

Teaching Research as a Social Act: Collaborative Learning and the Library  
Barbara Fister *RQ* 29.4 (1990): 505-509.

From time to time I have helped students look for information to support a really fascinating and unique hypothesis only to have them conclude that they will have to change topics—they don't have enough sources. When we discuss it further, what often comes out is something along the lines of "if I could only find a few people who say the same thing I want to say I could prove my point. But no one is saying exactly what I am." Some students are reassured when I point out how much of the material they have already found informs and supports their thesis, and some are eventually persuaded that it's okay to construct an original idea; others insist it is only provable if they find it in a book, and change to something safer.

More often, of course, the trouble is that the students begin without any idea at all, only a general "topic," and they never develop one. They do not have the confidence to propose a question in their research and feel unequal to answering even those posed by teachers as a subject of investigation—unless they find the answer in a book.

These students have a very skewed idea of what research is. If described in William Perry's terms of cognitive and ethical development,<sup>1</sup> they are at the dualistic stage, and the information they seek in the library—their "sources" or "evidence"—is perceived as hard and fast truth. They do not see their role in the research process except as hunters and gatherers. And many times the way they are taught to do research promotes the notion that knowledge is something on the shelves, to be pulled together into a paper, not something that the students construct for themselves with the collaboration of the sources they find to inform their thesis.

However, I do not believe that these students are stuck at a dualistic stage of cognitive development. Given the right impetus they can work at a higher level, a level at which they participate in the construction of knowledge. If we teach research not as a gathering process but rather as a process of constructing knowledge they can become participants. And by teaching research as a collaborative process we can demonstrate that knowledge is not only constructed by the knower, it is socially constructed.

What exactly do I mean by the social construction of knowledge?<sup>2</sup> I am referring to the way in which communities work together to formulate their interpretations of the world, and the way in which those communities continually reformulate interpretations and together decide which interpretations are acceptable. Thomas Kuhn described how science is made by these communities.<sup>3</sup> Science is not, in his judgment, a series of discrete discoveries, but rather a system of laws and interpretations that changes as anomalies require reinterpretation and as the reinterpretations require a new set of laws and interpretations. Stanley Fish, in the realm of literary criticism, views the reading of a text as a construction that is influenced by the previous interpretations of other texts by a critical group of readers.<sup>4</sup> Knowledge, in other words, 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. And the varying interpretive communities go through a kind of constant mitosis and morphogenesis as new disciplines form and schools of thought within disciplines vie for legitimacy within the larger scholarly community.

To some extent we have begun to describe these communities to our students to make clear their different approaches toward knowledge, their different criteria for evidence and conventions for discourse. Writing programs in higher education have begun to recognize the fact that writing is not the same from discipline to discipline and have tried to teach students to cope with those differences, just as some teaching librarians have taught students that research strategies and conventions differ from one field to another. What we have too often failed to do, though, even while describing these different communities to our students, is to initiate them into the communities, as participating members. We need to give students the sense that they are members of a scholarly community themselves in order to have them work on the level that Perry calls "relativistic"—the level at which they perceive knowledge as something they must take a constructive role in.

Michael Oakshott has proposed a different metaphor for this social interaction that decides what constitutes knowledge he calls it a conversation, one that crosses boundaries of space and time and that functions both in public and internal discourse. He further asserts that "education, properly speaking, is an initiation into the skills and partnership of this conversation."<sup>5</sup> In a similar vein, Joan Bechtel proposed a few years ago that conversation could serve as a new paradigm for librarianship.<sup>6</sup> The student, then, comes not to the classroom or the library to extract information, but to join in conversation with the scholars they encounter there. It would be wonderful to see these students I have run into, frustrated and flummoxed by their search for certain knowledge, learn to debate with, to question, to be inspired by, to connect what they find with their own ideas, and ultimately to use the conversation to build something uniquely their own. We can help them see the library differently and, in the process, help them move from a dualistic stage of cognitive development to a relativistic one, by teaching research as a creative act of construction.

Looking at knowledge from this angle provides a startlingly new way of thinking about research. Rather than seeing the library as a machine-like system with rules of access, tools to master, and ultimately a pile of pieces of information to be assembled mechanically, the library can be seen as a living network, a network that the user joins. By portraying the library as a place where the scholarly community exchanges ideas, we can invite the student to join in and, once they have the sense that they are members themselves, they can do research as real scholars, interacting with

sources rather than merely gathering and reporting to them, entering the conversation in order to make their own contribution to it.

The best way I know of making this notion of the social construction of knowledge real to students is to have them work in groups, forming small interpretive communities of their own. Collaborative learning makes research a creative act of construction and demonstrates that knowledge is built, tested, and debated—it is not merely learned. Group inquiry gives the students a working model of a scholarly community in the microcosm of the classroom.

Researchers have asserted the pedagogical value of group learning for some time now.<sup>7</sup> In primary and secondary classrooms cooperative learning is a technique employed to teach students to work together rather than competitively, with the added benefits that students formerly left out—minorities, disabled, different one way or another—have been mainstreamed successfully. In higher education collaborative learning is a refinement of the notion that teamwork can work better than competition in the classroom. It is built on the assumption that knowledge is socially constructed and operates on the premise that students must recognize the mechanisms by which knowledge is formed and changed by the community and must play a constructive role in making knowledge within their own community for learning to be meaningful. Patricia Bizzell and Bruce Herzberg have gone further to define research as a social act, saying that this definition

allows us to revise the notion of research-as-recovery, for the recoverer in a community of knowledge is not merely rehashing old knowledge nor informing himself/herself about a randomly chosen topic—he/she is interpreting and reinterpreting community's knowledge in light of new needs and perspectives, and in so doing creating and disseminating new knowledge.<sup>8</sup>

In other words, students form an interpretive community and these students, if given an understanding of how the researcher uncovers and explores real questions and if given a collaborative setting in which to probe those questions socially, will learn how knowledge is made by making it themselves.

What is the nature of the collaborative setting? It is a place where the teacher does not have the last word, either imparted by lecture or coyly teased out of the students through a tennis-match "discussion" in which the teacher mediates each response. It is rather a classroom where the teacher sets up the learning situation and students do the learning as a group. It is a setting in which the questions raised must be complex enough to have no single right answer, but that require analysis, debate, negotiation, and consensus before an answer can be suggested. It is a setting where students are asked to do a lot, and are given the authority and the space to do it.

"Authority" is a key concept in collaborative learning. In the traditional classroom authority belongs to the teacher. Research, in this classroom, consists of locating authority in the library by finding written texts and reporting on them. This pedagogy is designed to demonstrate to the teacher that knowledge—though not the means of creating it—has been successfully transferred to the student. In the collaborative classroom the teacher gives authority to the students, sets up situations in which they can pose and propose responses to real questions, suggests how such conversations could proceed, and then leaves the students to it. Research in this classroom requires sharing information, building on one another's ideas, and using written evidence as added voices in an extended conversation. It is demanding, both of students and teachers, but can lead to genuine inquiry and a grasp of the process of inquiry that makes the effort well worth it.

I think that collaborative learning, because it grapples directly with questions of authority and the formation of knowledge, could have special meaning for students learning to do library research. Collaborative learning can be used to demonstrate the structure of the literatures of different disciplines by giving students a deeper understanding of the social contexts in which these literatures are generated. It can help students understand how citations serve as a network among scholars, both giving credit to the contributors of ideas and as a web that makes connections between people and ideas. It can help students realize the necessity of approaching research with an idea in mind rather than just a general topic, and it can help them understand how important it is to analyze critically and question-the materials they find.

I make use of group activities among students whenever possible, even when I only have an hour to do a guest lecture for a class. In one hour it is impossible to form the kind of interpretive community that would be ideal, but I do group students to practice tasks relevant to the search projects they are assigned for the course. Often I will start by having the entire class help me construct an appropriate model of the research process. They give me steps in the process (check the catalog, look in an index, ask the teacher for advice, and so on) and then together, and with the professor's input, we arrange those steps into a process. From the start, then, they are participating in constructing something together.

The session is not all theory, however. I will never forget the way a chemistry professor expressed his frustration with a chemistry literature class taught by a librarian at a different institution. After a semester of theory, one of his students still could not find an article in the journal of the American Chemical Society because she did not know the library shelved it under "American Chemical Society. Journal." Because I do think students have the right to learn nuts-and-bolts skills as well as concepts, I have students go through the same steps we have discussed on a theoretical level-and they work in groups. Rather than simply hand out a bibliography of reference works, then, I might have small groups examine and report to the class on representative examples of

helpful reference books; if they are each given a list of titles with plenty of space left between entries for notes, they can create their own annotations. If the class is small enough I will design an exercise that will ask students (again working in groups) to search for items relevant to their class assignments on the online catalog. (I initially had students work in groups so they could get hands-on experience without occupying all of our terminals, but quickly found that students learn more working together than they do when working alone.) I sometimes have groups work on searching out items found on a bibliography or have them use several indexes to search a single subject and compare coverage in the different indexes.

Whatever the exercise, I generally begin with fairly straightforward questions but progress to ones that do not have a single right answer. (Given this problem, which course of action would be most fruitful? Given that circumstance how would you proceed?) These provide a context for discussion both within the small groups and among the class as a whole. And by raising questions that do not have a definite right or wrong answer students do not get the impression that library research is simply a question of learning the rules.

Finally, I do not leave them with simply the ability to gather, I try to include some kind of exercise that will have them deal with gathered material. Frequently I give each working group a set of articles or other materials on the same topic and have each group rate them for appropriateness as sources for a paper in their class. This engenders a lot of discussion, usually giving the teacher a chance to discuss in very specific terms what she or he considers an appropriate source. Freshmen are sometimes surprised to learn that Reader's Digest is not high on many professors' lists as a source of information—only they usually do not find out until it's too late.

For a more advanced class this exercise helps students become more familiar with the literature of a given discipline. It would be appropriate, for instance, to have groups in a senior seminar debate the relative merits of the major journals in their field by comparing articles from several on the same topic. They will be sophisticated enough to realize that Reader's Digest is not considered a scholarly source of information, but they may not realize how different and pronounced are the stances of scholarly journals. It is often news to them that certain journals contain review articles, others are best for keeping up with new developments, and some are pitched more to various sub-fields within the discipline—and that some, quite frankly, are more respected than others. Librarians often shy away from making qualitative judgments for their users and leave such analysis to the experts, but in this case the students are not experts and the professors rarely think to pass along that expertise. By providing the forum to examine publications critically we can demonstrate that such critical analysis is a natural and necessary part of the research process. And if the teacher is present at the session, often sitting among the students, she or he can contribute to the discussion, not as an expert handing down the truth but as a community member who simply is more

experienced with such things. Faculty response to this kind of exercise has so far been uniformly enthusiastic.

It seems to me the library is a natural place to use collaborative learning to demonstrate the ways in which knowledge is socially constructed and, in the process, to make them better researchers. 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. By working in groups students construct knowledge, if only on a basic level, in the same way that all scholars do, by sharing ideas and building interpretations. By posing questions that do not have simple right or wrong answers we can give students a setting within which to work collaboratively at a higher cognitive level. By providing a collaborative setting for learning we can give students a new awareness of how knowledge is a network of relationships, always changing and always interdependent, and can invite them to become a part of it.

#### REFERENCES AND NOTES

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4. Stanley Fish, *Is There a Text in this Class? The Authority of Interpretive Communities* (Cambridge, Mass: Harvard, 1980).
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6. Joan Bechtel, "Conversation: A New Paradigm for Librarianship," *College and Research Libraries* 47:219-24 (1986).
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8. Patricia Bizzell and Bruce Herzberg, "Research as a Social Act," *The Clearing House* 60:303-6 (1987).