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Building on Strengths: A Collaborative, Asset-Focused Approach to Teaching Critical Information Literacy Skills

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Abstract

This article showcases an instructor–librarian collaborative model for teaching critical information literacy (CIL) skills in a higher education course by incorporating interactive workshops into a sequence of required course assignments. Using an asset-focused design, this assignment sequence allows students to first demonstrate their existing research strategies and then evaluate those strategies during workshop activities, applying the CIL principles they are learning. In this way, the approach recognizes students' existing strengths and builds upon them, while emphasizing self-reflection opportunities and an intentional research focus on diversity, equity, inclusion, and representation. Results from our one-year study are also highlighted. The suggested instructional strategies could be adapted to any course with research-related projects.

Keywords: collaborative instruction, critical information literacy, asset-focused approach, infographics, higher education

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> It is not about just finding any sources and using them. It's about finding a source that goes with the topic and being able to verify the information you found.
>
> —Student CG23

Instructor–librarian collaborations are increasingly being promoted in higher education. Recent studies have explored the potential opportunities for librarian contribution to research topics and themes, assignment design, instructional delivery, and class discussions, arguing that the degree of librarian involvement in a course has a direct positive impact on students' engagement and information literacy (IL) skill development (Belzowski & Robison, 2019; Chisholm & Spencer, 2019; Mounce, 2010; Smith & Dailey, 2013). In defining *collaboration* for IL instruction, Mackey and Jacobson (2005) presented two models:

1. Teaching alliances: a librarian and a course instructor work together through the planning stages of a specific course (e.g., designing and scaffolding assignments, curating course materials, interacting with students, and leading class meetings). Ideally, the librarian also has access to the course LMS and can contribute resources as needed. This arrangement involves multiple conversations that start before the term begins and continue throughout, incorporating periodic debriefs after class sessions to make any necessary adjustments.

2. Campus partnerships: a librarian works with one or more campus departments on specific IL projects, focus groups, and committees, or provides IL support and library resources in response to campus-wide initiatives and assessment goals.

The collaboration model for this Innovative Practice was a teaching alliance at a medium-sized public state university in the western United States, where both the librarian and the instructor have been employed for approximately 20 years in their respective roles. The course instructor contacted this librarian and suggested the collaboration after hearing about her specific research in critical information literacy (CIL) pedagogy. The goal was to design an asset-focused assignment sequence first to identify students' existing research strengths and CIL skills and then build upon them with targeted instruction from the librarian in at least two interactive workshop settings. This approach positioned the

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librarian as an academic professional equal to the course instructor, contributing unique and valuable expertise.

This article details the results of our assignment sequence from two semesters of an upper-division diversity-themed course, providing an adaptable design for similar research-focused courses in any discipline.

Background

The Association of College and Research Libraries (ACRL, 2015) *Framework for Information Literacy for Higher Education* emphasizes the interactive roles and responsibilities of all parties (students included) in information consumption and creation processes. In response, a growing body of literature showcases interdepartmental collaboration in IL instruction: ideally the partnership of a course instructor (contributing course content specialization) and an academic librarian (contributing information literacy/information science specialization). Several sources have described such collaborations in practice (Stöpel et al., 2020; Torrell, 2020); however, few have identified effective assessment tools for measuring students' short-term or long-term application of these skills, and further research is needed in this area (Bharuthram et al., 2019).

Additionally, practical assessment of IL skills relies on a study's ability to elicit and record students' research decisions before targeted instruction to identify their pre-existing knowledge and abilities in comparison to their decisions after instruction (Walton et al., 2018). Unfortunately, the before measurement is often skipped in published examples of collaborative approaches where the librarian initiates IL instruction at the onset of the study, and the featured results highlight only examples from students' final research projects (Gosselin & Goodsett, 2019; Rosa & Pinto, 2023). Without a task or deliverable to use as a pre-test or diagnostic, the instructional design is fundamentally deficit-focused, and curriculum is needs-driven, rather than strengths-driven (Johnson et al., 2022).

Our collaborative project takes a different approach by first exploring the research strategies students use without targeted instruction and then allowing students to self-evaluate these habits during guided workshops later in the semester. Students then incorporate new strategies to either build upon their existing skills or remedy areas of weakness. Our assignment design is framed by the following pedagogical priorities and practices.

Critical Information Literacy (CIL) & Digital Media

A more specific application of the *Framework* involves examining the power structures in information decisions. Generally speaking, critical information literacy (CIL) is based on the critical literacy theory rooted in the critical librarianship movement (Tewell, 2015). Also referred to as "Critlib" in LIS scholarship, it is an intellectual or activist movement to increase awareness of social justice issues that influence library practices—from employment and management decisions to services and resource deployment (Nicholson & Seale, 2018).

Demonstrating CIL principles requires intentionality in choosing equitable, inclusive, and accurately represented sources for research-related projects and assignments. This level of discernment has become increasingly important as sources of information continue to multiply in type and delivery. In response, recent studies have explored students' digital and technological literacy using a CIL perspective (McGrew et al., 2018; Tewell, 2018; Tynes et al., 2021). Rather unsurprisingly, the predominant literacy challenges they have discovered stem from students' inability to identify source authorship because the professional appearance of digital media can easily be copied by non-professionals. Students tend to more readily believe sources of information they agree with, sources that have professional formatting and graphics, and sources that appear at the top of the list of search results (McGrew et al., 2018; Tynes et al., 2021; Westerwick, 2013).

In early scholarship applying critical theory to entertainment media, Yosso (2002) introduced critical race media literacy (CRML) and designed an instructional curriculum that centered on the portrayal of Chicanas/os in popular American movies. Yosso argued that racist, classist, and sexist stereotypes about people of color are perpetuated in mainstream entertainment media through cast and script decisions. Her CRML curriculum asked students to question and challenge those negative media portrayals as well as their own instinctive tendencies to implicitly accept or internalize the stereotypes presented.

Building on this work by applying a more specific focus on digital media, Tynes et al. (2021) introduced critical race digital literacy (CRDL) in their study of U.S. students of color and their perceptions of race-related messages in four digital formats: websites, tweets, online videos, and social media posts. Results of these and similar studies have consistently revealed the same overall concerns about students' difficulty evaluating authorship and questioning the power structures that create inequality and oppression. Researchers also argue that the scope of this discussion is too complex for one class meeting. These findings justify

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increased efforts on the part of academic librarians to reinforce CIL research skills in their instructional opportunities as well, supporting interdisciplinary conversations.

Very recent work by Chomintra (2023) examined the librarians' role in addressing fake news and mis/disinformation, noting that library instruction on this topic often lacks any direct references to critical theory. In response to these findings, Chomintra designed a CRDL rubric for developing lesson plans and approaches that emphasize key aspects and applications of these principles (Chomintra, 2024). Though the rubric was not published until after our study was completed, our instructional design demonstrates convergence with Chomintra's recommended standards.

Rather than using traditional essays as the pre- and post-assignments in our sequence, we asked students to create infographics, with which they would demonstrate and then self-evaluate their research practices. Infographics are loosely defined as the combination of text and graphics in a vertical arrangement that can stand alone (Lankow et al., 2012), and our initial weeks of instruction addressed the purposes, features, and audiences considered in infographic design. This aligned well with the social justice themes of the course by providing students with real-life contexts for the data they chose to present.

Similar documented uses of infographic assignments include a studio art project (Owens & Voorhees, 2022) and a poster presentation for an English language course (Caplan & Chi, 2022). Both examples also incorporated collaborative instruction from a university librarian, but the librarian's role was primarily to provide general research assistance. Additionally, the scope of both assignment situations differed significantly from ours. Using infographics in his business writing courses, Toth (2013) argued that infographics require the same basic research skills as essays, such as source evaluation, critical thinking, and digital literacy. Toth also recommended including a written reflection component where students can explain their decision-making process. For students in social work courses, Jones et al. (2019) argued that infographic assignments give students real-world contexts for practicing higher-order critical thinking skills. Similarly, using the social justice themes of our course, we hoped students would see the infographic assignment as an opportunity to practice a different skill set, explore their creative potential, and produce work they would be comfortable sharing with classmates.

Asset-Focused Approach

Traditionally, academic discussions and administrative decisions regarding student achievement have been based on institutional data reported from a deficit-focused perspective, highlighting the lowest-performing student populations and their most failed programs and courses (Johnson et al., 2022). These groups are generally "non-traditional" students—low-income, first-generation, and/or non-white/non-Asian ethnicities—and are quickly identified as the cause of an institution's declining progression, retention, and graduation rates (Hall et al., 2021). Johnson et al. (2022) pointed out the prevailing mindset that "the lack of persistence by a student is the fault of the student" (surely not the institution), which means there is an "implicit deficit" in those students who do not complete their courses or degree programs (p. 1). In hopes of improving the institution's overall achievement rates, new goals and initiatives are implemented to provide tools and resources that underperforming groups are assumed to be lacking—assumptions based largely on negative stereotypes (Ilett, 2019).

This perspective has been attributed to "academic capitalism" and the market-oriented model adopted by higher education, which views students as customers and commodities and, therefore, prioritizes student retention to retain tuition and other sources of enrollment funding (Johnson et al., 2022; Slaughter & Rhoades, 2004). Consequently, tools used in institutional data collection often micro-target specific identity factors, which leads to biased and inaccurate data, as well as academic programming that undermines the actual skills and assets of these students (Flyvbjerg et al., 2012; Johnson et al., 2022).

Alternatively, Johnson et al. (2022) argued that we should be measuring and increasing students' sense of *belongingness*, which has been identified for decades as a leading factor in their decisions to persist or drop out of higher education. They noted, "Belonging requires that a person or a set of people be valued and matter to an institution, which includes the nuances of their experiences and shared pursuit of subjective growth and success" (p. 6). Adopting this perspective on retention would prioritize recognizing and developing students' individual assets, rather than assuming or predicting their collective deficits. Incorporating small group and pair activities into our workshops empowers students by placing them in control of discussions and actively soliciting their voices and opinions. In this way, Tewell (2018) argued that students also become "active mediators in the interpretation and creation of information," which is a fundamental CIL pedagogical method (p. 19).

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Similarly, Hicks and Lloyd (2016) have published multiple studies exploring the limitations of the traditional behaviorist approaches to information literacy (IL) instruction and argue for taking a sociocultural constructivist approach where "linguistic and cultural variables are seen to bring complexity rather than deficiency" to the academic environment (p. 336). Here, students' unique perspectives and lived experiences are welcomed as a point of entry into class discussions and assignment choices. Further, Hicks and Lloyd (2023) underscored the impact of student success discourse at all levels, including terminology and phrasing in assignment guidelines, learning outcomes, and grading rubrics.

Librarian–Instructor Collaboration

Equipped with the practices and dispositions outlined in the *Framework*, academic librarians are uniquely positioned on their campuses to promote CIL. When librarians with discipline-specific expertise or interdepartmental liaison assignments seize opportunities to form strategic partnerships with instructional faculty, the librarians' contribution will likely influence course and assignment design (Becker et al., 2022; Gilman et al., 2017; Hoffman & LaBonte, 2012; Hulseberg & Versluis, 2017; Reale, 2018; Zanin-Yost, 2018). Continued collaboration further reinforces a shared vocabulary in conversations about CIL and a shared understanding of ways these skills could be effectively practiced and demonstrated by students.

Despite the documented success of collaborative CIL instruction, this practice is far less common than librarian one-shot invitations, and many course instructors have little to no interaction with their university librarians during an academic term (Oakleaf et al., 2011). A variety of factors contribute to this division. Studies have reported complaints from instructors about time and workload constraints (Brown & Shelley, 2017), instructor misconceptions about the librarians' role (Barr & Tucker, 2018; Belzowski & Robison, 2019), the perception of IL discourse as "weak" in comparison to "strong" academic discourse (Walton & Cleland, 2017), and a misunderstanding of IL in general (Cox et al., 2023). Other studies have blamed librarians for being resigned to the librarian–servant stereotype (Reale, 2018), pointing to a "librarian insecurity complex" (Leeder, 2011, para. 8) and the need to be more proactive in their interdepartmental liaison opportunities (Barr & Tucker, 2018).

Ultimately, collaborative approaches are dependent on *mutual* interest, ability, willingness, and available time. We cannot realistically expect all of those factors to be concurrently present very often; in fact, even the most effective instructor–librarian partnership will not be repeatable every term or every year due to the continually evolving circumstances of one or both partners. Instead, our goal should be to create and foster an environment where these partnerships form organically, as colleagues recognize and seize opportunities to improve outcomes by combining their strengths.

Additionally, we believe that collaborative instruction is an asset-focused practice. Its design builds upon the combined knowledge, talent, and expertise contributed by each partner, and it is grounded in reciprocated professional respect. Collaborative instruction maximizes identified strengths and possibilities, rather than assuming barriers and limitations to these relationships. Promoting interdepartmental partnerships welcomes and values multiple perspectives, encouraging asset-focused conversations.

Targeted Course: Advanced Writing & Research

Our collaborative project involved an upper-division English course that satisfies two general education requirements for baccalaureate graduation at our institution: (1) academic writing proficiency and (2) diversity awareness and self-reflection. This course was ideal for our assignment design because of its research-heavy components and emphasis on diversity-related themes in course content. Both areas require high-level CIL skills.

The established learning outcomes of our university's upper-division writing proficiency courses include seven reading, writing, and research goals. The assignment sequence we developed supports the following two goals:

- Students will find and evaluate diverse, reputable sources for a specific writing task.
- Students will effectively and correctly use summary, paraphrase, and direct quotes to synthesize sources.

The established learning outcomes of our university's diversity and reflection courses include four self-knowledge and diversity awareness goals. The assignment sequence we developed supports the following two goals:

- Students will demonstrate an understanding of the basis of human diversity including, but not limited to, gender, race/ethnicity, social class, age/generation, religious/philosophical beliefs, and/or mental/physical ability.

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- Students will be able to recognize, discuss, and demonstrate an understanding of their own experiences and perspectives while maintaining respect for diverse experiences and perspectives.

Several weeks prior to the course term, we began meeting to design the syllabus, scaffold assignments, and set appropriate dates and expectations. The instructor described examples of previous student research interests and frustrations with this course, and the librarian suggested CIL instruction and workshop activities to support a wide range of social justice topics. With consideration for the librarian's workload, we designed this assignment series to be one of four Canvas modules required for course completion, and we scheduled two workshops to be delivered by the librarian during weeks five and six. The librarian gathered and developed the CIL materials, placing these on the course's Canvas LMS site and discussing them with the instructor. Taking a collaborative team-teaching approach to this assignment series allowed the course instructor to prepare the class for the research assignments and introduce the faculty librarian with an emphasis on her education and credentials, which underscored her subject matter expertise and authority. The instructor attended and participated in the workshop sessions, which were directed and facilitated by the librarian.

We continued to meet after each class session to discuss the activities and student responses, making adjustments and supplementing course materials accordingly. The instructor was responsible for the official grading of all assignments.

Assignment Sequence

Using an asset-focused design in our assignment sequence, we incorporated the CIL instruction in the middle of the four stages—unlike similar but deficit-focused collaborative approaches that introduced CIL principles from the beginning (Gosselin & Goodsett, 2019; Rosa & Pinto, 2023). Our sequence allowed students to demonstrate their existing research knowledge and skills before receiving targeted information about CIL. Then, they would examine their initial assignment submissions through the lens of the CIL principles and, ultimately, self-assess and reflect on the strengths and weaknesses of their strategies to make necessary improvements.

Stage 1: Infographics

As previously noted, we chose research-based infographics, rather than traditional essays or research papers, to be the main assignments in the series. Since this series was only one of four modules in the course, the other three modules incorporated more traditional writing assignments. Focusing on the infographic's unique attributes, the course instructor prioritized formatting decisions and creative design during the first few class meetings and introduced students to two free online graphic design platforms, Snappa and Canva. Both programs provide infographic templates and editing tools that allow for extensive customization of the text, graphics, and color scheme.

Students were required to choose a social justice topic for their infographic—any current issue directly affecting a specific human population was permitted. Multiple class meetings allowed students to practice using the features of the online programs and explore a variety of topic ideas, which ultimately included aspects of immigration, human trafficking, food insecurity, housing insecurity, mental health, the child foster system, international adoption, reproductive rights, student underperformance, and juvenile delinquency.

Students were instructed to research their topic and find two trustworthy sources to provide the necessary data for their infographics; they submitted a separate reference list of the sources they incorporated. No restrictions were placed on the type of information sources allowed.

Stage 2: CIL Workshops

After students created and submitted their infographics, the academic librarian began attending class meetings and was formally introduced to take over instruction for two 75-minute workshops. Using a variety of multimedia resources, the librarian defined the principles of CIL and explained how to apply a CIL lens to our research context. Students participated in interactive exercises and small group discussions about the social justice topics they had chosen and the information sources available to them. They questioned the quality and limitations of the information they found, and they were challenged to explore other forms of information and expand their initial scope to include alternative voices, particularly to represent the individuals directly affected by or involved with their chosen social justice issue. Independently and in pairs, students proposed new research directions and strategies that they could immediately apply and practice.

Workshops introduced lateral reading strategies and ways students could verify the origins of the sources they incorporated in their infographics, examining their authority, purpose, consistency, and potential biases. Students were also introduced to fact-checking websites and given opportunities to replace sources they determined to be weak or unsubstantiated.

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(See sample workshop lesson plans available at https://bit.ly/CILworkshops and sample instructional materials available at https://bit.ly/CILmaterials.) Students were instructed to make the appropriate revisions for a new infographic submission, and their revised submissions also needed to incorporate a third information source.

In pairs, students completed peer review exercises and provided feedback and suggestions to each other based on CIL principles and the strategies practiced in the workshops. Peer comments were often related to audience, requiring students to define their research needs for the infographic and its presumed user—whom did they envision might use or benefit from their infographic's message? What type of information would that audience need? What voices should be represented? And what sources or information outlets would best provide them? These questions guided students to move beyond doing research and into using research with focus and intention (Schmersahl, 1987), which reinforced CIL practices. The students addressed these questions and activated a critical disposition that considers the sociocultural and political aspects of their knowledge use and knowledge production.

Stage 3: Written Reflections

After the last workshop, students were instructed to write a three-paragraph reflection describing their understanding of the CIL-related strategies in regard to their personal research habits and expectations. The prompt for this reflection consisted of guiding questions for each paragraph. In the first paragraph, students were asked to explain their initial search process, for example, where they looked for sources, what they found, what they decided to use, and what characteristics helped them determine the relevance and authority of a source. In the second paragraph, students were to describe their opinion of their sources after applying evaluative strategies learned from the workshops, such as what they learned about their sources and whether they chose to keep or replace them. In the third paragraph, students were to explain the research process they used to find an additional source to incorporate in their revised infographic. They were also asked to reflect on their peer review experiences and the feedback they received from their classmates.

Stage 4: Infographic Revisions

In the same manner as before, students submitted their revised infographics to the course instructor with a separate, corresponding source references list. A quick scan of their revision submissions was somewhat disheartening at first, noting that the majority of the infographics looked almost identical to their initial versions, with only slight changes to content or layout. A few students made more noticeable revisions by adding graphics or quotes, resizing or reducing text, or changing color schemes, but major changes were less common. Realizing this, the instructor referred to students' written reflections during the grading process. The written reflections articulated the students' logic behind significant research decisions that might not be visibly evident, particularly in cases where students concluded from self-assessment that their initial sources were strong and credible. In fact, as noted in the Results section, 71% of students retained at least one of their original sources in their revision submission. Visible changes in the infographics proved to be less informative than students' explanations of their decision-making process.

Assessment Methods & Findings

Prior to beginning this project, the authors applied for and received IRB approval to use student assignment submissions as study data. All enrolled students were informed of the study and given the opportunity to participate each semester. Of the 29 students enrolled in the first semester course, 15 provided informed consent, but only 14 students completed the full series of assignments. In the second semester course, nine of the 15 students enrolled provided informed consent, but only seven completed the full series of assignments. Therefore, the study results discussed below represent a combined total of 21 participants.

Participant identities were concealed until the courses had ended and final grades had been submitted. Participants' assignments were then downloaded and anonymized using random alphanumeric identifiers. All personal identifiers were removed and deleted.

Methods

The entire series of assignment submissions were considered during analysis: the initial infographics, the written reflections, and the revised infographics. For the purposes of this article, the most noteworthy data to report came from our inductive thematic analysis of the written reflections—an iterative process of identifying emerging themes through the coding and grouping of student responses (Grbich, 2013). Students tended to make minimal noticeable revisions to their infographics; however, their written reflections provided detailed descriptions of their responses to the workshop materials and subsequent research decisions.

Using NVivo qualitative data analysis software to manually log and sort the responses, we created four main code categories: Initial Search Approaches, Initial Evaluative Criteria,

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New CIL Search Approaches, and New Evaluative Criteria. See Table 1 for definitions of these categories.

Table 1: Main Code Categories and Descriptions

Before Workshops	
Initial Search Approaches	Students' instinctive research approaches
Initial Evaluative Criteria	Source characteristics they were looking for to determine credibility and/or usability for the infographic
After Workshops	
New CIL Search Approaches	Research approaches students used after participating in the CIL workshops
New Evaluative Criteria	Characteristics they looked for in selecting a replacement or supplemental source for the infographic revision

Independently, we generated specific codes *in vivo* within those categories based on the phrasing and descriptions provided by the participants, using a manual magnitude coding process, as the number of participants was manageable (Saldaña, 2016). (Examples of coded responses from written reflections are provided in Appendix A.) After comparing and synthesizing our individual analyses, we created a common, shared codebook containing the most prevalent and/or informative themes. (See Table B1 for the full list of shared codes and code frequency.)

Results

Key observations from participants' descriptions of their initial approaches include their preference for searching the open web and using Google for preliminary research (86%), and their attraction to government websites (48%) and quantitative data/statistics (62%) as evidence of a source's credibility. Another interesting observation was the participants' admission to demonstrating confirmation bias (looking for sources that confirmed their existing beliefs or expectations) in their initial source selection (48%) contrasted with their reported attention to lateral reading strategies (86%) including fact-checker websites and Wikipedia results after the CIL workshops. (See data tables in Appendix A for specific student examples.)

Participants also responded positively to the peer feedback they received during small group activities, seeing these as non-threatening opportunities to ask questions and explore new directions. Sixteen participants (76%) indicated that they used or considered advice from peers when revising their infographics. We also found that peer workshops contributed significantly to reinforcing audience awareness, as many participants described peer suggestions to make infographic content more useful or visually attractive. For example, some mentioned adding emergency hotlines and contact information for support centers—necessary and helpful information for a person experiencing the issue showcased by the infographic.

> She thought that my source was a good addition to the infographic as it provided help as well as information … to not only show the statistics of food insecurities but also offer local resources that are available if you find yourself in that position. (Student FG23)

Students who retained one or more of their initial sources explained their justification for doing so:

> After participating in the workshops, … I still like my second source because it provided me with plenty of information on my topic, and the writer explained where the data came from and listed three different sources to confirm the information was accurate. (Student EG23)

> After participating in the CIL workshops, I practiced lateral reading … the source found in the university library was referenced in other websites, there was previous work done by the source, and I was able to find more information on the source in *Wikipedia*. (Student DG23)

While 15 participants (71%) reported retaining at least one of their original sources, 11 participants (52%) said they intentionally added a new source of a different type in their revision, usually to incorporate the firsthand perspectives of those directly impacted by the infographic topic. New source types included user-generated content, such as YouTube videos, TED Talks, documentaries, nonfiction books, and/or non-profit service organizations. (See data tables in Appendix A for these examples.)

Discussion

This study revealed multiple opportunities for students to demonstrate IL practices and dispositions outlined in the ACRL *Framework*, most notably "Authority Is Constructed and Contextual," "Research as Inquiry," "Scholarship as Conversation," and "Searching as Strategic Exploration." These connections are noted below.

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Successes

Using the asset-focused approach allowed students to positively acknowledge the aspects of their research process that they instinctively did well. Most notably, when students evaluated their original sources during the CIL workshops, the majority were able to confirm the authority of at least one source, expressing feelings of validation. This positive energy gave way to deeper critical thinking in regard to representation and inclusion. Eleven students (52%) reported that they incorporated a new type of source in their revision—some mentioned a specific documentary, TED Talk, government source (e.g., Census report), nonprofit organization website, or biographical book. (See Table A3) Student examples illustrate dispositions of the ACRL frames of "Authority Is Constructed and Contextual" and "Scholarship as Conversation" reflecting their desire to also represent the lived experiences of those directly involved or affected.

We found that the peer review opportunities increased students' audience awareness, partly because the peer was an audience (someone besides the instructor), but also because the peer feedback often suggested resources and information that would benefit an actual intended audience. Working in pairs and small groups made students more comfortable sharing their work and considering new research strategies, which reinforced dispositions of the "Searching as Strategic Exploration" frame that emphasizes the value of accessing a wide variety of information sources and knowing when they have found enough information to satisfy the assignment.

Incorporating reflection is important in all IL instruction because it asks students to examine their specific research decisions and the resulting effects. McCoy (2022) posited that IL requires metacognition, explaining that opportunities for reflection reinforce the metacognitive practices that help students better identify what they do, understand why they do it, and decide what they want to change about it. McKinney and Sen (2012) recommended using prompts with specific guidelines or targeted questions, asserting that students' written reflections will then be more descriptive and focused. The reflection stage of our assignment series provided the most valuable information for our study as well. Reflection encourages dispositions of intellectual humility and intellectual curiosity described in the "Research as Inquiry" frame.

Challenges & Considerations

We found that students are more engaged when workshop time is primarily allocated to activities, rather than lectures. Class sessions tend to be very short, so we recommend introducing any novel technology (e.g., online whiteboard apps) before the workshops, allowing students time to create profiles and practice basic functions. Additionally, some materials could be made available to students in advance of the class meeting, such as a video or lengthy reading, so students can watch or read it in preparation for the session. This flipped classroom strategy allows more time in class for active learning. If students are not likely to do this preparation on their own time without incentive, consider assigning a small point-based "knowledge check" submission as encouragement.

Some web-based graphic design programs do not allow file downloads in their free versions, so users can only share a URL link to view their creation online. We discourage using these programs or accepting URL links as assignment submissions because any changes students make will be saved to the same URL, overriding their initial design. Consequently, their initial creation/submission will no longer be available to view for comparison purposes.

Infographic revisions can also be difficult to grade if there is not much noticeable change; therefore, students should be reminded that written reflections are their opportunity to explain their decisions. We considered amending the instructions to require one or more specific changes to the format or content of the revised submission, but we believe this could distract students from the more significant learning outcomes involving source evaluation and selection. Because infographics tend to be data-heavy, students who use library databases for this information will often find accurate and reliable sources, though they might not give much thought to the characteristics that make those sources reliable. Ultimately, we recommend placing the grading emphasis on the process over the product. Designing the deliverable becomes less important than practicing CIL skills.

Future CIL instructional collaborations should also consult the critical race digital literacy (CRDL) rubric designed by Chomintra (2024) for developing and assessing lesson plans. While it is difficult to thoroughly address every area of her rubric in one or two workshops (and some librarians might not be willing or qualified to facilitate deep discussions on highly nuanced topics), the descriptions in each category provide helpful goals for engaging students in relevant critical practices. If we could incorporate a third workshop into our series, it would focus on the rhetoric of digital media as a communication tool and other non-traditional information sources.

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Conclusion

Any course with research-based assignments could incorporate a similar asset-focused, scaffolded approach to instruction, whether or not collaboration with a librarian is also available. For strong teaching alliances, instructors and librarians should initiate course planning discussions long before the term begins, and then consider "sharing the stage" during class meetings as often as mutually realistic. A frequent librarian presence reinforces both the critical pedagogy and the librarian's authority regarding CIL concepts, and the power systems influencing academic research.

Collaborative instructional approaches vary as greatly as the personalities of the partnering colleagues. Our intention is not to define a perfect partnership but to encourage communication between course instructors and librarians so they are prepared for and mindful of these opportunities to combine forces in ways that effectively engage students, deepening their critical thinking skills and improving their overall academic experience.

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References

Association of College and Research Libraries. (2015). *Framework for information literacy for higher education.* https://www.ala.org/acrl/standards/ilframework

Barr, P., & Tucker, A. (2018). Beyond saints, spies and salespeople: New analogies for library liaison programmes. *In the Library with the Lead Pipe.* https://www.inthelibrarywiththeleadpipe.org/2018/beyond-saints-spies-and-salespeople

Becker, J. K., Simmons, S. B., Fox, N., Back, A., & Reyes, B. M. (2022). Incentivizing information literacy integration: A case study on faculty-librarian collaboration. *Communications in Information Literacy, 16*(2), 167–181. https://doi.org/10.15760/comminfolit.2022.16.2.5

Belzowski, N., & Robison, M. (2019). Kill the one-shot: Using a collaborative rubric to liberate the librarian-instructor partnership. *Journal of Library Administration, 59*(3), 282–297. https://doi.org/10.1080/01930826.2019.1583018

Bharuthram, S., Mohamed, S., & Louw, G. (2019). Extending boundaries: Team teaching to embed information literacy in a university module. *Mousaion: South African Journal of Information Studies, 37*(2), 1–17. https://doi.org/10.25159/2663-659X/6426

Brown, N. J., & Shelley, M. C. (2017). Impacting student success: Intervention effectiveness and policy development at small colleges. *New Directions for Institutional Research, 2017*(173), 75–87. https://doi.org/10.1002/ir.20214

Caplan, V. F., & Chi, A. M. L. (2022). Infographics: Pedagogical innovation to enhance university students' academic and information literacy. In S. Higgins & N. Y. Tran (Eds.), *Embracing change: Alternatives to traditional research writing assignments* (pp. 181–203). Association of College and Research Libraries.

Chisholm, A., & Spencer, B. (2019). Through the looking glass: Viewing first-year composition through the lens of information literacy. *Communications in Information Literacy, 13*(1), 43–60. https://doi.org/10.15760/comminfolit.2019.13.1.4

Chomintra, M. (2023). Assessing the use of critical literacies in mis/disinformation literacy instruction. *Journal of Academic Librarianship, 49*(5), Article 102762. https://doi.org/10.1016/j.acalib.2023.102762

Chomintra, M. (2024). Critical race digital literacy rubric for assessing mis/disinformation literacy instruction lesson plans. *Journal of Academic Librarianship, 50*(3), Article 102868. https://doi.org/10.1016/j.acalib.2024.102868

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

Flyvbjerg, B., Landman, T., & Schram, S. (2012). *Real social science: Applied phronesis.* Cambridge University Press.

https://pdxscholar.library.pdx.edu/comminfolit/vol18/iss2/6
DOI: 10.15760/comminfolit.2024.18.2.6

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

Gosselin, A., & Goodsett, M. (2019). Increasing faculty-librarian collaboration through critical librarianship. *Collaborative Librarianship, 11*(2), 100–109. https://digitalcommons.du.edu/collaborativelibrarianship/vol11/iss2/5

Grbich, C. (2013). *Qualitative data analysis: An introduction.* Sage.

Hall, P., Mathias, L., McGowan, K., Parkes, S., Snelleksz, S., & Seal, M. (2021). Foundation years: Undoing discourses of deceit. In M. Seal (Ed.), *Hopeful pedagogies in higher education* (pp. 137–147). Bloomsbury.

Hicks, A., & Lloyd, A. (2016). It takes a community to build a framework: Information literacy within intercultural settings. *Journal of Information Science, 42*(3), 334–343. https://doi.org/10.1177/0165551516630219

Hicks, A., & Lloyd, A. (2023). Reaching into the basket of doom: Learning outcomes, discourse and information literacy. *Journal of Librarianship and Information Science, 55*(2), 282–298. https://doi.org/10.1177/09610006211067216

Hoffmann, D., & LaBonte, K. (2012). Meeting information literacy outcomes: Partnering with faculty to create effective information literacy assessment. *Journal of Information Literacy, 6*(2), 70–85. https://doi.org/10.11645/6.2.1615

Hulseberg, A., & Versluis, A. (2017). Integrating information literacy into an undergraduate geography research methods course. *College & Undergraduate Libraries, 24*(1), 14–28. https://doi.org/10.1080/10691316.2017.1251371

Ilett, D. (2019). A critical review of LIS literature on first-generation students. *portal: Libraries and the Academy, 19*(1), 177–196. https://doi.org/10.1353/pla.2019.0009

Johnson, N., Nelson, M. S., & Yngve, K. (2022). Deficit, asset, or whole person? Institutional data practices that impact belongingness. *IASSIST Quarterly, 46*(4). https://doi.org/10.29173/iq1031

Jones, N. P., Sage, M., & Hitchcock, L. (2019). Infographics as an assignment to build digital skills in the social work classroom. *Journal of Technology in Human Services, 37*(2-3), 203–225. https://doi.org/10.1080/15228835.2018.1552904

Lankow, J., Crooks, R., & Ritchie, J. (2012). *Infographics: The power of visual storytelling*. Wiley.

Leeder, K. (2011). Collaborating with faculty part 1: A five-step program. *In the Library with the Lead Pipe*. https://www.inthelibrarywiththeleadpipe.org/2011/collaborating-with-faculty-part-i-a-five-step-program/

Mackey, T. P., & Jacobson, T. E. (2005). Information literacy: A collaborative endeavor. *College Teaching, 53*(4), 140–144. https://doi.org/10.3200/CTCH.53.4.140-144

McCoy, E. J. (2022). Teaching and assessment of metacognition in the information literacy classroom. *Communications in Information Literacy, 16*(1), 42–52. https://doi.org/10.15760/comminfolit.2022.16.1.5

McGrew, S., Breakstone, J., Ortega, T., Smith, M., & Wineburg, S. (2018). Can students evaluate online sources? Learning from assessments of civic online reasoning. *Theory & Research in Social Education, 46*(2), 165–193. https://doi.org/10.1080/00933104.2017.1416320

McKinney, P., & Sen, B. (2012). Reflection for learning: Understanding the value of reflective writing for information literacy development. *Journal of Information Literacy, 6*(2), 110–129. https://doi.org/10.11645/6.2.1747

Mounce, M. (2010). Working together: Academic librarians and faculty collaborating to improve students' information literacy skills: A literature review 2000-2009. *The Reference Librarian, 51*(4), 300–320. https://doi.org/10.1080/02763877.2010.501420

Nicholson, K. P., & Seale, M. (Eds.). (2018). *The politics of theory and the practice of critical librarianship*. Library Juice Press.

Oakleaf, M., Millet, M. S., & Kraus, L. (2011). All together now: Getting faculty, administrators, and staff engaged in information literacy assessment. *portal: Libraries and the Academy, 11*(3), 831–852. https://doi.org/10.1353/pla.2011.0035

https://pdxscholar.library.pdx.edu/comminfolit/vol18/iss2/6
DOI: 10.15760/comminfolit.2024.18.2.6

Owens, T. M., & Voorhees, C. H. (2022). What fascinates you? Infographics as research-based inquiry for artists. In S. Higgins & N. Y. Tran (Eds.), *Embracing change: Alternatives to traditional research writing assignments* (pp. 205–229). Association of College and Research Libraries.

Reale, M. (2018). *The indispensable academic librarian: Teaching and collaborating for change.* ALA Editions.

Rosa, V., & Pinto, C. (2023). Disrupting data: Developing technology integrated assignments to teach about race and racism. *Radical Teacher, 125*, 43–53. https://doi.org/10.5195/rt.2023.972

Saldaña, J. (2016). *The coding manual for qualitative researchers.* Sage.

Schmersahl, C. B. (1987). Teaching library research: Process, not product. *Library Research, 6*(2), 231–238.

Slaughter, S. A., & Rhoades, G. (2004). *Academic capitalism and the new economy: Markets, state, and higher education.* JHU Press.

Smith, M. D., & Dailey, A. B. (2013). Improving and assessing information literacy skills through faculty-librarian collaboration. *College & Undergraduate Libraries, 20*(3), 314–326. https://doi.org/10.1080/10691316.2013.829370

Stöpel, M., Piotto, L., Goodman, X., & Godbey, S. (Eds.). (2020). *Faculty-librarian collaborations: Integrating the information literacy framework into disciplinary courses.* Association of College and Research Libraries.

Tewell, E. (2015). A decade of critical information literacy: A review of the literature. *Communications in Information Literacy, 9*(1), 24–43. https://doi.org/10.15760/comminfolit.2015.9.1.174

Tewell, E. C. (2018). The practice and promise of critical information literacy: Academic librarians' involvement in critical library instruction. *College & Research Libraries, 79*(1), 10–34. https://doi.org/10.5860/crl.79.1.10

Torrell, M. (2020). That was then, this is wow: A case for critical information literacy across the curriculum. *Communications in Information Literacy, 14*(1), 118–133. https://doi.org/10.15760/comminfolit.2020.14.1.9

Toth, C. (2013). Revisiting a genre: Teaching infographics in business and professional communication courses. *Business Communications Quarterly, 76*(4), 446–457. https://doi.org/10.1177/1080569913506253

Tynes, B. M., Stewart, A., Hamilton, M., & Willis, H. A. (2021). From Google searches to Russian disinformation: Adolescent critical race digital literacy needs and skills. *International Journal of Multicultural Education, 23*(1), 110–130. https://doi.org/10.18251/ijme.v23i1.2463

Walton, G., & Cleland, J. (2017). Information literacy: Empowerment or reproduction in practice? A discourse analysis approach. *Journal of Documentation, 73*(4), 582–594. https://doi.org/10.1108/JD-04-2015-0048

Walton, G., Pickard, A. J., & Dodd, L. (2018). Information discernment, mis-information and pro-active scepticism. *Journal of Librarianship and Information Science, 50*(3), 296–309. http://doi.org/10.1177/0961000618769980

Westerwick, A. (2013). Effects of sponsorship, web site design, and Google ranking on the credibility of online information. *Journal of Computer-Mediated Communication, 18*(2), 194–211. https://doi.org/10.1111/jcc4.12006

Yosso, T. J. (2002). Critical race media literacy: Challenging deficit discourse about Chicanas/os. *Journal of Popular Film and Television, 30*(1), 52–62. https://doi.org/10.1080/01956050209605559

Zanin-Yost, A. (2018). Academic collaborations: Linking the role of the liaison/embedded librarian to teaching and learning. *College & Undergraduate Libraries, 25*(2), 150–163. https://doi.org/10.1080/10691316.2018.1455548

https://pdxscholar.library.pdx.edu/comminfolit/vol18/iss2/6
DOI: 10.15760/comminfolit.2024.18.2.6

Appendix A: Prominent Findings

Table A1: Students' Search Approaches (Before and After Workshops)

Initial Approach	Example Quotes
Used Google and the Open Web	Student CG24: "Once I made a choice, I went to Google to start my research." Student BG23: "For my sources for the infographic, I used Google search engine to find them all." Student EG24: "When beginning my research for my infographic, I resulted in using the Internet to find information."
Used Government Websites and Records	Student CG23: "Finding .org /.gov websites for me means reliable sources." Student HG24: "The information for my infographic I found online focuses mainly on the websites that are government." Student KM23: "When looking for information I always tried to find sites that ended with .gov just so I know it can trust this article or website with its information."
New CIL Approach	**Example Quotes**
Practiced Lateral Reading Strategies	Student DG23: "After participating in the CIL workshops, I practiced Lateral Reading to revise these sources, I can conclude that my top source is not reliable." Student AG23: "I did the lateral reading strategies to find out more about the sources' information." Student EG23: "Going back and applying lateral reading strategies made me realize my first source was not a good article to use."
Incorporated Peer Feedback	Student AG23: "For my third source, I took the advice of my peers who reviewed my infographic and decided to include facts against myths that relate to Islam." Student AG24: "My peer reviewer said that if I add my new reference (YouTube video) it would add more value to my infographic." Student EG24: "My peer reviewer and I discussed the sources that were provided in the workshop that allowed for more informational sources to appear within the search engine … as well as provide resources for individuals."

Table A2: Students' Initial Evaluative Criteria (Before Workshops)

Criteria	Example Quotes
Contained Quantitative Data	Student HG24: "The characteristics of the information I was looking for was mainly data to plug in into my infographic for example, percentage, numbers, charts, and graphs." Student BG24: "They were informative, including a large number of statistics, specific places, and even rates of obesity and how poverty affects the human body, which is just what I needed." Student NG23: "Since the assignment required information to be presented in a visually appealing way, I researched any data about the issue."
Confirmed Existing Expectation	Student AG23: "I do think I picked my second source out of confirmation bias due to my use of proving a point through a single statement I agreed with for that small article." Student KM23: "I usually tried to find articles that would support what information I tried to lay out." Student FG24: "However, it is noteworthy that I finished my research upon acquiring what I perceived as sufficient information."
Aligned with Personal Experience	Student OG23: "I chose a topic that interests me, which is mental health, because I am struggling with maintaining a stable state. [. . .] I wanted to research methods that can help me and others to deal with everyday stress and struggles with mental health." Student AG23: "[My search process] started off with my personal experiences regarding the treatment I received from my experience living in the U.S." Student BG23: "I also had my personal experience and all my adoption documents, which I used to bring information and numbers into the infographic as well."

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Table A3: Students' New Evaluative Criteria (After Workshops)

Criteria	Example Quotes
Represented a Different Source Type	Student DG23: "I was given the option to find documentaries or nonfictional books. I obtained a video that is on YouTube." Student HG23: "[My] third source is a nonfiction book of the experiences he endures in the foster care system." Student LG23: "[I] decided to branch out and use the lateral reading techniques in order to focus on non-profits and any additional information that they could provide."
Provided Practical Resources and/or Assistance	Student FG23: "This new source is going to allow me to not only show the statistics of food insecurities but also offer local resources that are available if you find yourself in that position." Student CG24: "When I revise my infographic, I plan to put links for anyone who wants more information." Student EG24: "I hope that this will allow me to highlight the huge homeless population that has increased over time in the Antelope Valley, as well as provide resources for individuals."
Contained Firsthand or Lived Experience	Student AG24: "I wanted a testimonial, someone who has been affected by mental health stigma and the speaker for this YouTube video is that person." Student BG23: "It is a new perspective and one that has not been expressed yet on the infographic ... the feelings and emotions that he experienced after being adopted by an American family." Student DG23: "I obtained a video on YouTube that documents the anecdotal lived experienced of rape victims that chose to abort."

Appendix B: Code Categories and Codes

Table B1: Code Categories and Frequency of Codes (*N* = 21)

Code Category	Code	Participants *n*	Participants %
Initial Search Approaches	Conducted an internet search	18	86
	Used government websites and records	10	48
	Used university library database(s)	9	43
	Accessed social media	3	14
	Considered family/friend input	3	14
Initial Evaluative Criteria	Contained quantitative data (numbers/statistics)	13	62
	Confirmed expectation/personal experience	10	48
	Sponsored by government organization	10	48
	Peer-reviewed or written by authority/expert	10	48
	Sponsored by public or academic organization	8	38
	Presented an unbiased perspective	7	33
	Verified by or documented other sources	7	33
	Contained firsthand/lived experience	3	14
	Published recently	2	10
New CIL Search Approaches	Used lateral reading strategies	18	86
	Considered peer feedback/suggestions	16	76
	Changed search terms	4	19
	Considered search engine algorithm bias	3	14
New Evaluative Criteria	Represented a different source type	11	52
	Provided resources and/or assistance	10	48
	Verified by or documented other sources	8	38
	Added a new perspective or argument	7	33
	Contained firsthand/lived experience	7	33
	Well-established or reputable	4	19

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