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Chapter 22
Searching as Learning: A Scaffolded Approach to the Research Paper Assignment

Karin deJonge-Kannan

Somewhere on a university campus, there is a hunched figure working at a computer. The person is surrounded by books, papers, beverage cans, and writing utensils. Their fingers tap on the keyboard, intermittently coming to a stop when the person's gaze shifts from the screen into the distance. Their torso leans forward, their brow is tense. Frequent sighing can be heard.

Did you picture a student? An instructor? When it comes to the research paper assignment, this scene could feature either of them, frustrated and dispirited. While it may be worthwhile pondering how we got here (see, for example, Freedman & DiPardo, n.d. and Murphy & Thaiss, 2020 for a historical perspective on the teaching of writing), in this chapter I describe a way *out* of the frustration for both parties. In a nutshell, this approach shifts the emphasis away from the traditional focus on the outcome to a more engaging and satisfying focus on the process, particularly the aspect of finding and sifting through sources. I outline the structure and rationale of a scaffolded approach to the research paper assignment that I use in a 2000-level course titled *Language & Religion*, which uses a sociolinguistic lens to examine the lives of ordinary practitioners from a wide range of religious traditions. This course emphasizes "diversity within each religious tradition, especially as actually practiced by various adherents" (Kuhlken, 2021, p. 216); it has no prerequisites and enrolls students of all majors and backgrounds. I describe the design and learning outcomes of the course in greater detail in deJonge-Kannan and Lyon (2023).

Rather than using a textbook, I assign students a scholarly article to read for every class period. I made the decision to use scholarly articles when I first began teaching the course and was unable to find a suitable, undergraduate-level textbook on the sociolinguistics of religion. The benefit of selecting academic articles is that I can easily swap some in or out according to students' interests and course needs in a particular semester. Furthermore, all articles are accessed from databases to which the university library subscribes, making these materials zero-cost for students.

As they read each article, students write answers to comprehension and reflection prompts designed to counteract the trend that "nobody really does the reading" (Bollinger et al., 2020). The prompts are constructed to help students not only make sense of author claims but also to connect details of the text with their own experiences. Thus, from the first week of class, students develop familiarity with reading and making sense of academic discourse in the sociolinguistics of religion, around which I have designed the research paper assignment.

My approach to the research paper assignment in this course foregrounds "inquiry as learning" (Association of College and Research Libraries, 2015) and incorporates six Habits of Mind (Costa & Kallick, 2008), namely questioning and posing problems; persisting; thinking flexibly; thinking about your thinking; striving for accuracy; and remaining open to continuous learning. Drawing on Eyler's (2019) framework on how people learn, this approach incorporates curiosity, authenticity, and the productive use of failure, resulting in work that students are invested in carrying out and instructors are interested in reading.

Background

Students routinely report unrelenting academic, financial, physical, familial, and social demands that require their time and attention (Hurst et al., 2013; Linden & Stuart, 2020; Robb, 2017). The pressure of these many demands may compel students to ration their efforts according to task demands (Sharma et al., 2019). When given a chance, students will look for shortcuts. When it comes to writing research papers, a shortcut often means writing a paper without doing the type of research that helps them gain new insights or develop a nuanced perspective on their topic. In fact, students have told me that unless the assignment is structured to force a different approach, they usually make up their minds before they start writing, reducing their "research" to a quick hunt for sources that support their opinion. In other words, students "seek to accomplish tasks as much as possible based on their prior knowledge to minimize the effort required" (Vakkari, 2016, p. 8), as they deem "fulfilling a task's requirements as more important than engaging deeply with a topic" (Purdy, 2012). They thus rob themselves of an opportunity to learn from the research paper assignment. Moreover, due to lack of intellectual depth, the resulting papers tend to be uninspiring for instructors to read and grade. The scaffolded approach I explain in this chapter helps students become engaged in searching-as-learning and in making sense of what they learn. The work that students produce with this approach results in less frustration and more enjoyment as instructors review student work.

Approach

The term "scaffolding" is used in education to refer to a structured approach designed by an instructor "so the learner can solve problems or accomplish tasks that would otherwise be out of reach" (Reiser, 2004, p. 273). In essence, scaffolding involves breaking down a complex learning task into a series of manageable steps, with the instructor guiding and offering feedback along the way.

In Table 1, I summarize the scaffolded approach I have developed, its timeline, and its connections with Habits of Mind (Costa & Kallick, 2008). I designed this approach to help students experience success by making the process of research paper writing more manageable through a series of steps. The process begins with the student's curiosity (Eyler, 2019), a prerequisite for personalized learning (Kallick & Zmuda, 2017). Students receive instructor feedback throughout the semester-long process, including opportunities for do-overs without penalty, which offer them a chance to make productive use of failure (Eyler, 2019).

Table 1
Step-By-Step Approach in a 15-Week Semester

Stage	Week	Learning task	Habit of Mind
1	5	*Formulating a question*	Questioning and posing problems
2	6	*Learning how to search*	Thinking flexibly; thinking about your thinking
3	8	*Searching, reading, note-taking, Part 1*	Thinking flexibly; persisting; striving for accuracy
4	10	*Searching, reading, note-taking, Part 2*	Thinking flexibly; persisting; striving for accuracy; remaining open to continuous learning
5	12	*Synthesizing*	Thinking about your thinking; remaining open to continuous learning
6	13	*Reflecting*	Thinking about your thinking

Formulating a question (questioning and posing problems)

As students try to decide in Stage 1 what question they would like to pursue, I encourage them to choose any topic they find interesting, as long as it connects to language and religion in some way. Freedom to pursue whatever students find interesting offers validation of their agency, affirmation of their duty to ask questions, and encouragement to follow their curiosity wherever it may lead them. By Week 5 of the 15-week semester, students have learned that language refers not only to specific languages, whether vernacular or ancient, but also to key concepts, rhetorical frames, principles promoted in sacred texts, debates about social issues, the experience of diaspora communities, matters of translation, and so forth. They have also become used to read scholarly articles.

As students ponder what question to ask, I invite them to write what is called a WH-question, or a question that begins with a word such as *why*, *how*, *what*, etc., and sets students up for exploring more broadly than a question that can be answered with "yes" or "no." Students are free to formulate their own question or choose one from a list of sample questions from previous semesters. In addition, they are invited to write related questions that may also need to be addressed in pursuit of an answer to their research question.

Frequently, a student's question springs from a personal connection or previous experience, thus incorporating authenticity (Eyler, 2019). As they share their initial question with classmates in small groups, they also explain why it interests them. For example, a student who heard from a Muslim friend that women living in France were forbidden to wear hijab wanted to know "What's up with Europeans squashing people's freedom of expression by banning headscarves?" Following small group sharing in class, she rephrased her question as "What rhetorical frames are used by EU nations that ban headscarves?" She then wrote related questions that may help her answer her driving question: "When and why did the banning of headscarves start? Are they banned everywhere? How does this rhyme with laws that protect freedom of religion, freedom of expression?"

When students submit their driving question and related questions, I offer feedback to help them widen or narrow their scope or sharpen their focus. In the case of the student mentioned above, I recommended she clarify what exactly she meant by "headscarf," given the various types of head coverings worn by Muslim females.

Along with my feedback on their topic of choice, I attach a scan of a relevant journal article or book chapter, which I can almost always find in the collection of articles and chapters I have curated over the years. Sharing a potentially relevant article or chapter demonstrates two things to students: scholars have been looking into this topic (i.e., it is viable) and the instructor has taken the time to offer personalized, supportive feedback on their driving question. The latter

is part of the caring relationship I aim to establish with each student. I also emphasize they are free to discard the article if it does not meet their needs, again promoting agency and authenticity (Eyler, 2019). With a topic in mind, students are ready to get into the search process, which begins with a library session facilitated by the academic librarian who specializes in languages and cultures, among other disciplines.

Learning how to search (thinking flexibly; thinking about your thinking)

Stage 2 consists of a 75-minute library session designed to achieve three goals: a) illustrate the key features of scholarly sources, b) demonstrate the differences between searching with Google Scholar and searching with the library's databases, and c) guide students through a sample search using key terms, synonyms, and Boolean operators. Before attending the library session, students are expected to read "Secondary Sources in their Natural Habitat of Guptill" (Guptill, 2018), which is a student-friendly orientation to the type of sources students will be focusing on in their library search. Their time with the subject librarian is designed to challenge students' "common assumption that everything is available online through Google" (Hooper & Scharf, 2017, p. 86) and to "alleviate the library anxiety of learners and empower them to become better students" (Cooke, 2010, p. 208).

In a classroom with a computer terminal for every student, the subject librarian introduces students to the tools and techniques that will help them search effectively on their chosen topic. After following along with the librarian's sample search on the topic of *speaking in tongues / glossolalia*, students begin their own searches while the librarian and I are available to support and assist. Being able to call on the librarian and me as they get stuck or have questions enables students to course correct or try a different approach, thus developing their ability to think flexibly and make productive use of failure (Eyler, 2019) in a supportive environment. After all, "one of the beautiful things about science is that it allows us to bumble along, getting it wrong time after time, and feel perfectly fine as long as we learn something each time" (Schwartz, 2008, p. 1771).

At the end of our time with the librarian, students submit an exit ticket (Leigh, 2012; Marzano, 2012), stating three new insights they learned from the session or things they wish to remember regarding library searching. The exit ticket serves as a brief formative assessment that guides students to reflect on their learning (i.e., to think about their thinking). By the end of the library session, students have usually found at least a handful of sources to begin reading as they look for information and insights that will help them answer their research question.

Searching and note-taking (Thinking Flexibly; Persisting; Striving for Accuracy)

Stage 3 is designed around the principle of "research as inquiry," one of the guiding frames for information literacy in higher education advocated by the Association of College and Research Libraries (2015). As they explore databases of scholarly works and play around with search terms and Boolean operators, students assess search results on relevance to their research question. They quickly realize that no single article or chapter lays out a tidy answer to their research question and that they need to keep reading so they can combine bits and pieces of various sources to arrive at a nuanced answer. In other words, they practice staying open to continuous learning. Articulating their rationale for keeping or discarding a source offers students a way to document their search process and the various databases and search terms they used to locate sources. This approach foregrounds the process of searching-as-learning, emphasizes the value of thinking flexibly, and keeps students thinking about their thinking.

For each source they locate, students generate three things: an assessment of its relevance to the research question, its full citation, and at least five bullet points of key things they want to

remember from each source they decide to keep. Throughout the process of "making sense of, structuring, and manipulating search results and sources" (Vakkari, 2016, p. 16), students type their notes.

The work that students submit for this stage of the research paper assignment contains three sections: an introduction with their rationale for their interest in the topic; their research question, which they are welcome to tweak as they learn more; and their notes for all the sources they accessed during the first round of searching. Students must supply complete and accurate citations. They are also expected to submit notes on a minimum of five sources that they plan to keep. Their notes can include whatever they found meaningful or relevant in the source, as it pertains to their research question. With this freedom, students can operate with authenticity (Eyler, 2019) according to their own meaning-making process.

I review student work for this phase of the research paper assignment with three goals in mind. First, I want to make sure students use only scholarly journals and academic books to gather components of the answer to their research question. Second, I count whether students have the minimum five sources they plan to keep in their research papers. And third, I verify that they have the expected quantity of notes for each source.

For any aspect not meeting expectations, I offer students detailed feedback on how to improve their work and the opportunity to re-do and resubmit without penalty. For example, when students access web pages operated by a religious organization, I point out that while these are a great resource, they do not meet the requirement for the assignment, in that they do not feature citations or references to scholarly work. Similarly, when students use magazine or news articles, I draw their attention to the absence of citations and references and invite them to find additional sources that do meet the assignment criteria. In these communications, I make it clear that their errors are no big deal; students can revise and resubmit their work without negative repercussions. Emphasizing a no-penalty attitude toward areas where students missed the mark keeps the focus on learning.

As most students are at best vaguely familiar with APA format for citing and referencing, I do not insist on impeccable compliance with such details as capitalization and italics. I do, however, demand completeness and accuracy of all components of a citation. Striving for accuracy in this way serves not only their readers, but also the writers themselves, as they will be able to locate and re-read sources when they had not saved the article and when neither a URL nor a search function link—both known to be unstable over time (Davis, 2016)—offers a reliable route back.

My feedback on Stage 3 helps students to develop their ability to think about their searching, persist, and learn from mistakes. I personalize comments on their work and offer encouragement to keep them motivated.

Continued Searching and note-taking (**Thinking Flexibly; Persisting; Striving for Accuracy**)

Using feedback on Stage 3, students continue their work of searching and note-taking while adding to the same document submitted for Stage 3 (or its revision). The success students experienced in the previous stage, combined with my feedback, helps them proceed with greater confidence as they get deeper into their topic. I remain available for consultation, although most students need little support during Stage 4. Research has shown that when people repeat a task similar to a previous one, they can extrapolate from what they learned previously to develop greater skill and confidence (Fadde & Klein, 2010; Jung et al., 2016).

The more sources that students read, the more they realize that the contributions of an array of voices help them develop a nuanced perspective on their topic. As they build their

collection of sources, they experience the wisdom of using a citation manager to keep accurate records (modeled by the librarian) if they wish to re-read sources accessed previously.

The work that students submit for Stage 4 of the research paper assignment is a continuation of the work submitted for Stage 3—complete citations and a set of notes on a minimum of five additional sources that they plan to keep for their research paper. I review students' submissions using the same criteria as for Stage 3. As before, any portion of their work not meeting expectations can be re-done and resubmitted without penalty. Having thus gathered information from 10 scholarly sources on their topic, students are ready to review their notes and synthesize an answer to their research question, even if gaps remain.

Synthesizing **(Remaining Open to Continuous Learning)**

Stage 5 requires students to review their notes and write a short paper in which they articulate what they have learned in pursuit of an answer to their research question. The assignment description emphasizes that this paper should not be a string of summaries but instead students' own synthesis. I also tell students that being unable to come up with a tidy answer after reading only 10 sources is both possible and permissible. Without pressure to have a solid answer to their question, students have the freedom to remain open to continuous learning. Students are encouraged to include in their synthesis a section in which they describe as-yet unresolved aspects of their question and gaps remaining in their understanding of the topic. As they think about their thinking, they realize there is more to learn.

Students add their synthesis to the document they submitted previously. Expectations for the synthesis are that it must contain an integrated representation of what students learned about their topic (i.e., it cannot be a string of summaries), that it cites between six and ten of the sources for which they wrote notes in Stages 3 and 4, and that it includes a section on what they do not have clarity on at this point.

I review student work for Stage 5 against these criteria and offer detailed, personalized feedback for any portions not meeting expectations. As before, students are invited to re-do and resubmit any parts that do not meet expectations. What they end up with at this point is certainly not a paper that would meet the standard definition of a well-crafted research paper with a thesis statement controlling the structure. However, the synthesis could be expanded upon and revised to become a standard research paper. In fact, in the field of writing studies, some have argued that one semester is insufficient and have suggested that "two-course writing sequences are valuable because they extend the time that students focus on developing as writers and researchers" (Sura, 2015). While important, these considerations are outside the current scope and focus for this one-semester, entry-level course.

Following Stage 5, students have one final opportunity to think about their thinking as they reflect upon their experience with the research process.

Reflecting **(Thinking about your Thinking)**

The final stage of the multi-phase assignment is a two-page reflection on the research process, in which the students write about their setbacks and successes, and especially what they learned about themselves, their habits, and their potential. Almost all students express something akin to what Schwartz (2008), lauding the importance of acknowledging ignorance, describes upon realizing that

> the scope of things I didn't know wasn't merely vast; it was, for all practical purposes, infinite. That realization, instead of being discouraging, was liberating. If our ignorance is infinite, the only possible course of action is to muddle through as best we can.…One of

the beautiful things about science is that it allows us to bumble along…and feel perfectly fine as long as we learn something each time. (p. 1171)

Indeed, the process of searching-to-learn includes for many students some level of frustration over dead ends and dissatisfaction with their research skills. Nevertheless, most students find my scaffolded approach an empowering and engaging way to conduct and learn from library research. Many say that, in contrast to writing assignments they have done for other courses, they were "actually able to learn" through the steps they followed in my course, especially because they were allowed to choose a topic that matters to them and to follow their curiosity wherever it led them. They appreciate receiving detailed, supportive feedback along the way and experiencing success step-by-step. They remark on the joy of discovering how much there is still to learn. While they have practiced searching as learning, they developed Habits of Mind that will benefit them in their other courses and beyond college.

I will close this section with a selection of student comments submitted on anonymous course evaluations administered by the university at the end of the semester.

"The research project was a great opportunity for me to learn about what I was interested in personally. It was a lot of work, but I was really pleased about what I was able to find and put together." (spring 2020)

 "I enjoyed the research project. It taught me a new way to do research papers." (spring 2020)

"The research project was excellent and gave me a great experience in research writing that I hadn't done before." (fall 2020)

"I thought the research project was well done." (spring 2021)

"I liked the setup of the research project a lot!" (spring 2021)

"I loved the freedom of the research project." (fall 2021)

"I feel like I've developed skills that I'll need in every life aspect." (fall 2021)

 "I really enjoyed the broken-up process of the research project and that it allowed me to dive deeper into a new topic." (spring 2022)

 "I really appreciated how you re-engineered our research project. I learned so much from just that one project that I have been able to apply what I have learned in this class to other projects and research papers. I feel like I am actually learning something from what I am researching. Thank you!" (fall 2022)

Limitations

While the approach I have described works in my course and for my students, it may not work in other contexts. First, I use this method in a course with a manageable number of students, typically between 25 and 30. High-enrollment courses may not lend themselves well to the frequent rounds of feedback that make this process work. Second, as I do not specialize in writing studies or in library science, I readily acknowledge that colleagues in those fields may find my approach lacking. Third, what students produce at the end is only the first draft of a

potentially solid research paper. Nevertheless, I believe that producing this draft is the culmination of meaningful cycles of searching, learning, synthesizing, and reflecting in ways that are engaging and meaningful to the students.

Conclusion

I have offered a practical, step-by-step description that others may wish to experiment with if they are interested in creating a context in which students can learn as they fan the flames of their own curiosity by searching for bits and pieces of the answer to a question they find interesting. The approach I have described offers several benefits: it disrupts students' default mode of making up their minds before they start writing; it offers them a step-by-step process for engaging with scholarly sources; it engages them in searching to learn; it prevents them from using a paper generated by artificial intelligence or another human being; and it gives students and instructor various touch points to communicate about process and progress.

With the opportunity to state and subsequently tweak their question, the freedom to go where their curiosity takes them, and multiple chances to improve their work without penalty, students immerse themselves in the work of searching and note-taking for the sake of learning. Most students come into the course with little previous exposure to scholarly sources in the social sciences; however, when they reflect on their research process, especially its trials and triumphs, and what they learned about themselves, their habits, and their potential, they tend to offer positive comments. Just as importantly, it is satisfying for me as the instructor to learn with and from students as I coach them in their searching and learning and help them develop Habits of Mind that will benefit them long after the course is over.

References

Association of College and Research Libraries. (2015). *Framework for information literacy for higher education.* https://www.ala.org/acrl/sites/ala.org.acrl/files/content/issues/infolit/framework1.pdf

Bollinger, C. M. B., Lupo, S. M., & Sullivan, B. A. (2020). "Nobody really does the reading": Rethinking reading accountability using technology tools. In P. M. Sullivan & J. L. Lantz (Eds.), *Handbook of research on integrating digital technology with literacy pedagogies* (pp. 433–455). IGI Global.

Cooke, N. A. (2010). Becoming an andragogical librarian: Using library instruction as a tool to combat library anxiety and empower adult learners. *New Review of Academic Librarianship*, *16*(2), 208–227.

Costa, A. L., & Kallick, B. (2008). *Learning and leading with Habits of Mind: 16 essential characteristics for success*. Association for Supervision and Curriculum Development.

Davis, R. C. (2016). The future of web citation practices. *Behavioral & Social Sciences Librarian*, *35*(3), 128–134.

deJonge-Kannan, K., & Lyon, A. (2023). Encountering the religious Other at a public university: Student development through reflection and discussion. *Journal of College and Character*, *24*(3).

Fadde, P. J., & Klein, G. A. (2010). Deliberate performance: Accelerating expertise in natural settings. *Performance Improvement*, *49*(9), 5–14.

Freedman, S. W., & DiPardo, A. (n.d.). Teaching of writing: History, issues and trends in school-based writing instruction, research. *Education Encyclopedia*. https://education.stateuniversity.com/pages/2552/Writing-Teaching.html

Guptill, A. (2018). Secondary sources in their natural habitat. In *Writing in college: From competence to excellence* (chap. 4). Open SUNY textbooks. https://knightscholar.geneseo.edu/oer-ost/10

Hooper, M. D. W., & Scharf, E. (2017). Connecting and reflecting: Transformative learning in academic libraries. *Journal of Transformative Education*, *15*(1), 79–94.

Hurst, C. S., Baranik, L. E., & Daniel, F. (2013). College student stressors: A review of the qualitative research. *Stress and Health*, *29*(4), 275–285.

Jung, E., Kim, M., & Reigeluth, C. M. (2016). Learning in action: How competent professionals learn. *Performance Improvement Quarterly*, *28*(4), 55–69.

Kallick, B., & Zmuda, A. (2017). *Students at the center: Personalized learning with Habits of Mind*. Association for Supervision and Curriculum Development.

Kuhlken, P. F. (2021). Dear World Religions 101 professor: Some essentials about non-essentializing. *Religion & Education*, *48*(2), 216–262.

Leigh, S. R. (2012). The classroom is alive with the sound of thinking: The power of the exit slip. *International Journal of Teaching and Learning in Higher Education*, *24*(2), 189–196.

Linden, B., & Stuart, H. (2020). Post-secondary stress and mental well-being: A scoping review of the academic literature. *Canadian Journal of Community Mental Health*, *39*(1), 1–32.

Marzano, R. (2012). Art and science of teaching: The many uses of exit tickets. *Educational Leadership*, *70*(2), 80–81.

Murphy, J. J., & Thaiss, C. (Eds.). (2020). *A short history of writing instruction: From ancient Greece to the modern United States* (4th ed.). Routledge.

Purdy, J. P. (2012). Why first-year college students select online research resources as their favorite. *First Monday*, *17*(9). https://firstmonday.org/ojs/index.php/fm/article/download/4088/3289

Reiser, B. J. (2004). Scaffolding complex learning: The mechanisms of structuring and problematizing student work. *The Journal of the Learning Sciences*, *13*(3), 273–304.

Robb, C. A. (2017). College student financial stress: Are the kids alright? *Journal of Family and Economic Issues*, *38*(4), 514–527.

Schwartz, M. A. (2008). The importance of stupidity in scientific research. *Journal of Cell Science*, *121*(11), 1771.

Sharma, A., Van Hoof, H. B., & Ramsay, C. (2019). The influence of time on the decisions that students make about their academic reading. *Active Learning in Higher Education*, *20*(1), 79–92.

Sura, T. (2015). Fostering research identities in two-course writing sequences: A curricular perspective. *Composition Forum*, *32*. http://compositionforum.com/issue/32/west-virginia.php