarian-faculty collaboration and an alternative to the five-page paper. In the Library with the Lead Pipe. Retrieved from http://www.inthelibrarywiththeleadpipe.org/2015/archives-alive-librarian-faculty-collaboration-and-an-alternative-to-the-five-page-paper/

Archives Alive! is an innovative, alternative research assignment developed at the University of Iowa by a librarian and rhetorician (now library department head). This project was a successful attempt to develop a new type of research assignment model that moves beyond the standard college essay. The authors questioned the traditional research essay format, asking if this kind of assignment was truly effective in building student research skills.Authors Keegan and McElroy share the details of the Archives Alive! assignment, a multi-part research project that links students to archival, primary source materials. The different components of the assignment help to develop several sets of student skills, including writing, research, public speaking, and digital composition. Details on how the authors developed, tested, refined and expanded their assignment model based on student feedback and classroom experience are provided. The authors go beyond simply summarizing their successful alternative assignment model in this fresh and comprehensive article, they encourage librarians to advocate for similar changes in their own school curricula. Instead of simply reacting to establish syllabi with long-standing traditional assignments, they urge librarians to join forces with faculty to re-frame those assignments. To this end, the authors provide a "recipe" of strategies and suggestions for librarians to employ in these collaborations, such as how to advocate for innovation, the importance of risk-taking and flexibility, and how to promote successful projects. AP

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Lundstrom, K., Diekema, A. R., Leary, H., Haderlie, S., and Holliday, W. (2015). Teaching and learning information synthesis. *Communications in Information Literacy*, 9(1), 60-82.

Library literature indicates that college students struggle with effectively analyzing and synthesizing information from multiple sources to create new knowledge. To help students develop this higher order thinking skill, Lundstrom, et al investigate the effectiveness of using scaffolding to teach information synthesis in a college composition class and explore a method for identifying synthesis in writing samples in order to assess the intervention's impact on student learning. After being unable to locate a rubric solely for evaluating synthesis, the authors, two librarians and two faculty, collaborate on the design of a synthesis rubric. The authors explain in detail how they used and refined the rubric to assess students' in-class writing samples and final papers for evidence of successful information synthesis. Their research suggests that students benefit from the use of scaffolding to teach the complex task of synthesis. More importantly, the authors demonstrate the vital role librarians play in teaching higher order thinking skills. Readers interested in replicating the authors' work will find the inclusion of the rubric and the outline of the lesson in the appendix helpful. AMS

Margolin, S., & Hayden, W. (2015). Beyond mechanics: Reframing the pedagogy and development of information literacy teaching tools. Journal of Academic Librarianship, 41(5), 602-612. http://doi:10.1016/j.acalib.2015.07.001

Authors Margolin (a librarian) and Hayden (a compositionist) developed the Research Toolkit, a set of online resources and learning tools, to facilitate student learning beyond the basic mechanics of library research. The Research Toolkit, more than just a tutorial, was created to help students and faculty understand the tools available to them to do research. The Research Toolkit is based on commonly-asked questions at the library reference desk and is organized along the key steps of the research process. Using an online interface, both students and faculty can access targeted learning materials that address topics including: developing a research question, finding sources, reading scholarly material, using sources within a paper, and a faculty guide. The creators of the Research Toolkit, attempting to guide students toward the Threshold Concepts identified in the ACRL Framework for Information Literacy in Higher Education, provide a mix of how-to materials as well as more conceptual resources that take students beyond simply a basic understanding of search mechanics. For example, the Toolkit includes a guide to reading and understanding the components of a scholarly research article as well as accompanying online tutorials for each. The inclusion of a faculty guide in the Toolkit allows for an opportunity to promote this resource and advocate for a new kind of faculty-librarian collaboration around research and research-based assignments. Faculty are provided with supportive tools such as a research calendar and a guide to creating successful research assignments presented in a generic, non-discipline-specific manner. AP

O'Kelly, M., Garrison, J., Merry, B., & Torreano, J. (2015). Building a peer-learning service for students in an academic library. portal: Libraries and the Academy, 15(1), 163–182. http://doi:10.1353/pla.2015.0000

This paper describes a peer-consultant model of library instruction at Grand Valley State University (GVSU). The program began in 2012 and the authors detail the implementation and outcomes of this successful peer-tutoring service. In introducing the concept of library peer-tutors, O'Kelly, Garrison, Merry, and Torreano highlight the non-authoritative, non-hierarchical nature of peer consultations. These tutors do not replace librarians, but address student needs in a less formal, less instructive way. A goal of the sessions is to open a conversation about research instead of using the typical reference model. The student peer consultants work alongside writing and speech tutors in GVSU Libraries' "Knowledge Market," and much of the program is designed based on the student writing consultant model. The literature review on peer tutors in libraries includes a few articles describing peer-learning situations, but the majority of the literature focuses on training students to perform the reference or instruction duties of librarians. A design and implementation section of the article lists the four key competencies of peer consultants, and outlines the hiring process. Training is also modeled after a writing center peer-tutoring program, and the annual hiring/training schedule is included along with the initial two-day orientation schedule. The three goals of consultations are evaluated using a student survey following their session. This survey is administered by the software used to schedule consultations, which is also described. Data from the scheduling software was analyzed and trends identified, including the average duration of a session and the times of highest demand. The authors' report on survey results which measure student perceptions following a session, and consultant perceptions of their own skills which were all rated highly. Overall, a strong article describing a successful peer research consultation program in an academic library that could guide other librarians through a similar implementation. RM

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Subramaniam, M., Ahn, J., Waugh, A., Taylor, N. G., Druin, A., Fleischmann, K. R., & Walsh, G. (2015). The role of school librarians in enhancing science learning. Journal of Librarianship & Information Science, 47(1), 3-16. http://doi:10.1177/0961000613493920

This article is unique because it focuses on school librarians' contributions to science learning. Traditionally school librarians are linked to student literacy and reading achievements. The authors of this study investigate how socio-cultural frameworks of K-12 science education are connected to the contributions of librarians. Pre-service school librarians and middle school librarians teamed to co-design afterschool sessions that encourage students to engage in science-based literature such as science fiction, graphic novels and popular science. The authors relied on ethnographic methods and the principles of open coding to analyze data. In conclusion they found that librarians are an asset to science learning by encouraging authentic inquiry, providing search models and strategies, engaging student interest by linking science learning to media and technology, and to promote guideline for ethical and social interaction in sharing knowledge about science. This study took place in a large urban school district and involved a diverse population including a high number of underserved youth. Researchers unexpectedly found that the project met another aspect of the framework; embracing diversity as a means to enhance learning science. Results illustrate multiple contributions of librarians to these four concepts within the socio-cultural frameworks of K-12 science. ST

Tewell, Eamon. (2015). A decade of critical information literacy: A review of the literature. Communications in Information Literacy, 9(1), 24–43. Retrieved from http://eprints.rclis.org/28163/

Eamon Tewell presents a review of the literature in critical information literacy, an approach that emphasizes questioning the purpose and authority of information creation and publishing processes. This method of instruction aligns with the threshold concepts that are the backbone for the Association of College & Research Library's (ACRL) document Framework for Information Literacy for Higher Education, (2015). This framework redefines library instruction by focusing less on the skill sets featured in the Information Literacy Competency Standards for Higher Education, (2000) and more on a pedagogy that encourages the use of higher order thinking. The article outlines library instruction practices and ideologies since the term information literacy (IL) was introduced in the 1970s. The author provides a comprehensive look back at research and methods in IL and the impact the IL standards in academic library environments. He includes early critiques of standards-based IL instruction as well as an introduction to critical pedagogy and the relationship of both to higher education and society as a whole. Moving forward Tewell examines critical IL theory and research followed by specific examples of critical IL in practice. The article was published as the Framework was being drafted, a process that was controversial, transparent, and invited feedback from ACRL members in its various stages. Mr. Tewell leaves readers with the idea of hope. He summates that lessons learned from critical pedagogy and the adoption of the new Framework, that librarians can have a significant impact on the empowerment of students by teaching critical IL and subsequently bringing social change through education by promoting students to "identify and act upon the oppressive power structures" such as those underlying traditional institutions of knowledge creation and dissemination. ST

Tewell, EC, & Angell, K. (2015). Far from a trivial pursuit: Assessing the effectiveness of games in information literacy instruction. Evidence Based Library and Information Practice, 10(1), 20–33. Retrieved from http://ejournals.library.ualberta.ca/index.php/EBLIP/article/view/22887

Tewell and Angell have written an extremely accessible study on the value of game based learning in library instruction. The scope of the study is bounded, but not too narrow and their methodology is easily replicable. The literature review, while not comprehensive, is considerable and focused, and their results are clear and scientifically sound. The authors hypothesized that the inclusion of game play in an information literacy instruction session would improve the learning of keyword development skills and the understanding of differences between citation styles in a pre-test, post-test assessment. To that end the authors prepared lesson plans for an experimental group and a control group in which a keyword development game and a citation matching game were used across two instruction sessions in the experimental group. The control group received short lectures on keyword development and citation styles over two instruction sessions instead. A paired sample t-test was used to compare the pre-test post-test results between the control group and the experimental group. The test indicated a statistically significant different between the two groups. The group who received the game based instruction achieved higher scores on the post-test indicating that the game play was effective in helping students retain knowledge and skills related to information literacy tasks. Tewell and Angell provide ample evidentiary and

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supplemental data in their article including analytical and descriptive statistics and lesson plans detailing the difference procedures between the control and the experimental groups. SB

Watts, J., & Mahfood, S. (2015). Collaborating with faculty to assess research consultations for graduate students. Behavioral & Social Sciences Librarian, 34(2), 70–87. http://doi.org/10.1080/01639269.2015.1042819

A librarian and a member of the teaching faculty at a small Midwestern liberal arts college collaborated to embed the librarian into two classes, combining the librarian's information literacy expertise with the disciplinary context provided by the professor. The institution, Webster University (MO), has the core value of offering students a "personalized approach to education through small classes, close relationships with faculty and staff." The individual research consultations performed by the librarian certainly offered this personal approach. The librarian embedded in an 8-week School of Education course in the fall and a 16-week course in the spring. The learning goals for the research consultation were kept simple to allow for tailoring; "(1) Students will construct a search statement using topic-relevant and controlled vocabulary in order to search databases with maximum effectiveness; and (2) students will critically evaluate sources in order to intentionally select the best source for their information need." Prior to the consultation students were required to do a research journal entry about a self-directed search that could then be assessed by the librarian at the start of the consultation to assist with determining the content to be covered. To assess the effectiveness of their program, the librarian and teacher conducted focus groups, using the question "How do required research consultations impact student learning in a graduate-level course?" as the foundation of the investigation. Nine questions in all were formulated. To analyze the transcripts, the investigators used the constant comparison method to tease out the major theme for each of the four key questions posed to the focus groups. Results showed that students were positively impacted by the research consultations and gaining confidence in their research skills. PJ

Webb, K. K., and Hoover, J. (2015). Universal design for learning (UDL) in the academic library: A methodology for mapping multiple means of representation in library tutorials. College and Research Libraries, 76(4), 537-553. http://doi:10.5860/crl.76.4.537

With the availability of easy to use and often free software, web based information literacy tutorials have become a common method for teaching research skills. Tutorials allow librarians to reach a larger audience where they are and at their point of need. The challenge is creating effective, accessible tutorials for a diverse user population. Through the application of the ADDIE (Analysis, Design, Development, and Evaluation) Model and Universal Design for Learning (UDL), Webb and Hoover offer their readers a solid framework for developing tutorials that accommodate multiple learning preferences styles and take into consideration the needs of learners with disabilities. Their article provides a thorough overview of the design process they used to create a comprehensive tutorial. The authors explain how the ADDIE Model guided their work from conceptualization and analysis to creation and testing to final implementation. Through concrete examples, readers learn how to apply the principles of UDL to their tutorials and gain insight into creative ways to reach learner. Although the article describes a tutorial for an undergraduate biology course, Webb and Hoover's most salient points transcend the college classroom. AMS

Zhang, Q., Goodman, M., and Xie, S. (2015). Integrating library instruction into the course management system for a first-year engineering class: An evidence-based study measuring the effectiveness of blended learning on students' information literacy levels. College & Research Libraries, 76(7), 934-958. http://doi:10.5860/crl.76.7934

These three authors describe how they used blended learning to overcome the challenges created by staff shortages, increased instruction loads, and their universities' e-learning initiative without sacrificing the quality of the information literacy instruction they provide to their first-year engineering students. As the authors describe in detail the process of converting the content of an in-person library session into two online learning modules delivered through the course management system and supplementary in-person workshops, readers develop an understanding of fundamental best practices for online library instruction and discover the benefits of blended learning as a teaching method. In addition to providing these practical insights, the authors give a thorough account of the research methodology they used to ascertain the effectiveness of the blended learning strategies they employed and their impact on student learning. The appendix includes pre and post-test questions, the participant survey, and focus group questions. AMS

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Tech Talk

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TECH TALK – DATA LITERACY, PART 2

Dear Tech Talk: It is becoming increasingly clear to me that librarians need to teach – not only information and media literacy – but also "data literacy." However, it is not at all clear to me what it means to be "data literate?" Do I need to be data literate and fit data literacy into my information literacy activities?

-- Disoriented Librarian about Data Literacy

Dear DLDL: The previous column (http://www.ala.org/lirt/sites/ala.org.lirt/files/content/archive/2016mar.pdf, p.16) provided information about the growth of data, definitions for data literacy, and addressed some misconceptions associated with data literacy. This column will focus on instruction for data literacy.

Assuming that librarians see the need for and value in moving forward with data literacy education, it becomes a two-fold issue: **librarians** need to be **data literate**, if they are not already; and librarians need to identify the best mechanisms to meet the data literacy needs of their constituents. So, moving beyond a definition of data literacy, what competencies are needed to be data literate?

In 2007 Purdue University and the Graduate School of Library and Information Science at the University of Illinois at Urbana-Champaign received an IMLS grant to conduct research that helped them define core competencies to guide the development of their Data Information Literacy (DIL) programs. Although provided from an academic library perspective, these competencies present a good starting point – both for determining one's own level of data literacy and for providing instruction to others. While briefly outlined below, Carlson, Fosmire, Miller, and Nelson (2011) provide details for each competency in their publication (p. 652-3).

- Introduction to Databases and Data Formats
- Discovery and Acquisition of Data
- Data Management and Organization
- Data Conversion and Interoperability
- Quality Assurance
- Metadata
- Data Curation and Re-use
- Cultures of Practice
- Data Preservation
- Data Analysis
- Data Visualization
- Ethics, including citation of data

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Additionally, using the now passé ACRL Information Literacy Standards, Prado and Marzal (2013) outline data literacy core competencies, based on their examination of current perspectives and practices (p. 130-1).

1. Understanding data
    a. What is data
    b. Data in society
2. Finding and/or obtaining data
    a. Data sources
    b. Obtaining data
3. Reading, interpreting and evaluating data
    a. Reading and interpreting data
    b. Evaluating data
4. Managing data
    a. Data and metadata collection and management
5. Using data
    a. Data handling
    b. Producing elements for data synthesis
    c. Ethical use of data

Although a relatively a nascent area within librarianship, a number of librarians have published data literacy case studies that can help form approaches to acquire data literacy and provide instruction: Bealle and Cash-McConnell (2010); Carlson, Johnston, Westra, and Nichols (2013); Carlson and Johnson (2015); Carlson and Stowell Bracke (2015); Corti (2004); Gunter (2007); Haendel, Vasilevsky, and Wirz (2012); Hunt (2004); Johnston and Jeffryes (2014); MacMillan (2015); Otto (2012); Qin and D'Ignazio (2010); Sapp Nelson (2015); Shrimplin and Yu (2004 and 2006); Stephenson and Caravello (2007); van 't Hooft, et. al. (2012); and Zilinski, Nelson, and Epps (2014).

In particular, Carlson and Johnson (2015), devote chapter 9 of their book to providing detailed information for data information literacy programs, including: planning, developing, implementing, and assessing/evaluating data information literacy programs. Although targeting academic librarians, any information professional should be able to adapt their recommendations and techniques to her constituencies. For school librarians, Bowen's and Bartley's (2014) book is a valuable resource.

A common theme across most of these publications is the importance of integrating data literacy into and across the curriculum in order to achieve the best results – much like information literacy initiatives. Stephenson and Caravello (2007) specifically notes, "Based on our experience, however, we also think that offering a stand-alone course is neither the ideal method for teaching overall information literacy skills to upper division sociology students nor the best way to incorporate statistical literacy into the IL program" (p. 533). Another common theme – there's no one-size-fits-all option. Carlson and Johnston (2015) devote one third of their book to five case studies, each of which describes data information literacy using a different model in order to meet specified needs.

The research presented by Carlson, Fosmire, Miller, and Nelson (2011) demonstrates how important it is to consider the needs of the constituents, in their situation, both faculty **and** graduate students – each population with a different set of needs. Those needs influenced their list of data information literacy core competencies. These three themes – data literacy integrated into and across the curriculum; data literacy taught using a variety of models; and data literacy designed to meet real needs (based in the culture of the discipline) – can be applied to data literacy education efforts in any type of library.

One can't leave the data literacy competencies or education without mentioning the ACRL *Framework for Information Literacy for Higher Education* (2015). The *Framework* represents a significant paradigm shift from its 2002 predecessor, *Information Literacy Competency Standards for Higher Education*. Whereas the 2002 document outlined specific and detailed standards, the *Framework* "is based on a cluster of interconnected core concepts, with flexible options for implementation, rather than on a set of standards or learning outcomes, or any prescriptive enumeration of skills. At the heart of this *Framework* are conceptual understandings that organize many other concepts and ideas about information, research, and scholarship into a coherent whole" (http://www.ala.org/acrl/standards/ilframework, 2015, p. 2). However, the *Framework* does provide "an expanded definition of information literacy . . . [that emphasizes] dynamism, flexibility, individual growth, and community learning:

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> Information literacy is the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning" (http://www.ala.org/acrl/standards/ilframework, 2015, p. 3).

Not surprisingly, up until now research, case studies, and competencies have been based on the 2000 information literacy standards. However, in examining the new *Framework for Information Literacy*, it is abundantly clear that data literacy initiatives fit nicely within this *Framework*. Substitute the word "data" for "information" in the above statement, and you have:

> **Data** literacy is the set of integrated abilities encompassing the reflective discovery of **data**, the understanding of how **data** is produced and valued, and the use of **data** in creating new knowledge and participating ethically in communities of learning.

This modification isn't substantially different from Koltay's (2016) definition of data literacy, highlighted in the previous column (http://www.ala.org/lirt/sites/ala.org.lirt/files/content/archive/2016mar.pdf, p. 17):

> "Data literacy can be defined as a specific skill set and knowledge base, which empowers individuals to transform data into actionable knowledge by enabling them to access, interpret, critically assess, manage and ethically use data" (p. 96).

The broader perspective and flexibility of the new *Framework* make it more challenging to implement, but it nicely facilitates the incorporation of all kinds of literacies, including data literacy and those not yet in existence.

Although data literacy initiatives are progressing, especially in recent years, it will continue to take time and effort for librarians to (1) get up to speed on data literacy; (2) convince doubters of the value of data literacy; (3) convince others (teachers, faculty, administrators) that librarians can contribute to data literacy instruction; and (4) determine the best approaches for incorporating data literacy into a library's information literacy program or other curricular areas. Koltay (2015) stated, ". . . it would be utterly naïve [to] presume that researchers easily (and readily) accept the need for acquiring data literacy skills. . . Data is probably not different [from their perceived level of information competency] in researchers' perception. Even more, they may feel more confident with it [data literacy]" (p. 409).

Even within the library profession, some place limitations on data literacy education activities for librarians: "While the data literate person can identify and evaluate the soundness of a research design and data collection methods, perhaps only trained practitioners need the specialized skills to carry out a full-fledged project involving data curation and advanced tools. And in most instances, teaching these skills is beyond the purview of librarians". (Beauchamp, 2015) However, Shield (2004) provides the opposite perspective, ". . . librarians have a unique opportunity in view of their training. They are generalists, not specialists. . . As such they are eminently qualified to teach students how to think critically, how to become information literate, how to become statistically literate and how to become data literate" (p. 9).

Using information provided by Cox, Verbaan, and Sen (2012), academic librarians (and quite possibly school librarians) are well positioned to provide data information literacy because:

- Liaison roles provide good connections into the departments;
- Background in the general concepts of management and organization information;
- Experience with the delivery of information literacy;
- Existing roles as advocates of open access and sharing research; and
- Demonstrated experience of creating models of best practices.

However, these authors also identify some challenges:

- Need to eliminate some current responsibilities;
- Lack of direct personal research experience may result in a lack of insight into the motives and practices of researchers;
- Lack of discipline-specific knowledge;
- Nontrivial activity to translate complex library concepts (metadata, for example) to research data concepts;
- Differences among disciplines among information and data practices, which challenges a generic model design;
- Challenges associated with the complexity and scale of research data management issues; and
- Still undetermined resources, infrastructure, policy and governance structures.

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Nevertheless, information professionals and groups in all types of libraries have already developed a variety of resources that inform and can be used by others who want to develop their own data literacy competencies and/or the competencies of others:

- Data Management
  - Data Curation Profiles (http://datacurationprofiles.org/)
  - Data Management Plan Self-Assessment Questionnaire, Purdue (https://purr.purdue.edu/dmp/self-assessment)
  - Data Management, MIT (https://libraries.mit.edu/data-management/)
  - MANTRA Research Data Management Training (http://datalib.edina.ac.uk/mantra/)
  - New England Collaborative Data Management Curriculum (http://library.umassmed.edu/necdmc/)
  - Online Data Management Course, University of Minnesota (https://www.lib.umn.edu/datamanagement/workshops)
  - Oceans of Data (http://oceansofdata.org/)
  - OceanTracks (http://oceantracks.org)
  - A Step-by-step Guide to Data Management, University of Alabama (http://www.lib.ua.edu/wiki/sura/index.php/A_Step-By-Step_Guide_to_Data_Management)

- Training Resources – Higher Education
  - Data Credibility Checklist (http://docs.lib.purdue.edu/cgi/viewcontent.cgi?article=1087&context=lib_fsdocs, p. 4-5)
  - Data Information Literacy Case Studies (http://docs.lib.purdue.edu/dilcs/)
  - Data Information Literacy Scenarios Exercises (http://docs.lib.purdue.edu/dilsymposium/2013/scenarios/)
  - Data Library, University of Edinburgh (http://www.ed.ac.uk/information-services/research-support/data-library)
  - DIL Guide (http://www.datainfolit.org/dilguide/)
  - Electronic Data Center, Miami University (http://edc.lib.muohio.edu/)
  - Frameworks for a Data Management Curriculum (http://library.umassmed.edu/data_management_frameworks.pdf)
  - MANTRA Research Data Management Training (http://datalib.edina.ac.uk/mantra/)
  - New England Collaborative Data Management Curriculum (http://library.umassmed.edu/necdmc/)
  - Oceans of Data (http://oceansofdata.org/)
  - OceanTracks (http://oceantracks.org)
  - Online Data Management Course, University of Minnesota (https://www.lib.umn.edu/datamanagement/workshops)
  - X4L – SdiT - Survey Data in Teaching and the Tutor Guide, University of Essex (http://x4l.data-archive.ac.uk/ and http://x4l.data-archive.ac.uk/learning/tutorsguide.pdf)

- Training Resources – Information Professionals
  - RDMRose (http://rdmrose.group.shef.ac.uk/)
  - School of Data (http://schoolofdata.org/)
  - Teaching Data Information Literacy: A Hands-on Introduction, 2016 ALA Annual pre-conference (http://www.ala.org/acrl/datainformationliteracy)

- Training Resources – Other
  - Data Literacy for Media and Technology Programs, Public Schools of North Carolina (http://ites.ncdpi.wikispaces.net/Data+Literacy+for+Media+and+Technology+Programs)
  - DIL Guide (http://www.datainfolit.org/dilguide/)
  - InspireData (http://www.inspiration.com/)

Do information professionals need to incorporate data literacy into their instructional toolset? Haendel, Vasilevsky, and Wirz (2012) state: “Libraries are an under-recognized resource in the field of data and information literacy. Librarians have increasingly become experts in data management because of their combined knowledge of new data sharing standards, information science, and the Semantic Web” (p. 3). Carlson and Johnson (2015) emphasize that “DIL [data information

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literacy] represents an opportunity to leverage the expertise, knowledge, and skill sets of librarians and apply them to an area of growing need," with a potential outcome of a "significant advancement for librarians in engaging in both the teaching and research missions of the academy"(2015, p. ix-x). The growth and accessibility of data, the new *Framework for Information Literacy for Higher Education*, the over-arching goal of enabling lifelong learning represent some of the reasons why the answer to this question is a definite – **yes**.

Ultimately, echoing Hunt (2004), "The success of data literacy will depend on how well we train data librarians about teaching; reference librarians and support staff about data and referrals; and faculty and administrators about why data literacy is imperative" (p. 14). Given our data-rich society, this imperative applies to information professionals in all types of libraries.

At the up-coming 2016 ALA Annual Conference, the ACRL Instruction Section will provide a pre-conference, "Teaching Data Information Literacy: A Hands-on Introduction" (http://www.ala.org/acrl/conferences/confsandpreconfs) This pre-conference should provide an excellent opportunity for instruction librarians – from any type of library – to develop or build their own data literacy skills, as well as gain insight to and practice in developing data literacy initiatives for their constituencies. If you are unable to attend this pre-conference, watch for other opportunities – the need for data literacy education is likely only to increase in the future.

ADDITIONAL RESOURCES

Association of College and Research Libraries. (2015) *Framework for Information Literacy for Higher Education*. Retrieved from http://www.ala.org/acrl/standards/ilframework

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LIRT STANDING COMMITTEES

Adult Learners
This committee is charged with assisting library professionals to more effectively serve adult learners.

Awards
This committee is charged with selecting the recipients for the LIRT Innovation in Instruction Award and the LIRT Librarian Recognition Award.

Conference Program
This committee shall be responsible for annual program preparation and presentation.

Liaison
This committee shall initiate and maintain communication with groups within the American Library Association dealing with issues relevant to library instruction and shall disseminate information about these groups' activities.

Membership
This committee shall be responsible for publicizing the Round Table's purposes, activities and image; and for promoting membership in the Round Table.

Newsletter
The committee shall be responsible for soliciting articles, and preparing and distributing LIRT News.

Organization and Planning
This committee shall be responsible for long-range planning and making recommendations to guide the future direction of LIRT.

Teaching, Learning, & Technology
This committee will be responsible for identifying and promoting the use of technology in library instruction.

Top 20
This committee shall be responsible for monitoring the library instruction literature and identifying high quality library-instruction related articles from all types of libraries.

Transitions to College
This committee builds and supports partnerships between school, public, and academic librarians to assist students in their transition to the academic library environment.

Web Advisory
This committee shall provide oversight and overall direction for the LIRT Web site.

For more information about our committees visit
http://www.ala.org/lirt/committees

Library Instruction Round Table News

LIRT

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