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Outdated Notion?

Teaching Scholarly Articles as the Gold Standard

Since 2023, librarians at The Ohio State University and the University of New Mexico have been collaborating on a project, including "Outdated Research Notions" workshops, to identify information literacy practices that may no longer work as well as we'd like.[1] This article, along with the companion piece "Outdated Notion? Teaching Plagiarism as Theft," by Jane Hammons, provides an overview of an "outdated notion" that has generated significant discussion among our workshop participants. Our piece explores one of the more evocative topics from our series: the use of scholarly articles in teaching undergraduates.[2] We know not everyone will agree with our assertions, but more than consensus we hope to spark discussion.

Background

Scholarly articles[3] play an important role in academia. However, the expectation for undergraduates to engage with them, especially in their first few years of college, often overlooks significant challenges. In this article, we invite librarians and instructors to reconsider the use of scholarly articles in the undergraduate classroom.

Researchers from Project Information Literacy (PiL) studied students transitioning from high school-level to college-level research. One PiL report indicates that students rarely have prior exposure to scholarly formats, so when they get to college, many struggle to read, comprehend, and effectively incorporate meaningful evidence from scholarly articles.[4] Similarly, findings from the Citation Project reveal shallow engagement with sources. In a study of first-year writing students, 94 percent of citations relied on just one or two sentences, and 70 percent of students cited material from the first or second page of a source.[5] These numbers make sense to us—rather than point to what may be perceived as students' shortcomings, we need go further upstream to examine the context and practices that are producing these outcomes.

Undergraduates are stepping into a scholarly landscape that has grown exponentially in the past forty years. Journals are more specialized, and their articles are longer and more complex, as are titles and abstracts.[6] Then there is the issue of just how much content is being published. One estimate suggests close to 2 million peer-reviewed articles are published every year.[7] For a student new to the scholarly scene, stepping into this world can be disorienting.

Compounding these environmental factors, there is a huge difference between the intended utility of scholarly articles and how students use them in reality. Articles tend to be written for experts by experts, so undergraduates do not have the experience, or often support, to

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engage with them meaningfully. This underscores the need to reconsider how research assignments and source requirements are structured to better support undergraduate student learning and foster deeper engagement with information. In the next sections, we'll examine some differences between instructors' intentions for assigning articles and how students actually use them, and we'll offer alternative approaches.

Key Concerns

We outline four key concerns with using scholarly articles in undergraduate classrooms.

Finding scholarly articles is not a straightforward task.

Librarians are often asked to help early undergraduates find scholarly articles, but in focusing on search, we may be skipping too far ahead. Research is a complex, iterative process, yet one-off library workshops often emphasize the procedural: type in keywords, apply filters, retrieve articles. This makes searching seem like a fairly straightforward task.

The structured steps of a database demo don't reflect how experienced researchers engage with the literature. Scholars navigate search socially, attuned to key voices and ongoing debates in their fields. Students, on the other hand, are often dropped into this conversation without an introduction. A keyword search plunges them into an information vortex, where each article is a small, nuanced piece of a discussion they don't yet have the background to follow.

Barbara Fister describes this challenge well: "If the emphasis is on finding, evaluating, and using sources, it can suggest that research is primarily about mining quotes from published sources."[8] Research is reduced to a rote task, rather than engagement in a dynamic, evolving conversation. It's no wonder, then, that many students approach scholarly articles as a box to check—literally. With peer-review filters built into databases, students can locate articles without fully understanding what makes them scholarly. Their reasoning often boils down to circular logic: "It's scholarly because it's from an academic journal."[9]

Instead of treating search as the first step, librarians can focus on building students' understanding of information formats and guiding students toward sources that build background knowledge. Instruction sessions can introduce formats as typified documents with distinct purposes, processes, and products.[10] Reference sources like encyclopedias and handbooks, or accessible secondary sources, like high-quality magazines, can serve as valuable entry points. These sources help students develop strong foundations before they engage with scholarly literature.

Although we encourage course instructors to scaffold research by curating reading lists or providing sources directly, librarians play a distinct role in equipping students with the transferable skills to evaluate and navigate different formats. Teaching students how information is created and circulated, rather than just where to find it, empowers them to engage with research as more than a mechanical task. Learning to search effectively is important—but only when students have the foundation to make sense of what they find. Without that, it's just another hoop to jump through.

Scholarly articles are not a shortcut to credibility.

Scholarly articles are often treated as a shortcut for evaluating sources: Find a peer-reviewed article, and the credibility question is settled. Although peer review provides important quality control, it's not infallible. Issues like retractions, misleading abstracts, and

reproducibility problems remind us that evaluating credibility requires more than checking a box.[11]

To be clear, shortcuts aren't inherently bad. We rely on them to navigate complex information environments. But when scholarly articles are positioned as automatically credible, students may assume research is a binary process; some sources are "good," others are not.[12] This can lead them to overvalue scholarly articles while dismissing other reliable formats, such as newspaper articles, industry reports, or reference sources. Without deeper engagement, students miss opportunities to think critically about how and why different types of information are created.

Without guidance on why certain sources are required or how they fit the purpose of an assignment, students often rely on heuristics. Students may struggle to determine what makes a source useful beyond its label, domain, or publication date, treating credibility as a static quality rather than something dynamic and shaped by context—including their own. It is empowering to center students in this process, prompting them to ask: How much authority do I grant this source?[13]

Rather than present credibility as something inherent to a source, instruction can help students recognize that credibility is constructed through expertise, community, and context. Research becomes a reflective practice that prepares students to critically situate information wherever they encounter it.

We cannot quickly inoculate students to the difficulty of journal articles.

It can be tempting to want to ease the cognitive burden for our students when it comes to journal articles. We might think that if we can quickly expose students to scholarly articles earlier, they will be more equipped to deal with them later on. This is similar to inoculations—the more exposures, however quick and painful, the better. But according to the transfer of learning theory, which encompasses a complex set of processes and is considered "one of the fundamental goals of education,"[14] glancing introductions don't really work. Successful transfer requires a person to connect previous experiences to current settings and problems.[15] Meaningful connection of past and present takes time, especially with new, abstract concepts. With class time at a premium, though, instructors may feel that requiring students to use a scholarly article in a research assignment is a good-enough first encounter.

Early brushes with scholarly articles often leave students feeling frustrated and confused.[16] One researcher found that even after ample class time and scaffolding, students came away from scholarly literature less willing to engage with it.[17] Although it's true that learning often involves the management of difficult feelings, students' negative experiences of journal articles can inhibit future learning. Just as we hope that transfer of learning happens, there can also be no transfer of learning or negative transfer.[18]

Requiring first-year students to read, understand, and synthesize texts that are the pinnacle of disciplinary knowledge may be inappropriate for students completing general education curriculum and not yet ensconced in their disciplines. Instead of using assignment instructions to introduce students to scholarly articles, we should instead employ backward design to understand what we want students to know by the time they complete the assignment. If the outcome of the research project is for students to draw upon several sources to bolster a claim, then students should be able to read and understand the source. Material geared

toward students, not experts, should be the standard. Librarians can work with instructors to identify the specific goals of having students use particular kinds of sources.

Reading scholarly articles may not be worth it.

Even though we know these are difficult texts, it can be tempting to make students struggle through reading them. For some students, the reach is attainable. For many early undergraduates though, we often see the shallow engagement reported by the Citation Project and other researchers.[19] Experts remind us that reading is developmental—and not only in childhood years. They note, "Reading comprehension, *including academic reading*, matures on a continuum" (emphasis added).[20] Developing expert readers is a commendable goal, but it must include working with novice and proficient academic readers first. Further, when we ask students to use an academic journal article in their paper, we are actually asking them to do much more than "just" read. We are asking them to acquire new language, decode complex concepts, and draw conclusions between abstract principles that typically only experts in the subdiscipline are able to do with facility.[21]

One way we can update this notion is to meet students where they are as readers. The first step is to find out whether and how much experience students have with reading scholarly journal articles. Once we have a sense of the starting point, we can help students, especially early undergraduates, develop reading strategies. If we aim to help students progress on a reading continuum, we should use information formats geared toward their current reading level, or slightly beyond it. Librarians and instructors are finding innovative ways to make reading and comprehension a more social activity. From social annotation and instructor modeling to direct instruction in text structure, students benefit from group engagement with one text.

Conclusion

We invite librarians and instructors to reconsider the use of scholarly articles in the undergraduate classroom. The implications for using them to do more than their original purpose of communication among experts are significant, especially when it comes to emerging researchers. The hidden curriculum takes a toll on students, especially those who are unsure about whether they belong in a given community.[22] Real communities exist around journal articles too. As Anne-Marie Deitering and Kate Gronemyer note, "Peer-reviewed articles are produced within a particular knowledge community and intended for other members of that community. For those who are not a part of the community, there are layers and layers of assumptions, revisions, collaboration, synthesis, and argument hidden under the static, polished surface of the published journal article."[23] Asking emerging researchers who are not part of these scholarly communities to enter them and absorb the layers of insider knowledge is requiring a non-member to act as a member. If students cannot cross this substantial divide, they may doubt their fit in the community or the academy more broadly.

As librarians with an ethos of freedom of information, we want to make clear that we are not suggesting a ban on these kinds of texts in the classroom. We know that with the appropriate amount of guidance and motivation, students can interact meaningfully with any information. But we suggest that the time needed to fully engage with journal articles is not usually possible in the undergraduate classroom. Librarians can play an integral role in guiding students and instructors toward more fruitful matches with emerging researchers.

Notes

1. We were initially inspired by the work of Sam Wineburg, Joel Breakstone, Nadav Ziv, and Mark Smith, "Educating for Misunderstanding: How Approaches to Teaching Digital Literacy Make Students Susceptible to Scammers, Rogues, Bad Actors, and Hate Mongers" (working paper, Stanford History Education Group, Stanford University, 2020): 7, https://purl.stanford.edu/mf412bt5333. We began identifying outdated notions from our experiences with undergraduate researchers.

2. We are indebted to Ohio State librarian Jane Hammons, who invited us to participate in her wide-reaching professional development information literacy program.

3. We use the terms *scholarly*, *academic*, and *peer-reviewed articles* interchangeably, recognizing they are different and understanding there is no broad consensus on definitions. Rather than parsing differences among these texts, we are more concerned with addressing information formats that best serve students.

4. Alison J. Head, "Learning the Ropes: How Freshmen Conduct Course Research Once They Enter College," *Project Information Literacy Research Institute* (2012), https://projectinfolit.org/pubs/first-year-experience-study/pil_firstyear-experience_2013-12-04.pdf.

5. Sandra Jamieson, "What the Citation Project Tells Us about Information Literacy in College Composition," in *Information Literacy: Research and Collaboration across Disciplines*, ed. Barbara D'Angelo, Sandra Jamieson, Barry Maid, and Janice R. Walker (WAC Clearing House and University Press of Colorado, 2016): 119–43, https://wac.colostate.edu/books/infolit/chapter6.pdf.

6. Margy MacMillan and Allison MacKenzie, "Strategies for Integrating Information Literacy and Academic Literacy: Helping Undergraduate Students Make the Most of Scholarly Articles," *Library Management* 33, no. 8/9 (2012): 525–35, https://doi.org/10.1108/01435121211279885; Feng Kevin Jiang and Ken Hyland, "Titles in Research Articles: Changes across Time and Discipline," *Learned Publishing* 36, no. 2 (2023): 239–48, https://doi-org.libproxy.unm.edu/10.1002/leap.1498; Feng Kevin Jiang and Ken Hyland, "Changes in Research Abstracts: Past Tense, Third Person, Passive, and Negatives," *Written Communication* 40, no. 1 (2023): 210–37, https://doi.org/10.1177/07410883221128876. Jiang and Hyland have studied academic language across disciplines, finding that regardless of field, titles are longer in word length and more often employ a compound structure. Their research on semantics in abstracts has been a bit more nuanced, with trends changing depending on the discipline; however, they suggest abstracts now seek to claim attention and stand out from the crowd, in addition to the traditional role of summarization.

7. Robert Campbell, Ed Pentz, and Ian Borthwick, *Academic and Professional Publishing* (Chandos Publishing, 2012): chap. 1 O'Reilly.

8. Barbara Fister, "The Social Life of Knowledge: Faculty Epistemologies," in *Not Just Where to Click: Teaching Students How to Think about Information*, ed. T. A. Swanson and H. Jagman (Association of College and Research Libraries, 2015): 99, https://barbarafister.net/SocialLife.pdf.

9. Amy Jankowski, Alyssa Russo, and Lori Townsend, "It Was Information Based: Student Reasoning When Distinguishing between Scholarly and Popular Sources," *In the Library with the Lead Pipe* (2018), https://www.inthelibrarywiththeleadpipe.org/2018/it-was-information-based/.

10. Amy R. Hofer, Silvia Lin Hanick, and Lori Townsend, *Transforming Information Literacy Instruction: Threshold Concepts in Theory and Practice* (ABC-CLIO, 2019): 79–100.

11. John Bohannon, "Who's Afraid of Peer Review?" *Science* 342, no. 6154 (2013): 60–65, https://doi.org/10.1126/science.2013.342.6154.342_60; Open Science Collaboration, "Estimating the Reproducibility of Psychological Science," *Science* 349, no. 6251 (2015): aac4716, https://doi.org/10.1126/science.aac4716.

12. Kevin P. Seeber, "Wiretaps and CRAAP," *Kevin Seeber, MLIS* (blog), March 18, 2017, http://kevinseeber.com/blog/wiretaps-and-craap/.

13. Alyssa Russo, Amy Jankowski, Stephanie Beene, and Lori Townsend, "Strategic Source Evaluation: Addressing the Container Conundrum," *Reference Services Review* 47, no. 3 (2019): 294–313, https://doi-org.libproxy.unm.edu/10.1108/RSR-04-2019-0024.

14. Anne MacKeough, Judy Lee Lupart, and Anthony Marini, ed., *Teaching for Transfer: Fostering Generalization in Learning* (Taylor and Francis, 1995): 1.

15. Daniel L. Schwartz and Na'ilah Nasir, "Learning," in *Encyclopedia of Education* vol. 4, (Macmillan Reference USA, 2003): 3412.

16. Head, "Learning the Ropes."

17. Michael J. Wise, "Traumatic Exposure of College Freshmen to Primary Scientific Literature: How to Avoid Turning Students off from Reading Journal Articles," *Teaching & Teacher Education* 105 (2021): 7, https://doi.org/10.1016/j.tate.2021.103422.

18. Leslie S. Keiler, "Students' Explanations of Their Data Handling: Implications for Transfer of Learning," *International Journal of Science Education* 29, no. 2 (2007): 151–72, https://doi.org/10.1080/09500690600560910.

19. Head, "Learning the Ropes."

20. Pamela Howard, Meg Gorzycki, Geoffrey Desa, and Diane D. Allen, "Academic Reading: Comparing Students' and Faculty Perceptions of Its Value, Practice, and Pedagogy," *Journal of College Reading and Learning* 48, no. 3 (2018): 189–209, https://doi.org/10.1080/10790195.2018.1472942.

21. William Nagy, Dianna Townsend, Nonie Lesaux, and Norbert Schmitt, "Words as Tools: Learning Academic Vocabulary as Language Acquisition," *Reading Research Quarterly* 47, no. 1 (2012): 91–108, https://doi.org/10.1002/RRQ.011.

22. Many scholars have studied the hidden curriculum, but this work ties it to the use and creation of documents: Ciaran B. Trace, "Information Creation and the Notion of Membership," *Journal of Documentation* 63, no. 1 (2007): 142–64, https://doi.org/10.1108/00220410710723920.

23. Anne-Marie Deitering and Kate Gronemyer, "Beyond Peer-Reviewed Articles: Using Blogs to Enrich Students' Understanding of Scholarly Work," *Portal: Libraries and the Academy* 11, no. 1 (2011): 493, https://muse.jhu.edu/article/409889.