LIRT's Top Twenty for 2015

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Beilin, I. (2015). Beyond the threshold : Conformity, resistance and the ACRL Information Literacy Framework for Higher Education. *In the Library with the Lead Pipe*. Retrieved from 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 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. doi: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 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. 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

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://doi.org/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 (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

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. 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. 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

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. 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 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, thereby 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. 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. doi:10.5860/crl.76.7934

Zhang, Goodman, and Xie 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