

Professional applications of information literacy: Helping researchers learn to evaluate journal quality

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Abstract:

Evaluating journals can be challenging, especially for new researchers. This article discusses the application of information literacy skills and techniques, such as lateral reading, in the context of teaching researchers to evaluate journal quality and avoid predatory journals. Many libraries focus information literacy efforts on helping students develop skills in reflective discovery, evaluation, and ethical use of information. But information literacy skills are critical for lifelong learning, and similar techniques can be applied to help faculty and other researchers evaluate publication venues. This article will examine the connections between information literacy skills and scholarly communications, and will offer methods and practices for readers who wish to build on these connections in their own work.

Keywords: academic libraries | information literacy | lateral reading | predatory journals | scholarly communications

Article:

1. Introduction

Information literacy instruction and scholarly communication support are two critical areas of responsibility and opportunity for academic libraries and their personnel. As these areas of work have evolved, so have the intersections between them. In 2013, the Association for College and Research Libraries (ACRL) released a white paper entitled “Intersections of Scholarly Communication and Information Literacy: Creating Strategic Collaborations for a Changing Academic Environment.” That white paper focused on three key intersections between these concepts: the economics and distribution of scholarship, digital literacies, and new roles for librarians (ACRL, 2013). That same year, ACRL Press published *Common ground at the nexus of information literacy & scholarly communication*, a volume edited by Stephanie Davis-Kahl and Merinda Kaye Hensley, which provided practical examples of work that was happening at

the nexus—or intersection—of these two areas of work. ACRL developed a (now retired) Roadshow workshop “Two Paths Converge: Designing Educational Opportunities on the Intersections of Scholarly Communication and Information Literacy,” which drew from both of these texts.

The 2013 white paper argues that “Incorporating the changing nature of the scholarly communication system into our teaching requires all of us, regardless of job title, to learn and apply the best practices in teaching based on understanding of student learning, using good instructional design and the most appropriate teaching technologies” (ACRL, 2013, p. 15). As the scholarly communication landscape has continued to change and evolve, so have our teaching practices, particularly with the introduction of the ACRL Framework for Information Literacy for Higher Education, which was approved in 2015. This article will explore intersections between information literacy and scholarly communication in a specific context: evaluating journal quality. Evaluating journals as potential publication venues can be challenging, especially for new researchers. Fortunately, some of the approaches and strategies that information literacy experts use to teach online source evaluation can also be used to teach researchers to evaluate journal quality.

This article discusses the application of one particular approach—lateral reading—in the context of teaching researchers to evaluate journal quality and avoid predatory journals. Many libraries focus information literacy efforts on helping students develop skills in reflective discovery, evaluation, and ethical use of information. But information literacy skills are critical for lifelong learning, and similar techniques can be applied to help faculty and other researchers evaluate publication venues. This article will draw on the connections between information literacy and scholarly communication outlined above and will recommend best practices for teaching faculty and researchers to use lateral reading strategies paired with specific scholarly communication resources to evaluate journal quality.

2. Information literacy and the ACRL framework

In the 2015 Framework for Information Literacy for Higher Education (ACRL Framework), ACRL defines information literacy as:

the set of integrated abilities encompassing the reflective discovery of information, the understanding of how information is produced and valued, and the use of information in creating new knowledge and participating ethically in communities of learning.
(ACRL, 2015)

An examination of the LIS literature reveals numerous scholarly articles that address teaching information literacy to students, from K-12 through higher education. There are far fewer examples of scholarly sources that focus on helping faculty and researchers at institutions of higher education develop their own information literacy skills. The ACRL Framework seems to assume that most practitioners using this guiding document would be doing so to develop and teach information literacy curricula for students, though many of the core concepts, knowledge practices, and dispositions can be applied to learners at any level.

In 2015, the ACRL Framework replaced the ACRL Information Literacy Competency Standards, which were approved in 2000. The Framework was specifically designed to be a more flexible guiding document than the Standards, and explicitly encourages each local institution to implement the Framework in the way that best suits their culture and curriculum. The Framework is organized into six interconnected frames, which represent core conceptual understandings necessary for becoming information literate. These six frames are:

- Authority is constructed and contextual.
- Information creation as a process.
- Information has value.
- Research as inquiry.
- Scholarship as conversation.
- Searching as strategic exploration.

Each frame is supported by a description, knowledge practices, and dispositions. The practice of teaching researchers to critically evaluate journals draws from concepts and knowledge practices associated with several of these frames, but this article will focus on “Authority is constructed and contextual.”

Several of the knowledge practices identified for the Authority is constructed and contextual frame connect directly to the evaluation of journal quality. For example, the Framework indicates that “Learners who are developing their information literate abilities” related to this frame:

- Use research tools and indicators of authority to determine the credibility of sources, understanding the elements that might temper this credibility.
- Understand that many disciplines have acknowledged authorities in the sense of well-known scholars and publications that are widely considered “standard,” and yet, even in those situations, some scholars would challenge the authority of those sources” (ACRL, 2015).

In recent years, LIS scholars and practitioners have shown an increased interest in understanding how researchers evaluate the authority of publications. Tenopir et al. conducted a survey of more than 3,600 researchers “to explore how trust is defined for scholarly information and to discover how scholars worldwide perceive trust to have changed with new forms of scholarly communication” (2016, p. 2347). Respondents indicated that, when it came to determining the trustworthiness or authority of a source—either for selecting sources to read and use in their work or for seeking publishing venues for their own scholarly work—they tended to rely on more traditional factors like peer-reviewed status and overall reputation (Tenopir et al., 2016, pp. 2349–2350). Interestingly, when researchers are evaluating the trustworthiness or authority of a scholarly resource, “Traditional criteria such as journal ranking remain essential, even though this is criticized by the very researchers who rely on it” (Tenopir et al., 2016, p. 2355). These results clearly reflect the knowledge practices highlighted in the previous paragraph.

Swanberg et al. (2020) reported on a study they conducted that involved surveying faculty members at Oakland University. While this study was limited to a single institution, making it

difficult to extrapolate to other settings, the findings also reflect the experiences of the authors of this article in working with faculty and researchers. In their study, Swanberg et al. sought to answer two research questions:

1. “What gaps, if any, exist in faculty members’ knowledge of predatory OA journals, including the ability to identify one?”
2. “What are faculty attitudes toward predatory OA journals?” (Swanberg et al., 2020, p. 209).

Overall, the faculty respondents expressed a range of confidence levels about their abilities to assess journal quality. When asked what resources they use to evaluate journal quality, the top three responses were: colleagues, Google (or similar commercial search engines), and professional resources (like listservs, blogs, or websites) (Swanberg et al., 2020, p. 214). Faculty respondents reported wanting help and more information about these predatory OA publications, “with most reporting wanting a checklist to assess journal quality (70.9%), followed by information on the library website (65.2%)” (Swanberg et al., 2020, p. 216). Checklists are popular source evaluation tools, but Swanberg et al. reported that their “libraries’ educational efforts have focused on developing critical thinking skills in appraising journal quality and legitimacy, which aligns with [the Framework]” (2020, p. 216). The approach to evaluating journal quality proposed in the sections below relies on a mix of the kind of “critical thinking skills in appraising journal quality and legitimacy” that Swanberg et al. recommend and the checklist approach that faculty reported wanting.

3. Lateral reading

Lateral reading is, in the words of Wineburg and McGrew, “a powerful heuristic for taking bearings” (2019, p. 19). The term itself is attributed to Sam Wineburg and his colleagues at the Stanford History Education Group, including Sarah McGrew, his collaborator and coauthor on a frequently cited study that revealed the importance of lateral reading for online information evaluation. Wineburg & McGrew’s 2019 article from *Teachers College Record* reported on a study conducted several years prior in which they studied three groups of Internet users (Stanford undergraduate students, PhD-holding historians, and professional fact-checkers). The purpose of the study was to answer two research questions: “How do experienced users of the Internet arrive at judgments of credibility as they evaluate unfamiliar sites and investigate questions of social and political import? What strategies or heuristics do they use to efficiently find reliable information?” (Wineburg & McGrew, 2019, p. 5). Clearly, this study was focused on online information—organizational websites, news reports about social and political issues, etc.—but the strategies that were revealed can be applied in many information evaluation contexts. Participants in all three groups in this study completed six tasks related to online information evaluation, and their searches and strategies were captured using screen and audio recording software. The professional fact-checkers were far more efficient and effective than the other two groups of Internet users, and Wineburg & McGrew attribute that success to their use of lateral reading: “Fact checkers almost immediately opened up a series of new tabs on the horizontal axis of their browsers before fully reading the article” (2019, p. 19).

The term “lateral reading” draws on this visual imagery of a browser with several tabs opened. This is in contrast to vertical reading, which is the way most individuals have been taught to read and evaluate web sources—reading from top to bottom and focusing on the content provided by the source itself. This approach of leaving the source that one is evaluating in order to seek additional context from external sources connects directly to the Authority is constructed and contextual frame, and particularly the knowledge practice “use research tools and indicators of authority to determine the credibility of sources, understanding the elements that might temper this credibility” (ACRL, 2015). Lateral reading requires the use of both research tools (which vary depending on the context, but can be tools as accessible as Google) and indicators (which also vary based on context).

In his open textbook *Web literacy for student fact-checkers*, Mike Caulfield writes that “Lateral reading helps the reader understand both the perspective from which the site’s analyses come and if the site has an editorial process or expert reputation that would allow one to accept the truth of a site’s facts” (2017, Chapter 16). This idea can be extended beyond general websites to scholarly journals as well. When evaluating a journal for quality, researchers might do a Google search (like many of those in Swanberg et al.’s study did) to learn about the journal. Relying on information from the journal’s own website would be an example of vertical reading, while looking at what other sources have to say about the journal, its reputation, and its publishing processes would be lateral reading. When reading laterally, one can make quick decisions about the quality and authority of a source, whether that source is a news site or a scholarly journal. With the knowledge gained from lateral reading, one can return to the original source and reengage with a better understanding of the source itself. Or, if lateral reading leaves a user concerned about the quality of the original source, they can avoid it and look for a better option. By engaging in this practice, researchers can learn to identify and avoid predatory journals.

4. Predatory journals

In 2019, Grudniewicz et al. (2019) endeavored to come up with a consensus definition of predatory publishing. In creating this definition, the group identified characteristics of predatory journals and publishers, including the prioritization of self-interest over scholarship, deviation from best practices within editorial and publishing realms, a lack of transparency, the employment of aggressive and sometimes indiscriminate tactics for recruiting authors and content, and the journal or publisher’s sharing of false or deceptive information about itself. While a lack of rigorous peer review—or potentially any peer review at all—was also identified as a troubling characteristic of such journals, this criterion was not explicitly included in the definition, due to the difficulty of assessing the peer review practices and claims of individual journals (Grudniewicz et al., 2019). Authors who publish in predatory journals may have the quality and validity of their work called into question, which can negatively affect their careers. A 2019 study of Italian authors found that those who had published in journals that were considered predatory had an approximately 9% lower success rate when being evaluated for promotion by the National Scientific Qualification than authors who had not published in such journals (Bagues et al., 2019).

Some groups of researchers are more likely to publish in journals that have been identified as potentially predatory. A 2014 study by Xia et al. found that early-career researchers, especially

those in developing countries, are particularly at risk of publishing in predatory journals. The reasons and motivations for the selection of such journals may vary, with some authors striving to quickly build publication records and meet requirements for international visibility of their scholarship (Xia et al., 2015). In other cases, scholars may not be aware of the practices of predatory journals and the risks of being associated with them. Through scholarly communication education—including lateral reading practices—librarians have an opportunity to help researchers learn to identify predatory publishing practices and avoid entanglement with journals that employ them.

4.1. Identifying predatory journals

The predatory nature of a publication may manifest through a variety of characteristics and tactics. The process of evaluating journal quality can be complex, as there is no single indicator that can be used to definitively understand the quality of all journals. As such, researchers may need multiple strategies for evaluating journal quality, including lateral reading.

With some journals, red flags and predatory indicators may be clear enough for researchers to determine quality solely based on reviewing an email or website related to the journal in question. In the North Carolina Serials Conference presentation associated with this article, speakers showed examples of questionable solicitations from journals and discussed situations they have encountered with such journals (Craft & Dale, 2021). Immediate red flag indicators include solicitation for publication in a journal with no topical relation to the author's subject area, email communications and websites that include significant and pervasive grammatical and spelling errors, and unrealistic publication timelines that do not allow time for peer review, editing, layout, and other steps that add value and legitimacy to scholarly publishing processes. Another potential indicator is a vague or extremely broad journal scope, which can raise concerns about the potential availability of specific subject expertise among the journal's editorial staff and peer reviewers.

But not all predatory journal communications and websites display these serious and visible red flags, and it may not always be possible for authors to determine journal quality solely from reading the information the journal or publisher shares about itself. In such situations, information literacy strategies—including lateral reading—can be implemented to assist researchers in learning more about the journal and informing their decision on whether or not to proceed with submitting their work.

5. Resources and techniques for evaluating journal quality

There are a number of online resources and techniques that can assist authors in evaluating journal quality. Some resources and techniques focus on thinking critically about the journal and the information it shares about itself, while others provide opportunities to implement lateral reading practices by consulting information that is not shared directly by the journal or publisher in question. Suggested resources and techniques are discussed below; readers are encouraged to remember that multiple resources may be required in order to evaluate some publication venues.

1. Think Check Submit: <https://thinkchecksubmit.org/>

Think. Check. Submit. is a website created and directed by a cross-industry group, including the Directory of Open Access Journals (DOAJ), INASP (formerly known as International Network for the Availability of Scientific Publications, now known just as INASP), the International Standard Serial Number International Center (ISSN), the Ligue des Bibliothèques Européennes de Recherche (LIBER, the Association of European Research Libraries), the Open Access Scholarly Publishing Association (OASPA), the International Association of STM Publishers (STM), and UKSG (formerly known as United Kingdom Serials Group, now known just as UKSG). The Think. Check. Submit. initiative provides tools, resources, and education in an effort to help researchers identify credible journals in which to publish (Think. Check. Submit, 2021a). The website offers a checklist with steps for authors to consider as they evaluate their chosen publication venue; checklist questions address the awareness of the researcher and their colleagues regarding the journal and its availability online, identification of the publisher and its membership in relevant industry initiatives, and clarity of available information on journal policies regarding peer review, indexing, fees, and author guidelines (Think. Check. Submit, 2021b). At the time of this writing, the website is available in more than forty languages, making the content accessible to researchers around the world (Think. Check. Submit, 2021c).

Researchers across disciplines and at all levels can engage with the steps on the Think. Check. Submit. website, which encourages users to think critically about the information that journals and publishers provide about themselves, as well as to read or think laterally by considering or interrogating the knowledge of the researcher's colleagues regarding the journal and the indexing and availability of journal content beyond the journal's website. Many of the questions and considerations recommended by the site align with concepts in the Framework, including knowledge practices from the Authority is constructed and contextual frame as well as the Information creation as a process and Information has value frames.

2. Directory of Open Access Journals (DOAJ): <https://doaj.org>

DOAJ is an independent website that provides a community-curated list of open access journals and seeks to “increase the visibility, accessibility, reputation, usage and impact of quality, peer-reviewed, open access scholarly research journals globally, regardless of discipline, geography or language” (Directory of Open Access Journals, 2020a). Journals must apply to be included; application guidelines are available on the DOAJ website in English and six other languages. Guidelines address open access policies, the journal's web presence and ISSN, quality control for content, licensing, copyright, and other areas (Directory of Open Access Journals, 2020b).

Researchers may use the DOAJ website to locate open access content to read and use, as well as to identify open access journals as potential publication venues for their own work. Each indexed journal has a profile page on the DOAJ site; information on these pages is drawn from the journal's application materials and website, as submitted by the journal or publisher. While all journals on the DOAJ list have been subject to review based on DOAJ criteria, it is possible for journal policies and practices to deteriorate over time. For this reason, researchers should still think critically about their journal choices and consider other evaluation measures, even if the journal in question is included in DOAJ.

3. Discussions with trusted colleagues and librarians

One step in the Think. Check. Submit. checklist asks authors to consider the level of awareness they and their colleagues have of the journal in question (Think. Check. Submit, 2021b). This step is particularly important for new researchers and for those who are unfamiliar with the journal or journals they are considering as possible publication venues, as it can help these researchers develop a stronger understanding of indicators of authority and credibility within the field. Authors may wish to consult advisors, mentors, and other colleagues in such situations; many librarians are also able to assist with questions related to evaluating journal quality. At the University of North Carolina Greensboro (UNCG), all academic departments have assigned subject liaison librarians, and researchers are encouraged to contact their department's liaison librarian for support with identifying appropriate journals and evaluating journal quality; as needed, such requests can also be routed to additional library personnel with expertise in scholarly communications and journal evaluation.

4. Searches on the open web

In some situations, authors may want to use an online search engine of their choice to search for information about a selected journal or publisher. Such searches will likely bring up the journal or publisher's website, but may also yield information about the journal or publisher's history as captured by news sources, Wikipedia, and other websites. Researchers who take this approach must be willing and able to implement information literacy and critical thinking skills to evaluate their search results in order to determine the authority and reliability of the information they find.

5. Indexing

Researchers may have opportunities to implement lateral reading skills when evaluating journals and considering their indexing coverage. Journals often use their websites to share information about where their content is indexed; some journals that operate under deceptive practices may share indexing information that is incorrect or out of date, while others may state that their content is indexed by systems that are not truly academic indexes. Researchers investigating journal indexing practices may want to consider checking their preferred scholarly indexes to see if journal content is actually included in the selected indexing system or systems. For researchers who are unfamiliar with scholarly indexing practices and systems, librarians can assist in this area.

6. Journal blacklist websites

Some websites and online services track journal behavior and share their opinions and findings regarding journal quality. Some of these sites include Beall's List (<https://beallslist.net/>) and Stop Predatory Journals (<https://predatoryjournals.com/>), both of which are freely available online at the time of this writing; Cabells provides a resource

called Cabells' Predatory Reports, which is available by subscription only (<http://www2.cabells.com/about-predatory>).

Users that engage with these sites and lists should exercise their own judgment when evaluating the information. Users are encouraged to consider who is creating and maintaining the list or site, and to look for the criteria that may have been used in creating and maintaining the list. Some sites or lists may not be currently maintained or updated, meaning the information may be out of date and may not reflect current publisher or journal behavior. Researchers can draw on lateral reading skills when evaluating these lists just as they can when evaluating journals.

In the process of evaluating journals, authors may encounter conflicting and potentially subjective information regarding journal or publisher practices. In such situations there may not be a clear and easy determination as to the quality of a journal, and not all researchers will necessarily come to the same conclusion about the journal and its potential value as a publication venue. While librarians, colleagues, and lateral reading sources can provide support, the ultimate decision about whether or not to submit one's work rests with the author. Individual authors must consider the information they have gathered and the authority of that information, and then must determine their own level of comfort with the particular publisher or journal.

6. Future directions

The UNCG University Libraries have an active information literacy program that reaches many undergraduate and graduate students. Information literacy instruction sessions and workshops for these audiences tend to focus on finding, evaluating, and ethically using information sources. Librarians in the Research, Outreach, and Instruction Department do the bulk of this course-integrated instruction. Scholarly communications-focused topics are sometimes taught in course-integrated instruction sessions, but are more frequently addressed in professional development workshops and webinars offered for faculty, researchers, and graduate students across campus. To date, these scholarly communications workshops have not been designed or conducted with explicit inclusion of information literacy practices and techniques; the authors see this as an opportunity to develop and strengthen this work.

While information literacy and the ACRL Framework are fully integrated into the work of the Research, Outreach, and Instruction department in the UNCG University Libraries, colleagues based in the Technical Services department—who are responsible for some outreach and education regarding scholarly communications issues—do not currently have the same grounding and background in those areas. As such, the authors see opportunities for interdepartmental collaboration to strengthen both interdepartmental working relationships and staff understandings of researcher needs and best practices for supporting them. Personnel from both areas can collaborate to redesign existing teaching and learning materials on scholarly communications topics to intentionally address information literacy concepts and skills.

7. Conclusion

By strengthening the overall information literacy skills of researchers and encouraging the development of specific techniques like lateral reading, librarians can support authors as they learn to evaluate publishing opportunities. Developing these skills and techniques can help researchers build their confidence in evaluating these opportunities and avoiding entanglement with publishers that engage in predatory practices. In the same vein, library personnel can improve their own skills and practices in this area by learning more about information literacy, scholarly communication, and the intersections of these functional areas. Collaborations across departments can strengthen relationships within an academic library and may lead to innovative approaches to providing support to researchers across campus. The practices and resources provided by this article can support library personnel who are interested in engaging in this work consider potential opportunities to connect teaching practices with scholarly communications support.

References

- ACRL. (2013). *Intersections of scholarly communication and information literacy: Creating strategic collaborations for a changing academic environment*. <http://www.ala.org/acrl/sites/ala.org/acrl/files/content/publications/whitepapers/Intersections.pdf>
- ACRL. (2015). *Framework for information literacy for higher education*. Association of College & Research Libraries (ACRL). <http://www.ala.org/acrl/standards/ilframework>
- Bagues, M., Sylos-Labini, M., & Zinovyeva, N. (2019). A walk on the wild side: 'Predatory' journals and information asymmetries in scientific evaluations. *Research Policy*, 48(2), 462–477. <https://doi.org/10.1016/j.respol.2018.04.013>
- Caulfield, M. (2017). *Web literacy for student fact-checkers*. <https://webliteracy.pressbooks.com/>
- Craft, A. R., & Dale, J. (2021, April 9). *Professional applications of information literacy: Helping researchers learn to evaluate journal quality*. North Carolina Serials Conference. https://libres.uncg.edu/ir/uncg/f/A_Craft_Professional_2021.pdf
- Directory of Open Access Journals. (2020a). About DOAJ. *Directory of Open Access Journals*, <https://doaj.org/about/>
- Directory of Open Access Journals. (2020b). Guide to applying. *Directory of Open Access Journals*, <https://doaj.org/apply/guide/>
- Grudniewicz, A., Moher, D., Cobey, K. D., Bryson, G. L., Cukier, S., Allen, K., Arden, C., Balcom, L., Barros, T., Berger, M., Ciro, J. B., Cugusi, L., Donaldson, M. R., Egger, M., Graham, I. D., Hodgkinson, M., Khan, K. M., Mabizela, M., Manca, A., ... Lalu, M. M. (2019). Predatory journals: No definition, no defence. *Nature*, 576(7786), 210–212. <https://doi.org/10.1038/d41586-019-03759-y>
- Swanberg, S. M., Thielen, J., & Bulgarelli, N. (2020). Faculty knowledge and attitudes regarding predatory open access journals: A needs assessment study. *Journal of the Medical Library Association*, 108(2), 208–218. <https://doi.org/10.5195/jmla.2020.849>

- Tenopir, C., Levine, K., Allard, S., Christian, L., Volentine, R., Boehm, R., Nichols, F., Nicholas, D., Jamali, H. R., Herman, E., & Watkinson, A. (2016). Trustworthiness and authority of scholarly information in a digital age: Results of an international questionnaire. *Journal of the Association for Information Science and Technology*, 67(10), 2344–2361. <https://doi.org/10.1002/asi.23598>
- Think. Check. Submit. (2021a). *About*. Think. Check. Submit. <https://thinkchecksubmit.org/about-2/>
- Think. Check. Submit. (2021b). *Journals*. Think. Check. Submit. <https://thinkchecksubmit.org/journals/>
- Think. Check. Submit. (2021c). *Language*. Think. Check. Submit. <https://thinkchecksubmit.org/translations/>
- Wineburg, S., & McGrew, S. (2019). Lateral reading and the nature of expertise: Reading less and learning more when evaluating digital information. *Teachers College Record*, 2019, 40.
- Xia, J., Harmon, J. L., Connolly, K. G., Donnelly, R. M., Anderson, M. R., & Howard, H. A. (2015). Who publishes in “predatory” journals? *Journal of the Association for Information Science and Technology*, 66(7), 1406–1417. <https://doi.org/10.1002/asi.23265>