

12-2024

A Faculty Workshop on Developing Students as Discipline-Situated Researchers

William Badke

Trinity Western University, badke@twu.ca

Elizabeth Kreiter

Trinity Western University, Elizabeth.Kreiter@twu.ca

Qinqin Zhang

Trinity Western University, Qinqin.Zhang@twu.ca

Follow this and additional works at: <https://pdxscholar.library.pdx.edu/comminfolit>



Part of the [Higher Education Commons](#), and the [Information Literacy Commons](#)

Let us know how access to this document benefits you.

Recommended Citation

Badke, W., Kreiter, E., & Zhang, Q. (2024). A Faculty Workshop on Developing Students as Discipline-Situated Researchers. *Communications in Information Literacy*, 18 (2), 198–217. <https://doi.org/10.15760/comminfolit.2024.18.2.5>

This open access Innovative Practice is distributed under the terms of the [Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License \(CC BY-NC-SA 4.0\)](#). All documents in PDXScholar should meet [accessibility standards](#). If we can make this document more accessible to you, [contact our team](#).

A Faculty Workshop on Developing Students as Discipline-Situated Researchers

William Badke, Trinity Western University
Elizabeth Kreiter, Trinity Western University
Qinqin Zhang, Trinity Western University

Abstract

The reference librarians of Trinity Western University have a strong mission-driven commitment to teach information literacy, but there is a significant contrast between the amount of instruction they can provide and the demanding task of developing all students as skilled researchers. The growing teach-the-teacher model suggested an option to enlist faculty in providing a larger portion of information literacy instruction themselves. With strong support from academic administration, three librarians devised an initial faculty workshop as part of the university's faculty professional development series, followed by four detailed weekly sessions. They based their activities on several factors: first, faculty members would need to be invited into a shared concern about student research; second, the librarians would not call for significant disruption of current curricula and teaching practices; and third, the workshops would focus on one basic idea—turning the assigned research project into a vehicle for developing students as researchers—rather than overwhelming faculty with multiple options. Faculty responded positively to the workshop series, and there are initial signs that faculty members are embracing the promoted concepts.

Keywords: information literacy instruction, faculty, skilled student researchers, teach-the-teacher model, professional development workshop

Innovative Practices

edited by Andrea Baer, Carrieann Cahall, Robert Detmering, Carolyn Gamtso, and Merinda McLure

Badke, W., Kreiter, E., & Zhang, Q. (2024). A faculty workshop on developing students as discipline-situated researchers. *Communications in Information Literacy*, 18(2), 198–217.

Copyright for articles published in *Communications in Information Literacy* is retained by the author(s). Author(s) also extend to *Communications in Information Literacy* the right to redistribute this article via other scholarly resources and bibliographic databases. This extension allows the authors' copyrighted content to be included in some databases that are distributed and maintained by for-profit companies. All other rights of redistribution are licensed by *Communications in Information Literacy* under Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International (CC BY-NC-SA 4.0).

A Faculty Workshop on Developing Students as Discipline-Situated Researchers

Information literacy (IL) has become a mainstream element in higher education library services: 98% of over 600 academic library directors rated information literacy instruction as important (Hulbert, 2023). Instructional activities include single sessions (often called one-shots), workshops, embedded activities within courses, and even credit courses (elective or required). The sheer variety of offerings and the extent of librarian activity is staggering.

At the same time, there are significant challenges. The first is librarian workload, which can approach the level of burnout when librarians teach multiple sessions every semester. The second is the fact that our IL efforts are not providing significant instruction, with many students having only one or two hour-long sessions during their programs, nor are we finding that students develop high levels of research competence despite our efforts (Cook, 2022; Pagowsky, 2021; Santamaria & Schomberg, 2022). The third challenge is that academic faculty members, for the most part, are not fully convinced that extensive IL instruction is a priority (Julien et al., 2018; Reale, 2020). The fourth challenge comes from need: to develop a fully information literate student, able to excel in the information world, demands much more than a single, one-hour class session. Librarians know that extensive education throughout the curriculum is required (Bent & Stockdale, 2009; Lechtenberg & Donovan, 2022; Reale, 2020).

A workshop series carried out at Trinity Western University in British Columbia, Canada, attempted to address that gap in student research skill development by enlisting a specialized approach to the teach-the-teacher model. Our guiding question was: How can a teach-the-teacher model of IL best minimize cognitive load (overabundance of details) while providing a viable way for faculty to engage effectively in research instruction that significantly improves students' research abilities? The following paper details the development, guiding principles, structure, and outcomes of our faculty workshop sessions.

Literature Review

The Task of Information Literacy in our Digital World

With the explosion of information in the digital age, knowledge consumers find it more challenging than ever to navigate the complex digital environment, where information and knowledge is produced and disseminated at an overwhelming rate (De Paor & Heravi, 2020). The large quantities of unregulated data on popular social media platforms also facilitate the growth of fake news stories and dissemination of misinformation (Batchelor, 2017; De Paor & Heravi, 2020). Generative artificial intelligence (AI) is adding to the confusion by blurring the distinctions between human- and bot-created knowledge (Mehlenbacher et al., 2024).

Despite their technological savviness, digital natives are not necessarily information literate (Brindley, 2009; Julien et al., 2013; Phippen et al., 2021; Rowlands et al., 2008). As digital natives enter higher education, they often overestimate their IL skills (Encheva et al., 2020; Gross & Latham, 2012; Julien et al., 2018; Valenza et al., 2022). Not understanding their own information needs, due to a lack of experience/ability with academic research, digital natives are accustomed to applying less refined and ineffective information search strategies (D’Couto & Rosenhan, 2015; Martzoukou et al., 2020; Rowlands et al., 2008;). Digital natives are also not motivated to acquire IL skills (Encheva et al., 2020; Julien et al., 2013).

The Current State of Information Literacy

Approaches to teaching IL have not altered appreciably since IL was originally developed and delivered as bibliographic instruction (Ariew, 2014; Cook, 2022; Reale, 2020). IL instruction remains fixated on information-finding despite the evolution of information literacy’s learning-goal focus from information-finding to information-handling and creation (Hughes, 2024; Saunders, 2024). This gap echoes a mismatch between IL practice and theory: practice is stuck in the one-shot skills-based model despite theory recommending embedded, discipline-specific information-use competencies (Aharony et al., 2020; Ariew, 2014; Dolinger, 2019; Polkinghorne & Julien, 2018).

Standard IL practice involves single sessions. More rarely, librarians embed themselves in the delivery of a course (Cowan & Eva, 2016; Dunn & Xie, 2017; Polkinghorne & Julien, 2018) or engage in regular library skills instruction by means of the scaffolded integration of IL sessions throughout the curriculum (Dunn & Xie, 2017). Regardless of how widespread

these approaches may be, the clear disconnect between instructional practices and IL learning objectives indicates that the current state is not necessarily the ideal state.

The Stresses and Unsustainability of Current Efforts

As many academic libraries face budget constraints, librarians at post-secondary institutions are often overworked (Cowan & Eva, 2016). Given the lack of adequate staffing and institutional support, librarians encounter barriers in their attempts to consistently embed IL training across the curriculum (Cowan & Eva, 2016; Julien et al., 2018).

The responses to an online survey conducted by Julien et al. (2018) provide insights into challenges faced by professional librarians in the United States and are consistent with data collected from surveys in Canada (Julien et al., 2013; Polkinghorne & Julien, 2018). While covering more than one work role, librarians experience a lack of time to properly prepare for IL instruction sessions. The low ratio of librarians to the number of students in an institution leaves librarian teams stretched to capacity in their support of campus programs (compare Cowan & Eva, 2016). The traditional one-shot IL teaching method has not proven to be genuinely effective in developing information literate students (Cook, 2022).

Librarian–Faculty Relations

It is very common, according to the library literature, for librarians to affirm that their relationships with faculty are constrained or at least limited. Librarians cite a lack of recognition of their abilities, misunderstanding or discounting of their roles, and a lack of faculty interest in having librarians work with students in their classes to enhance IL (Badke, 2014; Fister, 2009; Hardesty, 1995; Julien et al., 2018; Reale, 2020; Saunders, 2013).

Librarians find that faculty members tend not to want to take time from course content to engage in student research ability development (Yevelson-Shorsher & Bronstein, 2018), believe that students should already have research skills (Saunders, 2012; Weiner, 2014), and/or assume that student research ability develops naturally over time through practice (Saunders, 2012; Weiner, 2014; Yevelson-Shorsher & Bronstein, 2018).

At the same time, most faculty members value at least some efforts to improve student research, though few of them have plans or activities to achieve that in their instruction (Cowan & Eva, 2016; Inzerilla, 2017). Saunders (2012), from a survey of fifty colleges, stated:

Overall, this study confirms earlier findings that faculty believe the competencies associated with IL are important and students need to develop these competencies, but there is a lack of consensus about where IL belongs in the curriculum and who should be teaching it. (p. 230)

Thus one-shots prevail. Many faculty have reconciled themselves to believing that showing students databases is sufficient and all that we can practically achieve (Reale, 2020).

Librarians, unfortunately to the detriment of more advanced educational efforts, reinforce this perception by agreeing to conduct multiple single sessions (Reale, 2020), so much so that one-shot sessions can consume most of an IL librarian's work week (Julien et al., 2018; Polkinghorne & Julien, 2018, based on national surveys).

While there are abundant examples of successful librarian–faculty collaborations that enhance student research (Corelli & Hanneke, 2015; Cowan & Eva, 2016; Dearden, et al., 2005; Dolinger, 2019; Dunn & Xie, 2017; Hammons, 2020; Jumonville, 2014; Lacy & Hamlett, 2021; Mullins, 2016; Wishkoski et al., 2019), the sheer effort required (almost always through librarian initiative) to create and maintain such collaborations is immense and probably unsustainable (Cox et al., 2023). If, as we have seen, there are too few librarians on the ground to achieve good student IL, it makes sense that faculty should take a more deliberate role in developing stronger student information skills.

The Teach-the-Teacher Model

Many librarians have recognized the need for a dramatic shift in the focus of IL instruction toward a teach-the-teacher model (Cowan & Eva, 2016; Farrell & Badke, 2015; Fister, 2009; Gilman et al., 2017; Hamlett & Lacy, 2019; Hammons, 2020, 2022; Lacy & Hamlett, 2021; Miller & Bell, 2005; Sajdak, 2012; Smith, 1997). Librarians have spent too much time attempting to impart abilities that are disconnected from the curriculum or specific disciplines (Dunn & Xie, 2017).

In the face of increasing complexity in our information landscape, resulting in student bafflement about many aspects of the research environment, faculty may well be finding it increasingly difficult to guide their students. The rise of generative AI has led to widespread consternation among faculty who want to maintain research components in their courses but fear they will be grading robots (McMurtrie, 2024). Librarians can offer considerable guidance to faculty struggling with such questions.

Shifting librarians' focus from teaching contextless skills to helping faculty impart discipline-contextual practices to their students, will allow IL to be integrated with courses instead of superimposed (Flierl et al., 2019), thereby generating a more efficient and effective connection between students and the concepts of IL. A better approach than teaching generic IL is to present it as a discipline-situated skillset that fully integrates key competencies and learning goals within course structures (Cowan & Eva, 2016; Dearden et al., 2005; Dunn & Xie, 2017; Flierl et al., 2019; Polkinghorne & Julien, 2018). Those who deliver IL to students should be the practitioners best suited to demonstrating discipline-specific information handling: active faculty researchers working in concert with librarians.

Our Experience at TWU

Trinity Western University is a private liberal arts religion-based institution of about 6,000 students, from over 80 nations, situated in British Columbia, Canada. It offers undergraduate and graduate programs, and a doctoral program in nursing. The following accounts detail our current IL teaching efforts through the lenses of three of our IL librarian-instructors.

Bill Badke

Beyond the reference and single IL sessions I perform, I teach several for-credit research courses at the undergraduate and graduate levels. Yet, I continue to feel challenged because most of our students are getting no more than one hour of instruction outside of these courses, during their programs. Our librarians, given the smaller size of our institution, have good relationships with faculty through our support of their research and their students. This can be used to engage faculty in student research development.

Elizabeth Kreiter

I support IL instruction for the schools of Nursing, Human Kinetics, and Arts, Media + Culture, as well as for the English department. The majority of this instruction is delivered through one-shot sessions in support of research or writing assignments. Anything that approaches a more consistent or in-depth level of IL instruction—such as partial scaffolding through the lower-level nursing classes, and an embedded module in a 100-level communications class—is not only still inadequate for students' needs but also unscalable.

Qinqin Zhang

I develop and deliver IL instruction to support the School of Business, the leadership programs, the faculty of Natural and Applied Sciences, and programs run at our satellite campus in Richmond, BC. I mainly provide one-shot IL sessions targeting first-year undergraduate courses, upper-level research-focused courses, and graduate-level courses, especially capstone projects and thesis courses. I also teach a module within a non-credit writing skills course for graduate students, developed by the Writing Centre. I have had a positive experience working with faculty members to embed IL instruction in their curriculum; however, one-shot instruction is oftentimes not substantial enough to fully build and develop students' IL skills for their curricular needs.

The TWU Faculty Workshops

Workshop Presuppositions

Our planning for a workshop series for faculty in the fall of 2022 functioned under three presuppositions. First, faculty members are unlikely to embrace librarians' initiatives unless those initiatives align strongly with faculty interests. Teaching professors must feel deeply that they are hearing guidance that will improve their own teaching and provide better outcomes for both them and their students (Jumonville, 2014; Junisbai et al., 2016). Second, we must limit cognitive load. Some past efforts in the teach-the-teacher model have tended to be overly complex (see the elaborate efforts described in the survey results of Dunn & Xie 2017). Cognitive load theory (summarized well by Paas et al., 2003) argues that presentation of multiple elements of information, which must be understood as a whole, creates a stress on mental comprehension that limits understanding and knowledge acquisition. In simplified terms, this is akin to throwing seven basketballs at the same time and expecting the receiver to catch them all or even one of them. A learner receiving too much detail at once will retain little information, let alone act upon it. Third, initiatives in a teach-the-teacher model must reckon with disciplinary differences in faculty approaches to their own research and that of their students (Brady & Malik, 2019; Farrell & Badke, 2015; Lacy & Hamlett, 2021; Saunders, 2013).

We believed that a teach-the-teacher approach could serve as a significant step to begin resolving our problems of librarian overwork and insufficient IL development in our students (compare the emphases of Badke, 2021b). This was our intent:

Badke et al.
A Faculty Workshop on Developing Students as
Discipline-Situated Researchers

[INNOVATIVE PRACTICES]

1. The teaching series would be promoted by the university's Associate Provost, Teaching & Learning and would include an initial presentation to most faculty as part of their regular professional development program, followed by four practical one-hour sessions. The endorsement of the provost and the context of an official faculty professional development offering would give our efforts credibility.
2. We would avoid introducing a wide variety of library-initiated resources and teaching tools but would focus instead on one idea: to transform existing student research projects into vehicles for research skill development.
3. The idea that, "We all want our students to do better research," would serve as a common motivation to put librarians and faculty on the same path.
4. The workshops would include recognition of the disciplines and of our students' need for disciplinary enculturation as a key factor in their research ability development.

Workshop Planning

From the beginning, we believed that strong administrative buy-in was crucial if faculty were to accept the importance of our efforts. The first administrator we approached was our University Librarian, who readily and enthusiastically embraced the idea and offered full support in facilitating whatever we wanted to do. After this endorsement, we connected with our Associate Provost, Teaching & Learning, who, as we discovered, had a keen interest in the IL efforts the librarians were already carrying out. She, too, enthusiastically supported the plan that we sent to her, so much so that she scheduled our workshop as the first in the professional development series for faculty on various topics for the academic year and scheduled four, weekly follow-up sessions, beginning in September 2022.

This administrative support made our planned workshop series more than just another "library thing" and placed it firmly within academic instruction concerns alongside other sessions on student academic success. Endorsement also produced an attendance boost over what it could have been, with a larger percentage of faculty participating because it was an official professional development event. Sessions sponsored solely by the library would likely have produced much smaller attendance numbers.

The Initial Plenary Workshop

During the first all-faculty presentation, which was strongly attended by a majority of faculty (over half) from most disciplines because it was an official university professional development session, we provided a summary introduction of the dominant teaching points, which was informed by a more detailed LibGuide (see Appendix for links to the presentation and LibGuide).

We had several related goals in mind: to help librarians and faculty find community in the reality that our students are not developing sufficiently as researchers, to lead faculty to agree on the importance of research skills in a confusing digital information world, to offer guidance on disciplinary enculturation as a vital foundation for student IL, and to share a simple process to turn the student research assignment into a vehicle for mentoring student research development. At its foundation, we were not looking for faculty to upend their current curricula but to rethink and reconfigure only one aspect, the research assignment. Faculty members' responses were strongly positive, generating multiple questions in the session and showing significant indications of interest in subsequent conversations with the librarians.

The Follow-up Workshop Sessions

The first of the four follow-up workshop sessions was attended by fewer faculty members (an average of 20 from a variety of disciplines), but those who did participate showed themselves to be keenly interested in learning more about our approach. The emphasis of this initial gathering, entitled "Challenge," was that the chaotic world of information, which has been called the "information fog" (Badke, 2021a), is an obstacle that requires new and dramatic paths to educate our oft-bewildered students.

The second follow-up workshop addressed a matter that might appear to be a diversion, though it is central: "disciplinary enculturation" (Badke, 2019; Prior, 1995). The concept is simple: if our students are going to develop as researchers in our disciplines, they need to move from being tourists in our disciplinary environments to becoming active citizens. We presented a simple model of disciplinary enculturation based around epistemology, metanarrative, and methodology, along with some approaches to allow faculty to personalize their student research development activities around the distinctives of the subject matter they teach.

The third follow-up workshop was based on design thinking (see Mullins, 2014; Wiggins & McTighe, 2005) and presented our core idea: If faculty members can predetermine what elements they expect to find in an exemplary research project in their disciplines and courses, they can create rubrics and write assignments to help students develop and achieve those elements in their work. Our LibGuide provided numerous examples to show how a faculty member's desired outcomes could translate into workable student assignments. This approach to design begins with faculty members listing their expectations of the final product and then distilling those expectations in the form of rubrics to use in assignment construction. Faculty members thus set their own goals based on their disciplinary and course requirements, shaping research assignments to teach to those goals. This approach is based on the work of Farrell (2012, 2013) and Farrell and Badke (2015).

The fourth and final workshop considered the development, purposes, and rationale for breaking the standard research project into facets (scaffolding), but with a twist. Research projects normally are summative—students deliver a final product and get comments along with a grade, end of story. Instead, the faceted approach is formative, allowing student assignments, broken into segments, to become vehicles that are less for assessment than for a mentoring pattern of instruction. The goal of the research assignment is thus not so much to assess existing abilities as to develop those abilities through an emphasis on mentoring and training. The assignment becomes a learning tool more than an opportunity to set a grade and affirms an approach that is formative rather than summative.

The research skill development plan we presented raised, of course, some difficulties, of which the most significant is increased workload for faculty members who are mentoring their students through their assignments. We stressed that librarians would still be available for in-class instruction as desired, and that faculty member familiarity with student projects would limit their time spent grading the final product. But more significantly, we asked the question: How important is it to you that your students, and all students throughout the curriculum, develop into skilled researchers able to handle the challenges of the information world and use information skilfully in their occupations? This, it appears, was highly valued by our attendees.

Assessment

We believe the workshops were congruent with our goal to present one straightforward idea that resonated with faculty interests and aspirations, and that offered minimal disruption of course design and instruction time. From the level of interest in the initial workshop and the follow-up sessions, we believe that this goal was achieved, though not enough time has passed to assess long-term changes in faculty uptake. In fall 2024, we led a three-session updated faculty workshop and hope to offer another one in 2026. Academic administration support remains strong.

While we considered doing a formal assessment of the success of the workshops, we recognized that the goal of our efforts was not to create a revolution in information literacy instruction but to sow the initial seeds. Assessment at this point would measure only short-term and possibly fleeting gains. Genuine assessment will only be possible over time as we continue pursuing our teach-the-teacher goals with faculty. We have our faculty members' attention now, and our academic administration facilitated the 2024 workshops.

A more recent development has provided strong indications that the principles of mentored student research ability development are becoming more mainstream in faculty consciousness. The rise of generative artificial intelligence, and the membership of one of this article's authors in the faculty-dominant AI Taskforce that developed policy and guidelines for AI use in our academic community, offered two benefits. First, these factors made the idea of faceting larger assignments and focusing on training students in critical research skills a mainstream method option for faculty who are seeking to encourage critical thinking in the face of AI use among students. In the effort to foster student abilities rather than have them use AI as a substitute, faculty are now considering ways to facilitate student research development.

Second, these factors gave many faculty new awareness of the need to move from requesting a product (the research paper) to constructing ideas and fostering skills required of students to make the final paper truly their own work. In other words, there is a distinct shift in faculty recognition from product to process. The AI guideline statement reflects this shift in its practical suggestions for research assignments:

2. Break larger assessments into smaller steps. ... For example, if the major assignment is a research paper or longer essay, asking students to draft and hone a thesis statement in class and receive feedback from peers and from you as the instructor

sets the stage for the entire assignment. Setting aside class time for exploration of resources from the library also helps them avoid creating a (usually false) bibliography via an AI bot. These are, of course, simply examples.

3. Ask students to reflect, either in writing or verbally, on the learning process. How did they reach the conclusions that they reached? What were the challenges or barriers that they encountered? Were there any moments of clarity, and if so, what happened? Focusing on process reinforces the overall transformational purpose of their educational experiences. (Trinity Western University, 2024, p. 13)

This approach to assignments in response to AI reflects the emphases of our workshop series and shows that our principles of student research skill development are catching on.

Conclusion

Our efforts within a teach-the-teacher model were not a rejection of our roles as librarian instructors but an attempt to advance our reach by doing information literacy together with our faculty. While a single set of workshop sessions for faculty can soon fade into history, we are crafting further initiatives to see faculty involvement in information literacy become widespread, including a summary guidance document posted on the Teaching & Learning website (Badke, 2023) and a hoped-for repeat of our workshops.

Our ability to present these workshops was privileged in that we had administrative buy-in. Other librarians will find that there is faculty resistance. Strategies could include working one on one with specific faculty (Badke, 2021b), cultivating relationships with teaching and learning offices, or initiating voluntary workshops for faculty under the auspices of librarians.

We believe that this initial entry into helping faculty to implement a relatively simple path to developing student research ability is sound and that it is beginning to be implemented by our faculty. The institution's Associate Provost, Teaching & Learning supports and promotes the concepts we presented in our workshops. We continue to embrace the teaching role while welcoming the direct involvement of faculty instructors. Though we are not under the illusion that we have solved the information literacy challenges we seek to address, we believe that initial changes in faculty perception and practice are a good start.

References

- Aharony, N., Julien H., & Nadel-Kritz, N. (2020). Survey of information literacy instructional practices in academic libraries. *Journal of Librarianship and Information Science*, 52(4), 964–971. <https://doi.org/10.1177/0961000619891762>
- Ariew, S. A. (2014). How we got here: A historical look at the academic teaching library and the role of the teaching librarian. *Communications in Information Literacy*, 8(2), 208–224. <https://doi.org/10.15760/comminfolit.2014.8.2.167>
- Badke, W. (2014). Who owns information literacy? *Online Searcher*, 38(4), 68–70.
- Badke, W. (2019). Reading to write: Using disciplinary expertise and source reading with the ACRL framework to enhance the conceptual depth of writing students. In G. Veach (Ed.), *Teaching information literacy and writing studies: Vol. 2. Upper-level and graduate courses* (pp. 135–146). Purdue University Press.
- Badke, W. (2021a). *Research strategies: Finding your way through the information fog* (7th ed.). iUniverse.com.
- Badke, W. (2021b). *Teaching research processes: The faculty role in the development of skilled student researchers* (2nd ed.). En Route Books and Media.
- Badke, W. (2023). *Developing student researchers: A faculty-based guide*. https://libguides.twu.ca/ld.php?content_id=37025874
- Batchelor, O. (2017). Getting out the truth: The role of libraries in the fight against fake news. *Reference Services Review*, 45(2), 143–148. <https://doi.org/10.1108/RSR-03-2017-0006>
- Bent, M., & Stockdale, E. (2009). Integrating information literacy as a habit of learning - Assessing the impact of a thread of IL through the curriculum. *Journal of Information Literacy*, 3(1), 43–57. <https://doi.org/10.11645/3.1.212>
- Brady, L. L. C., & Malik, M. (2019). Science, story, and structure: Framing the conversation for psychology faculty and librarian information literacy collaboration. *Teaching of Psychology*, 46(1), 64–71. <https://doi.org/10.1177/0098628318816155>
- Brindley, J. L. (2009). Challenges for great libraries in the age of the digital native. *Information Services and Use*, 29(1), 3–12. <https://doi.org/10.3233/ISU-2009-0594>

- Cook, D. B. (2022). Is the library one-shot effective? A meta-analytic study. *College & Research Libraries*, 83(5), 739–750. <https://doi.org/10.5860/crl.83.5.739>
- Cowan, S., & Eva, N. C. (2016). Changing our aim: Infiltrating faculty with information literacy. *Communications in Information Literacy*, 10(2), 163–177. <https://doi.org/10.15760/comminfolit.2016.10.2.31>
- Cox, A., Nolte, A., & Pratesi, A. L. (2023). Investigating faculty perceptions of information literacy and instructional collaboration. *Communications in Information Literacy*, 17(2), 407–423. <https://doi.org/10.15760/comminfolit.2023.17.2.5>
- D’Couto, M., & Rosenhan, S. H. (2015). How students research: implications for the library and faculty. *Journal of Library Administration*, 55(7), 562–76. <https://doi.org/10.1080/01930826.2015.1076312>
- Dearden, R., Dermoudy, J., Evans, C., Barmuta, L., Jones, S., Magierowski, R., Osborn, J., Sargison, J., & Waters, D. (2005). Aligning information literacy with the faculty teaching and learning agenda. *Australian Academic and Research Libraries*, 36(4), 138–152. <https://doi.org/10.1080/00048623.2005.10755306>
- De Paor, S., & Heravi, B. (2020). Information literacy and fake news: How the field of librarianship can help combat the epidemic of fake news. *The Journal of Academic Librarianship*, 46(5), Article 102218. <https://doi.org/10.1016/j.acalib.2020.102218>
- Dolinger, E. (2019). Defining and teaching information literacy: Engaging faculty and the framework. *College and Research Libraries News*, 80(1), 10–21. <https://doi.org/10.5860/crln.80.1.10>
- Dunn, L., & Xie, S. (2017). Information literacy instruction in Canadian undergraduate science education 2000–2015: A literature review. *Canadian Journal of Information and Library Science*, 41(4), 263–284. <https://muse.jhu.edu/pub/50/article/699703>
- Encheva, M., Tamaro, A., & Kumanova, K. (2020). Games to improve students’ information literacy skills. *International Information and Library Review*, 52(2), 130–38. <https://doi.org/10.1080/10572317.2020.1746024>
- Farrell, R. (2012). Reconsidering the relationship between generic and situated IL approaches: The Dreyfus Model of skill acquisition in formal information literacy

- learning environments, Part I. *Library Philosophy and Practice*. Article 842.
<http://digitalcommons.unl.edu/libphilprac/842>
- Farrell, R. (2013). Reconsidering the relationship between generic and situated IL approaches: The Dreyfus Model of skill acquisition in formal information literacy learning environments, Part II. *Library Philosophy and Practice*. Article 1049.
<http://digitalcommons.unl.edu/libphilprac/1049>
- Farrell, R., & Badke, W. (2015). Situating information literacy in the disciplines: A practical and systematic approach for librarians. *Reference Services Review*, 43(2), 319–340.
<https://doi.org/10.1108/RSR-11-2014-0052>
- Fister, B. (2009, March). Fostering information literacy through faculty development. *Library Issues: Briefings for Faculty and Administrators*, 29(4), 1–4.
- Flierl, M., Maybee, C., & Fundator, R. (2019). Academic librarians' experiences as faculty developers: A phenomenographic study. *Communications in Information Literacy*, 13(2), 184–204. <https://doi.org/10.15760/comminfolit.2019.13.2.4>
- Gilman, N. V., Sagàs, J., Camper, M., & Norton, A. P. (2017). A faculty–librarian collaboration success story: Implementing a teach-the-teacher library and information literacy instruction model in a first-year agricultural science course. *Library Trends*, 65(3), 339–358. <https://doi.org/10.1353/lib.2017.0005>
- Gross, M., & Latham, D. (2012). What's skill got to do with it? Information literacy skills and self-views of ability among first-year college students. *Journal of the American Society for Information Science and Technology*, 63(3), 574–83. <https://doi.org/10.1002/asi.21681>
- Hamlett, A., & Lacy, M. (2019). “The times they are a’changing”: Information literacy instruction, faculty ownership, and student success. In B. Sietz, S. Fabian, K. Getz, S. Memmott, & R. Stevens (Eds.), *Proceedings of the 47th Annual LOEX Conference, Up north: Reflect, reconnect, renew, Minneapolis, MN, May 9–11, 2019* (pp. 201–204).
<https://commons.emich.edu/loexconf2019/32>
- Hammons, J. (2020). Teaching the teachers to teach information literacy: A literature review. *The Journal of Academic Librarianship*, 46(5), Article 102196.
<https://doi.org/10.1016/j.acalib.2020.102196>

- Hammons, J. (2022). The faculty-focused model of information literacy: Insights from the faculty development literature. *Journal of Information Literacy*, 16(2), 22–40.
<https://doi.org/10.11645/16.2.3222>
- Hardesty, L. (1995). Faculty culture and bibliographic instruction: An exploratory analysis. *Library Trends*, 44(2), 339–367.
- Hughes, H. (2024). Flourishing in an ocean of information: A futures vision for information literacy. *Journal of Information Literacy*, 18(1), pp. 84–93.
<https://doi.org/10.11645/18.1.565>
- Hulbert, I. G. (2023). *US library survey 2022: Navigating the new normal*. Ithaca S-R.
<https://doi.org/10.18665/sr.318642>
- Inzerilla, T. (2017). Teaching faculty collaborating with academic librarians: Developing partnerships to embed information literacy. In S. Ingvaldsen & D. Oberg (Eds.), *Media and information literacy in higher education: Educating the educators* (pp. 67–88). Elsevier.
<https://doi.org/10.1016/B978-0-08-100630-6.00005-9>
- Julien, H., Tan, M., & Merillat, S. (2013). Instruction for information literacy in Canadian academic libraries: A longitudinal analysis of aims, methods, and success. *Canadian Journal of Information and Library Sciences*, 37(2), 81–102.
<https://doi.org/10.1353/ils.2013.0007>
- Julien, H., Gross, M., & Latham, D. (2018). Survey of information literacy instructional practices in U.S. academic libraries. *College and Research Libraries*, 79(2), 179–199.
<https://doi.org/10.5860/crl.79.2.179>
- Jumonville, A. (2014). The role of faculty autonomy in a course-integrated information literacy program. *Reference Services Review*, 42(4), 536–551. <https://doi.org/10.1108/RSR-07-2014-0020>
- Junisbai, B., Lowe, M. S., & Tagge, N. (2016). A pragmatic and flexible approach to information literacy: Findings from a three-year study of faculty-librarian collaboration. *Journal of Academic Librarianship*, 42(5), 604–611.
<https://doi.org/10.1016/j.acalib.2016.07.001>

- Lacy, M., & Hamlett, A. (2021). Librarians, step out of the classroom!: How improved faculty-led instruction improves student learning. *Reference Services Review*, 49(2), 163–175. <https://doi.org/10.1108/RSR-09-2020-0062>
- Lechtenberg, U., & Donovan, C. (2022). Undoing our instructional past: Envisioning new models for information literacy. *College & Research Libraries*, 83(5), 837–840. <https://doi.org/10.5860/crl.83.5.837>
- Martzoukou, K., Fulton, C., Kostagiolas, P., & Lavranos, C. (2020). A study of higher education students' self-perceived digital competences for learning and everyday life online participation. *Journal of Documentation*, 76(6), 1413–1458. <https://doi.org/10.1108/JD-03-2020-0041>
- McMutrie, B. (2024, June 13). Professors ask: Are we just grading robots? *Chronicle of Higher Education*. <https://www.chronicle.com/article/professors-ask-are-we-just-grading-robots>
- Mehlenbacher, B., Balbon, A. P., & Mehlenbacher, A. R. (2024). Synthetic genres: Expert genres, non-specialist audiences, and misinformation in the artificial intelligence age. *Journal of Technical Writing & Communication*. Advance online publication. <https://doi.org/10.1177/00472816231226249>
- Miller, W., & Bell, S. (2005, May). A new strategy for enhancing library use: Faculty-led information literacy instruction. *Library Issues: Briefings for Faculty and Administrators*, 25(5), 1–4.
- Mullins, K. (2014). Good IDEA: Instructional design model for integrating information literacy. *The Journal of Academic Librarianship*, 40(3–4), 339–349. <https://doi.org/10.1016/j.acalib.2014.04.012>
- Mullins, K. (2016). IDEA model from theory to practice: Integrating information literacy in academic courses. *The Journal of Academic Librarianship*, 42(1), 55–64. <https://doi.org/10.1016/j.acalib.2015.10.008>
- Paas, F., Renkl, A., & Sweller, J. (2003). Cognitive load theory and instructional design: Recent developments. *Educational Psychologist*, 38(1), 1–4. https://doi.org/10.1207/S15326985EP3801_1

- Pagowsky, N. (2021). The contested one-shot: Deconstructing power structures to imagine new futures. *College & Research Libraries*, 82(3), 300–309.
<https://doi.org/10.5860/crl.82.3.300>
- Phippen, A., Bond, E., & Buck, E. (2021). Effective strategies for information literacy education: Combatting ‘fake news’ and empowering critical thinking. In D. Baker & L. Ellis (Eds.), *Future directions in digital information: Predictions, practice, participation* (pp. 39–53). Chandos Publishing. <https://doi.org/10.1016/B978-0-12-822144-0.00003-3>
- Polkinghorne, S., & Julien, H. (2018). Treading water: Results from the longitudinal study of information literacy instruction in Canadian Academic libraries, 1995–2017. *Canadian Journal of Information and Library Sciences*, 42(1–2), 69–93.
<https://muse.jhu.edu/pub/50/article/717388>
- Prior, P. (1995). Tracing authoritative and internally persuasive discourses: A case study of response, revision, and disciplinary enculturation. *Research in the Teaching of English*, 29(3), 288–325. <https://doi.org/10.58680/rte199515343>
- Reale, M. (2020). *Meeting the challenge of teaching information literacy*. ALA Editions.
- Rowlands, I., Nicholas, D., Williams, P., Huntington, P., Fieldhouse, M., Gunter, B., Withey, R., Jamali, H. R., Dobrowolski, T., & Tenopir, C. (2008). The Google generation: The information behaviour of the researcher of the future. *Aslib Proceedings*, 60(4), 290–310. <https://doi.org/10.1108/00012530810887953>
- Sajdak, B. (2012). Let the faculty do it: Responsibility and collaboration in developing an information literacy program. *College and Research Libraries News*, 73(4), 196–199.
<https://doi.org/10.5860/crln.73.4.8740>
- Santamaria, M., & Schomberg, J. (2022). It doesn’t matter how many “doses”: One-shots aren’t cures. *College & Research Libraries*, 83(5), 851–853.
<https://doi.org/10.5860/crl.83.5.851>
- Saunders, L. (2012). Faculty perspectives on information literacy as a student learning outcome. *The Journal of Academic Librarianship*, 38(4), 226–236.
<https://doi.org/10.1016/j.acalib.2012.06.001>

- Saunders, L. (2013). Culture and collaboration: Fostering integration of information literacy by speaking the language of faculty. *ACRL 16th National Conference, Imagine, innovate, inspire, Indianapolis, IN, April 10–13, 2013* (pp. 137–147).
<http://hdl.handle.net/11213/18084>
- Saunders, L. (2024). Information literacy now: Examining where we are to understand where we are going. *Journal of Information Literacy* 18(1), 69–77.
<https://doi.org/10.11645/18.1.560>
- Smith, R. L. (1997). Philosophical shift: Teach the faculty to teach information literacy. *ACRL 8th National Conference, Choosing our futures, Nashville, TN, April 11– 14, 1997*.
<http://hdl.handle.net/11213/15663>
- Trinity Western University. (2024). *Guidelines for the use of generative AI in teaching and learning*. <https://www.twu.ca/sites/default/files/2024-04/Guidelines%20for%20the%20Use%20of%20Generative%20AI%20in%20Teaching%20and%20Learning%20.pdf>
- Valenza, J. K., Dalal, H., Mohamad, G., Boyer, B., Berg, C., Charles, L. H., Bushby, R., Dempsey, M., Dalrymple, J., & Dziedzic-Elliott, E. (2022). First years' information literacy backpacks: What's already packed or not packed? *The Journal of Academic Librarianship*, 48(4), Article 102566. <https://doi.org/10.1016/j.acalib.2022.102566>
- Weiner, S. A. (2014). Who teaches information literacy competencies? Report of a study of faculty. *College Teaching*, 62(1), 5–12. <https://doi.org/10.1080/87567555.2013.803949>
- Wiggins, G. P., & McTighe, J. (2005). *Understanding by design*. ASCD.
- Wishkoski, R., Lundstrom, K., & Davis, E. (2019). Faculty teaching and librarian-facilitated assignment design. *portal: Libraries and the Academy*, 19(1), 95–126.
<https://doi.org/10.1353/pla.2019.0006>
- Yevelson-Shorsher, A., & Bronstein, J. (2018). Three perspectives on information literacy in academia: Talking to librarians, faculty, and students. *College and Research Libraries*, 79(4), 535–553. <https://doi.org/10.5860/crl.79.4.535>

Appendix: TWU Faculty Workshops Resources

- *Developing Student Researchers* all-faculty presentation:
<https://prezi.com/view/LNsqiNiHFBtCamfaORMD/>
- *Developing Student Researchers - The Faculty Role (4 unit workshop)* LibGuide:
<https://libguides.twu.ca/DevelopingStudentResearchers4Unit>
- *Teaching Research Processes – The 2024 Workshops* LibGuide:
<https://libguides.twu.ca/TRP2024Workshops>