

Chapter Four

Swimming in the Matrix: A Dialogue on Teaching Undergraduate Research

By Iris Jastram and Steve Lawson

As instruction librarians at small liberal arts colleges – and therefore as two librarians in jobs very similar to Barbara Fister's – we have learned a great deal from and with Barbara over the years. Her writing and her conversations often reveal fully articulated versions of ideas that we have just begun forming ourselves, which is validating and humbling. But even more than that, her deep and fundamental respect for undergraduates and their learning process, combined with her ability to speak out forcefully and constructively, have put her in the position of being an informal mentor for so many of us who "want to be Barbara when we grow up."

One key theme woven throughout Barbara's work is the importance of finding and having a voice, and of honoring the voices of others. For undergraduates, this means finding their own voices while also incorporating the voices of others into their ever more robust knowledge constructs. They cannot download knowledge from one brain to another, but they can engage with ideas and use that engagement to foster knowledge building. The same is true of other learners. Even librarians!

Like undergraduates, librarians, also learn by engaging with ideas, either through direct conversation or through the drawn-out conversations between articles and blog posts and conference presentations. What follows is just such a conversation. Each of us will present our individual ideas on how instruction librarians can work most meaningfully with undergraduate

researchers, and then we will engage in a dialogue about those ideas, helping each other clarify and expand our understandings of the topic. Ultimately, we hope to come to a deeper understanding of our fundamental goals as instruction librarians, share a few ideas about how to translate those goals to the classroom, and do it all in a way that celebrates Barbara's conviction that knowledge is born of engaged interaction.

Iris on Undergraduate Research: This isn't stamp collecting!

Librarians and undergrads have one thing in common: we are obsessed with the "finding things" definition of research. When I was in library school, everything – from designing databases to bibliometrics to cataloging – had "finding things" as its driving motivation. Ask anyone what a librarian does and we are likely to say some variation on "find things."

Meanwhile, undergrads are similarly primed for focusing myopically on finding things whenever research projects appear on the syllabus. They want a couple of sources that back up their thoughts, point-by-point, and they want one hopelessly laughable source that can serve simultaneously as counterargument and whipping boy. As students see it, their job is to gather together something akin to a brief on the topic of choice: patch together the useful parts of the good sources; flay the bad source alive; and arrive at what John Bean calls an "all about" paperⁱ designed to show a professor that the student is capable of informing a hypothetical reader "all about" the important things to know about a topic. In an ongoing research project I am part of, the Information Literacy in Student Writing (ILSW) project, this shallow understanding of research shows up all over the place in the form of "patch writing"ⁱⁱ and over-citation.ⁱⁱⁱ "See?" says the student through the wide margins next to block quotes, "I did it! I found out everything

you need to know about global warming and condensed it for you into a digestible five-page essay!”

So here we all are, pulling for the same goal, over and over, and constantly disappointed with the results. Librarians train students in the fine art of finding things, students are bored but find things anyway, librarians feel undervalued, classroom faculty are underwhelmed, and our ILSW project keeps revealing patch-written “all about” papers. Maybe our goals need to be adjusted.

“But finding things is what we do,” some librarians might say. “If we adjust that goal, are we not becoming something else?” Not at all. “Use information effectively” is one of the ACRL Information Literacy Standards,^{iv} so there is nothing in our Information Literacy contract that forces us to draw the boundaries of our expertise well within the “finding things” part of research. In fact, doing so may actually be a disservice for our students.

Of course, this doesn’t mean that we should all go become writing instructors. Imagine, though, the impact of teaching *parallel* to disciplinary faculty, rather than off in a *cul de sac* on the side. All of a sudden, the disciplinary faculty and librarians become tracks the students can trolley along, each reinforcing the other, and each track guiding students toward more effective work. And, as Barbara Fister has pointed out over and over again, librarians can fulfill their part of the bargain relatively easily by remembering and making explicit that research is part of a fundamentally rhetorical act. As she says, “Rather than describe the search process as a matter of finding information – which sounds like panning for solid nuggets of truth – librarians should describe it as a way of tapping into a scholarly communication network.”^v And later, “Placing research skills in a rhetorical framework will make the search process more meaningful and the evaluation of sources more natural for students. And more important, it will help students to

situate their research findings in a text of their own that uses evidence in a more sophisticated and successful way.”^{vi} The emphasis, then, is on the connections between ideas and the conversations that these connections enact. It is not all about “finding things.” It is about igniting students’ imaginations. It is about revealing how students can engage with outside knowledge to build their own well-grounded ideas and to communicate those ideas effectively.

Steve on Undergraduate Research: From Curators to Creators

I often find library instruction unsatisfying. My complaints are familiar: my time with the class is too brief, my relationship with the students too tenuous, my lesson too isolated from the rest of the course. But, like all academic instruction librarians, I am hopeful and diligent, and with each class I teach, I look at the students’ research assignment and try to carve out a piece of that project to call my own. In the past, this piece almost always amounted to searching for sources in library-approved databases and full-text collections.

But when I taught that way, when I pulled out “searching for sources” as my sole contribution to a class I got to see once for an hour or so, I found that I was reinforcing a problematic attitude toward research. Students would speak of their research paper as if the “research” was something wholly different and divorced from the “paper.” Like tying your shoes before you play basketball, or putting gas in the tank before going for a drive, students seemed to know that research was necessary, but also seemed to expect it to be quick, preliminary, and mostly a technical barrier to the real work of writing. When I got in front of them and pulled out canned searches of my own devising to demonstrate the features of the article database, I was reinforcing this view of research as a technical or even bureaucratic skill. I was reinforcing a way of

researching and writing that too often ends up with students writing generally about a topic, rather than creating and supporting a compelling argument.

I suspected there was something more, an approach perhaps implied by the multi-faceted ACRL Information Literacy Standards,^{vii} but not fully articulated there as a pedagogy. I was attracted to the writing center on our campus, where it seemed to me that student tutors and clients alike took their writing far more seriously than their research. I wondered, what, if anything, could make those students as engaged with research as they were with writing: how could research feel as personal, as necessary, as high-stakes as writing did? I began to change the way I taught from being a “specialist” who passed on highly specific tips about this or that library database, to being more of a coach or even a counselor. I tried to first draw the class out with questions about their work and their ideas, and only once I’d established this context – this *need* for sources or evidence – would I turn on the classroom projector and start talking about searching.

Whenever I have a good idea about teaching and learning in libraries, I always find out that Barbara Fister has beaten me to it. Sometimes she’s only ahead of me by a few days, posting a fully developed column online while I am still mulling over the implications. But just as often – as in this case – it turns out that Barbara is a decade or more ahead of me. In 1990, or about twenty years before I started thinking about this problem in earnest, Barbara wrote about how students are too likely to see themselves as “hunters and gatherers” who use sources simply as collections of facts which they report back on in their papers.^{viii} Librarians are not the only source or cause of the students’ misconceptions, of course, but through our teaching we can help students develop a view of themselves as creators of knowledge, and less as collectors and curators of knowledge. If we’re successful, knowledge “is not something that grows by accretion of new discoveries (that can be written up, set on the library shelf and located whenever a dose

of truth is required), but changes depending on the way in which the interpreting community views it.”^{ix}

After more than twenty years, I would have hoped that our profession would have better internalized and formalized this understanding of how we should address teaching research skills. And perhaps with ACRL’s Information Literacy Immersion program, we are getting there. But it still seems like this integrated view of research, rhetoric, and writing is something that we need to relearn and reteach with some regularity. I am heartened somewhat by the fact that Fister herself is still returning to this subject, finding new insights and new metaphors. In the winter of 2012 Fister wrote: “We need to help students understand the vast web of meaning in the making and develop ways to shape their own ideas about what parts to pay attention to. They need to know not just how to find finished information but how to grasp meaning as it’s made and how to participate in its making.... I had a frustrating time this week helping students explore databases, which seem like supremely clumsy boutique shopping sites for products that are each sold separately, detached from the network that produced them.”^x

Instruction librarians are not personal shoppers, we are consumer advocates. By the time I have added this idea to my repertoire, I am sure Barbara Fister will have long moved on to another idea that I’ll think of later.

Dialogic Learning: Iris and Steve Discuss Undergraduate Research

Iris: I find it really interesting that when we each articulated what we saw as the deep underlying problem in the way that undergraduates understand research (and therefore in the ways that we see our jobs), I talked about how undergraduates misunderstand the point of gathering information, while you talked about how the major problem is that

undergraduates see information gathering as distinct and separate from writing.

I wonder if these conclusions point to the *same* deep underlying problem, or if you think they are two problems that often happen together.

Steve: I think that research and writing is problematic overall, I guess. It is full of problems, and part of the process is understanding or overcoming those problems or making those problems work for you.

Even in the short time since I wrote my contribution at the start of this chapter, I have been thinking about how students see that split between researching and writing. And I think what they actually do is more complicated than research first, writing later. In fact, the work that Barbara did in the 1990s shortly after the article that I quoted pointed to undergraduates having more complicated and recursive methods than perhaps I gave them credit for.^{xi}

I should also say that I don't think it is crazy for them to want to do the research first, because they are so often working from a state of near-total ignorance.

Iris: Yes, that is true.

Steve: Before they can even articulate a question, they have a lot of reading to do. I think part of it might be a vocabulary problem, as in, they refer to all this initial reading as "research." And then if they have time, or are diligent enough, they actually do continue to read even as they write and revise. But they don't necessarily think of that as "research," they think of it as "writing."

Iris: Ahh, that makes a lot of sense to me because it *is* research, but not done for the same purpose.

On top of all of this, undergraduates are making a difficult transition, I think, from school to higher education – from learning about things to learning to actually produce new knowledge based on all that background they finally know. I think they are often not yet used to their goal being to create knowledge.

Steve: Yes, and I sometimes see terrible confusion about the role of "opinion" in student writing. Some students have been told that papers shouldn't be their opinion, so they are very careful to say nothing controversial or original. Or interesting. Then their college professor says, "I need you to write more about what you think of the subject," and they feel stuck between two poles.

Iris: Right. "Opinion" is kind of like "research" in that we (and classroom faculty) use them to mean "independent thought" and "discovery and synthesis" while students think they mean "feelings" and "background." And all of this gets compounded by misunderstandings about where knowledge-creation actually happens. Students think "over there, with the experts" and we are trying to tell them, "No, in *you* – in your head, where you synthesize all this stuff from other people."

Steve: Yes, and in fact, in one of these articles Barbara says that we should teach constructivist knowledge creation by example – giving students a chance to see how we create knowledge in our own heads.^{xiii} Is that something that you try to do in the classroom?

Iris: I must, because that is how I think learning happens, but I wonder what examples I actually set that help students learn to recognize it for themselves. What do you do?

Steve: I have never, until this moment, sat down and thought, "how do I teach constructivist knowledge creation by example?" But I think that I do by exposing my ignorance to the classes I talk to. I try and let them know when I don't know what I am talking about. I don't use canned searches very often, and instead try and work with what the students are actually interested in and what they have told me in that moment. For example, I will point out that I am doing a really dumb search with just one keyword from them and I am expecting to get back lots of weird results.

And then I talk through how I look at the results and use them to teach myself something about the topic — what kinds of journals are publishing on the topic, what kinds of confusion or false hits I can expect, and so on. So I am starting from a position of ignorance, but learning through the research process.

I think that might be what Barbara is talking about, if on a pretty basic level. I am using the act of research to create a basic level of knowledge as I work. Then I also talk about why certain things we find in the results might be interesting, and that is very rarely because "it will probably have facts I need."

I notice as I tell you this, though, that I am still pretty well stuck in the "finding things" model that you say we need to get beyond.

Iris: Well, I think we can never get rid of that entirely. That would be throwing out babies with bath water. I think that there are probably lots of places to work in examples of and practice with knowledge creation, and certainly doing so while finding things is important too.

You have made me think about my earlier statement that I am not aware having the goal of teaching constructivist knowledge creation by example, but I *am* aware that I have shifted my conception of my underlying goal from "help them find things" to "show them The Matrix." So when I teach about attribution and bibliographies, for example, I teach them more about academic sociology than about citation styles.

I want them to see each piece of information not as a golden "nugget of truth"^{xiii} but as a node, almost. As a place that connects to a whole bunch of other people and ideas and articulations.

I want them to take the red pill.

Steve: I think that is a very valuable approach. In some cases you will be reinforcing what the professors are already teaching them about the discipline, but in many cases it seems like the professors are fish and the academic discipline is the water. You are throwing the students a snorkel.

Iris: And fins! Because the student has to get up to speed pretty quickly.

Steve: Right, yes. Swimming in the Matrix.

Iris: You can't have too many metaphors

Steve: Metaphors are the sand on the beach. *Anyway*.... I was thinking of the way you ended your piece. "It is not all about finding things. It is about igniting students' imaginations...." And while I do not disagree, I was wondering about the student who just is not catching fire.

The great Russian director Stanislavski wrote about how an actor cannot expect to be "inspired" on command, that inspiration comes rarely and technique has to carry the load a lot of the time. So can we teach students about doing research when they are not really inspired or on fire, when they are merely on deadline?

Iris: Well, I do not think that the "here is how you" approach to teaching will help either the inspired or the uninspired.

Steve: Yes, very good point!

Iris: If we think of our one session as one experience in a while long set of experiences in which students develop good information literate habits of mind, then even if your one session does not make a huge impression, at least it is not digging the student deeper into misconceptions about the nature and purpose of research. So I try not to teach things very differently, though I certainly do have to work harder to engage some classes, for sure. And some classes do not turn out well.

And just now, as we are talking, I realize that all of this is modeling knowledge creation!

I was doing it all along!

Steve: And simultaneously speaking prose!

Iris: Amazing!

Steve: I think I understand what you are saying, and I certainly do not think that the best way to reach bored uninspired students is to be boring and uninspired ourselves.

I think I am just hoping to abstract this a bit more, so that I can tell students explicitly or implicitly, "here are techniques that will help take you from choosing a subject through to a finished paper, and they will help you regardless of how excited and intellectually engaged you are."

I think that is one appeal of teaching "finding stuff." Finding stuff will never let you down. You can assess finding stuff. Did they find stuff? Excellent, assessment complete. It is a lot more difficult to assess an imagination on fire.

Iris: Yes, I think that is true. And that is why I have resisted many of the more simplistic assessment efforts floating around, not wanting to be even further reduced to that function just for the sake of numbers. But going back to your example from acting, I wonder what an acting coach would be able to teach us about reaching the uninspired. You talked in your essay about moving from being a "specialist" to being a "coach or even a counselor." I wonder how an acting coach would approach the problem.

Steve: One thing that actors have to do is put themselves in other people's shoes and see things from that person or character's point of view. It is pointless for an actress to say, "well, I am just not that ambitious" if she's playing Lady Macbeth.

Iris: Several of Lady Macbeth's acquaintances would have LOVED that turn of affairs...

Steve: "Whatever, damned spot" is not very powerful.

Iris: Hah!

Steve: So, I think the acting coach would have us think about the people in all stages of this research project. Who would care about this topic? Once you have read what they say, why did they say that, and what are they leaving out? "What is my motivation?" is a cliché, but it can be a great question to ask about academic sources and their authors.

Iris: It is also a cliché to talk about how undergraduates are constantly asked to pretend to be little academics in their coursework, so maybe that can work in our favor, too.

Steve: Yes, I would say that I think it is fine to ask them to pretend to be junior professors. It is just a bad idea to think that they can do that without any preparation. I think it might be fun to get more "let's pretend" into our teaching.

Iris: Yes. Maybe more powerful motivation to try for inspiration as our goal might be that there is more than one kind of uninspired student. A good chunk of them might become more interested when they see that there is more going on than panning for information gold in an endless Google gold mine.

Steve: Yes, that is a good point. One of my favorite academic authors is Gerald Graff. He writes about how he was never very engaged by literature until he found out after reading *Huckleberry Finn* that it was actually a controversial work and not just a kids' story.^{xiv} Once he had to treat a work of literature as a problem to be solved or as a cause of an argument, he suddenly found it engaging and exciting.

Of course, he then went on to be a professor of literature, so we might want to be careful—we don't want to warp all our students to that extent.

Iris: Heh. Yes, be inspiring, but not TOO inspiring.

But yes, it seems like most people go through this kind of transition, where they realize that things are deeper and more complicated than they may seem at first glance. I went through a similar moment of inspiration when I figured out that librarians do more than find stuff (like I wrote about in my essay here).

Steve: I certainly think that a liberal arts education tends to reveal the world as more complicated than it first appears, rather than providing simple answers. Which does not make it any less frustrating for us as individuals who seem to need to continually re-learn the lessons of the past. I wrote a bit in my essay about how it seems like teaching research as a part of rhetoric is something of an evergreen topic for instruction librarians. Barbara wrote the article I referenced in 1990, yet it still seems like this idea that we need to teach "information literacy" less in isolation and more in the context of critical inquiry is still a notion that we are struggling with as a profession. Do you think that is true?

Iris: I think it is true, and I was reminded of our favorite mantra that information literacy sessions are not inoculations — you cannot go to one and then know everything you need to know. So on the one hand, I am disheartened that we as a profession have not internalized this more situated, critical, and nuanced understanding of our work, but on the other hand, I think it is just as true for us as it is for our students that we need repeated

interactions with the concepts throughout our careers.

The director of our writing program at Carleton has written about how ongoing faculty development on teaching writing is analogous to the ideas of “Writing Across The Curriculum,” where repeated exposure and practice is more important than one perfect exposure.^{xv}

So that is my attempt to be optimistic about all this. The less optimistic part of me wonders if we will ever learn these lessons.

Steve: I suppose it is just parallel to what we have been talking about all along. Teaching is also something that must be learned through imaginative inquiry and constructivist knowledge creation and all that. It is easy to fall back on old habits and assumptions about what it means to teach and learn.

Iris: Yes.

Steve: Even had I read Barbara's article back in 1990, I think I would still be puzzling out all the implications and ramifications of trying to teach constructivist knowledge creation by example. That is kind of the point.

Iris: Yes, I agree, and I think I will be able to read it 5, 10, 15 years from now and it will be useful then, too.

Meanwhile, I will take your idea of being a coach and meld it with my idea of revealing the Matrix and see how that shifts my teaching. I guess that makes me Morpheus!

Steve: Hm. I am not sure putting them to sleep is a good plan.

Iris: Riiiiight. Good point.

Steve: But I will certainly use this metaphor as an excuse to incorporate more leather and sunglasses into my teaching.

Iris: You know what they say: Pics Or It Didn't Happen.

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ⁱ John Bean, *Engaging Ideas*, 2nd ed. (San Francisco: Jossey-Bass, 2011), 26-27.

ⁱⁱ Patch writing refers to the practice of gathering verbatim passages from various sources and then piecing them together, much like a patchwork quilt, with connecting words and sentences. The term was coined by Rebecca Moore Howard in *Standing in the Shadow of Giants: Plagiarists, Authors, Collaborators* (Stamford, CT: Ablex Publishers, 1999).

ⁱⁱⁱ Iris Jastram, Danya Leebaw, and Heather Tompkins. "CSI(L) Carleton: Forensic Librarians and Reflective Practices," *In the Library with the Lead Pipe* (2011).

<http://www.inthelibrarywiththeleadpipe.org/2011/csil-carleton-forensic-librarians-and-reflective-practices/>.

^{iv} Association of College and Research Libraries, "ACRL Information Literacy Competency Standards for Higher Education" (2000),

<http://www.ala.org/ala/mgrps/divs/acrl/standards/informationliteracycompetency.cfm>.

^v Barbara Fister, "Teaching the Rhetorical Dimensions of Research," *Research Strategies* 11, no. 4 (1993): 214.

^{vi} Fister, "Teaching the Rhetorical Dimensions," 218.

^{vii} Association of College and Research Libraries, "Standards."

^{viii} Fister, "Teaching Research as a Social Act." *RQ*. 29 (1990): 506.

^{ix} Ibid.

^x Barbara Fister, "Information Literacy in a World That is Too Big to Know," *Peer-to-Peer Review -- Library Journal*, 2012. <http://lj.libraryjournal.com/2012/02/opinion/information-literacy-in-a-world-thats-too-big-to-know-peer-to-peer-review/>.

^{xi} See Barbara Fister, "The Research Processes of Undergraduate Students," *Journal of Academic Librarianship*, 18 no. 3 (1992).

^{xii} "We can encourage them by example to perceive research not as a mechanical gathering process, not as a mastery of technical access tools, but as a meaningful way of making new knowledge." Fister, "Teaching Research," 509.

^{xiii} "Rather than describe the search process as a matter of finding information -- which sounds like panning for solid nuggets of truth -- librarians should describe it as a way of tapping into a scholarly communication network." Fister, "Teaching the Rhetorical Dimensions," 214.

^{xiv} Gerald Graff, *Beyond the Culture Wars*, (New York: W. W. Norton & Company, 1992), 67-68.

^{xv} Carol Rutz and Jacquelyn Lauer-Glebov, “Assessment and Innovation: One Darn Thing Leads to Another,” *Assessing Writing* 10, no. 2 (2005): 88.

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