THE ART OF COLLABORATIVE LEARNING

MAKING THE MOST OF KNOWLEDGEABLE PEERS

By challenging the traditional view of the teacher’s authority, collaborative learning helps prepare students for effective interdependence in an increasingly collaborative world.

Late last spring, a colleague of mine at a university out West—I’ll call him Jim—wrote and asked if I would read a manuscript of his. He felt he was finally ready for someone to take a close look at it.

Jim’s an old friend. I dashed off a note saying of course I’d read it, with pleasure. At the beginning of June, which luckily for both of us was right at the end of exams, I got a weighty package in the mail—279 pages plus notes. I read it, scribbled clouds of barely decipherable marginal notes, and drafted a six-page letter to Jim congratulating him on first rate work, suggesting a few changes and mentioning one or two issues he might think through a bit further.

He phoned to thank me when he got the letter and asked some questions. We then spent an hour or so discussing these questions and supporting AT&T in the manner to which it has become accustomed.

Before the snow blows, I expect I shall see some of Jim’s manuscript again. I doubt that he needs another reading, but I’m happy to do it if he wants me to. I learned a lot reading his book. We both learned something talking out the few stickier points in it. Anyway, I owe him one. He did the same for me five years ago, when I was thrashing about in the terminal throes of the book I was finishing. His name appeared prominently on my acknowledgements page; I suppose mine will appear prominently on his.

The experience I have just described is familiar to most readers of Change. To enjoy such an experience, you don’t have to write a book. All you have to do is work with an intelligent, compatible committee on an interesting grant proposal or a new development plan for your college. You know how it can go. Joe gets an idea and sketches it out.
in a couple of pages. Mary says, hey, wait a minute—that makes me think of . . . Then Fred says, but look, if we change this or add that. . . . In the end everyone, with a little help from his and her friends, exceeds what anyone could possibly have learned or accomplished alone.

If I'm right that this kind of experience is familiar, then no one reading this article is a stranger to collaborative learning, however strange the term may be. Jim and I are peers. When Jim asked me to read his work and I agreed, we became an autonomous collaborative learning group of two with the task of revising and developing the written product of one of its members.

The term "collaborative learning" has become increasingly familiar today because it is applied not only to voluntary associations such as my work with Jim, but also to teaching that tries to imitate that experience in college and university classrooms. Teachers of writing at institutions throughout the country are discovering that teaching students in a variety of ways to work productively on their writing demonstrably improves students' work.

And it is not just writing teachers who are interested. Clark Bouton and Russell Y. Clark's useful book, Learning in Groups, reports on the way collaborative learning is being applied in subjects from business management to medicine to math. And there is at least one physics lab manual in the country (at Montana State University) that presents an extended rationale of collaborative learning on its front cover.

Perhaps more to the point for some of us, at least one trenchant article exists that explains collaborative learning for the benefit of faculty and administrators who find themselves evaluating teachers. Harvey S. Wiener's "Collaborative Learning in the Classroom: A Guide to Evaluation" (College English 48) suggests ways to tell when teachers are using collaborative learning most effectively. It is also, therefore, a useful guide to effective use of collaborative learning for teachers.

Admittedly, there is not much research to date on the effects of collaborative learning in college and university education. But recent work on its effect in primary and secondary schools is relevant. Surveys of research by David Johnson (Psychological Bulletin 89) and by Shlomo Sharan (Review of Educational Research 50) tend to support the experience of college and university instructors who have used collaborative learning. Students learn better through non-competitive collaborative group work than in classrooms that are highly individualized and competitive. Robert E. Slavin's Cooperative Learning reports similar results.

Interest in collaborative learning in colleges and schools is motivated in part by these results. It is motivated also by the observation that the rest of the world now works collaboratively almost as a universal principal. Japanese "Theory-Z" quality circles on the factory floor aside, there is hardly a bank, legal firm, or industrial management team that strives—much less dares—to proceed in the old-fashioned individualistic manner. Physicians are increasingly collaborative, too, although they prefer to call it "consultation." At Harvard Medical School, 25 percent of each entering class currently studies in collaborative groups, bypassing systematic lecture courses almost entirely.

Interest in collaborative learning is motivated also by recent challenges to our understanding of what knowledge is. This challenge is being felt throughout the academic disciplines. That is, collaborative learning is related to the social constructionist views promulgated by, among others, the philosopher Richard Rorty (Philosophy and the Mirror of Nature) and the anthropologist Clifford Geertz. These writers say (as Geertz puts it in his recent book, Local Knowledge) that "the way we think now" differs in essential ways from the way we thought in the past. Social constructionists tend to assume that knowledge is a social construct and that, as the historian of science Thomas Kuhn has put it, all knowledge, including scientific knowledge, "is intrinsically the common property of a group or else nothing at all." (See Bruffee, "Social Construction, Language, and the Authority of Knowledge: A Bibliographical Essay," College English, vol. 48, December 1986, pp. 773-790.)

Collaborative learning is related to these conceptual changes by virtue of the fact that it assumes learning occurs among persons rather than between a person and things. It even turns out that some teachers who are using collaborative learning have found that social constructionist assumptions enhance their understanding of what they are trying to do and give them a better chance of doing it well.

So, although the term "collaborative learning" may be unfamiliar for some, collaborative learning itself is not new. Our understanding of its importance to higher education began in the late 1950s with Theodore Newcomb's work on peer group influence among college students (College Peer Groups, The American College, ed. Nevitt Sanford) and with M. L. J. Abercrombie's research on educating medical students at University Hospital, University of London. Newcomb demonstrated that peer group influence is a powerful but wasted resource in higher education. Abercrombie's book, The

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Anatomy of Judgement, showed medical students learning the key element in successful medical practice, diagnosis—that is, medical judgment—more quickly and accurately when they worked collaboratively in small groups than when they worked individually.

Abercrombie began her important study by observing the scene that most of us think is typical of medical education: the group of medical students with a teaching physician gathered around a ward bed to diagnose a patient. Then she made a slight but crucial change in the way that such a scene usually played out. Instead of asking each individual medical student in the group to diagnose the patient on his or her own, Abercrombie asked the whole group to examine the patient together, discuss the case as a group, and arrive at a consensus—a single diagnosis agreed to by all.

When she did this, what she found was that students who learned diagnosis collaboratively in this way acquired better medical judgment faster than individual students working alone.

With the exception of small, recently instituted experimental programs at the medical schools of the University of New Mexico and Harvard University, Abercrombie’s conclusion has had little impact as yet on medical school faculties anywhere, in Britain or America. But when I read the book in 1972, a dozen years or so after it was published, her conclusion had an immediate and, I believe, positive impact on my thinking about university instruction and, eventually, on the role I see myself in as a classroom instructor.

The aspect of Abercrombie’s book that I found most illuminating was her evidence that learning diagnostic judgment is not an individual process but a social one. Learning judgment, she saw, patently occurs on an axis drawn not between individuals and things, but among people. But in making this observation, she had to acknowledge that there is something wrong with our normal cognitive assumptions about the nature of knowledge. Cognitive assumptions, she says, disregard “the biological fact that [the human being] . . . is a social animal.” “How [do] human relationships,” that is, relations among persons, she asked, “influence the receipt of information about apparently non-personal events?”

In trying to answer this question, Abercrombie makes the brilliant observation that, in general, people learn judgment best in groups; she infers from this observation that we learn judgment well in groups because we tend to talk each other out of our unshared biases and presuppositions. And in passing, she drops an invaluable hint: The social process of learning judgment that she has observed seems to have something to do with language and with “interpretation.”

These three principles underlie the practice of collaborative learning. One thing that college and university instructors most hope to do through collaborative learning is increase their students' ability to exercise judgment within the teacher’s field of expertise, whatever that field is.

But there is today another thing that instructors hope to do through collaborative learning. They hope to raise their students’ level of social maturity as exercised in their intellectual lives. In doing so, instructors are trying to prepare their students for the “real world.” They are preparing them to enter law, medicine, architecture, banking, engineering, research science—any field, in fact, that depends on effective interdependence and consultation for excellence.

This discovery that excellent undergraduate education also depends on effective interdependence and consultation awaited the work of William Perry. Perry’s book, Forms of Intellectual and Ethical Development in the College Years, has made an indelible impression on the thinking of many college and university instructors, but not in every instance for the right reason. Like Abercrombie, Perry makes cognitive assumptions about the nature of knowledge, and most readers to date have found his developmental “scheme” of greatest interest.

Yet Perry himself is not entirely comfortable with the cognitive assumptions underlying his scheme. He has read Thomas Kuhn’s The Structure of Scientific Revolutions, and he acknowledges that our current view that “knowledge is contextual and relative” is only the most recent phase in a tendency toward the assimilation of cultural diversity that needs for its fulfillment “a new social mind.”

As a result, again like Abercrombie, Perry implies that the central educational issues today hinge on social relations, not on cognitive ones: relations among persons, not relations between persons and things. Learning as we must understand it today, he concludes, does not involve people’s assimilation of knowledge, it involves people’s assimilation into communities of knowledgeable peers. Liberal education today must be regarded as a process of leaving one community of knowledgeable peers and joining another.

Perry’s discomfort with this conclusion when it comes to educational practice, however, suggests that he himself may never have quite recognized the full implications of his study. He denies that the creating of communities of knowledgeable peers among students is a legitimate part of rationally and consciously organized university education. He prefers to rely on “spontaneity” to organize knowledge communities among students. He politely dismisses as unprofessional attempts to foster communities among students by using “particular proce-
dures or rituals.” Students must independently manage their “identification with the college community” as they go about “divorcing themselves” from the communities they have left behind.

Fortunately, Perry quotes liberally from his raw material—statements made by a sizeable number of informants among the Harvard College undergraduate body. And these undergraduates are not at all as ambivalent as Perry seems to be about regarding learning as a social process. Many of them see their undergraduate education quite explicitly as a difficult, perhaps even treacherous passage from one homogeneous community—the one they came from—to another homogeneous community—the college community of their student peers.

This “marrying into” the new community of students at college is clearly, as the students describe it, an informal, autonomous variety of collaborative learning that challenges students to define their individuality not as starkly as not at all as lonesomely independent, but as interdependent members of their new undergraduate community.

The more formal varieties of collaborative learning organized by instructors in classrooms imitate this informal type. And they imitate the “real world” interdependence and consultation that goes on in much business and professional work, including the work my friend Jim and I did together on his book and mine. In classroom collaborative learning, typically, students organized by the teacher into small groups discuss a topic proposed by the teacher with the purpose of arriving at consensus, much as Abercrombie’s medical students practiced diagnosis on patients chosen by the teaching physician. Or students may edit each other’s writing, or tutor each other, or develop and carry through assigned (or group-designed and teacher-approved) projects together.

But this classroom work, however collaborative, differs in striking ways from autonomous, “real world” interdependence. Classroom collaborative learning is inevitably no more than semi-autonomous, because students don’t usually organize their own groups or choose their own tasks, as Jim and I did. In most cases, teachers design and structure students’ work for maximum learning as part of a course of study. And teachers evaluate the work when it is completed, comparing it with professional standards and the work other students have done, both currently and in the past.

Now, to be accurate to a fault, of course, Jim and I were not an absolutely autonomous group either, any more than any interdependent consultative professional work is. Like most independently organized groups—such as political clubs, golf foresomes, and sand-lot baseball teams—he and I organized our working group on our own initiative for our own purposes, but we played the game, so to speak, by a set of rules we held in common with many other such groups.

The mores, conventions, values, and goals of our professional organization (in our case, the Modern Language Association), of that motley class of human beings called “university faculty,” of promotion and tenure committees whose values are probably similar at Jim’s college and mine, and so on—these large institutional communities determine to some extent what Jim and I did and said, how we did it and said it, and in point of fact, that we were doing it and saying it at all. Institutional motives and constraints always apply when people prepare themselves to take a hand in what is going on in the prevailing economic, legal, and educational world.

Formed within the immediate confines of a college’s institutional structure, however, working groups in a collaborative learning classroom are clearly semi-autonomous. Like the New York Yankees, a Boy Scout troupe, or the United States Supreme Court, their collaboration is organized by a larger institutional community and with its sanction. Group members abide by the conventions, mores, values, and goals of that institution. The autonomy of classroom groups derives from the fact that once the tasks are set and the groups organized, instructors step back, leaving peers to work in groups or pairs to organize, govern, and pace their work by themselves and to negotiate its outcome.

That this partial autonomy is the key to the impact of collaborative learning is evident when we compare semi-autonomous work with work that is entirely non-autonomous. The work of non-autonomous groups cannot reasonably be called collaborative learning at all. Like life in a Trappist monastery or an army platoon, in which activity is rigorously controlled, classroom group work is non-autonomous whenever instructors do not step back from the groups of working students, but rather “sit in” on them or “hover,” predetermined the outcome of the work and maintaining the students’ direct dependency on the teacher’s presence, resources, and expertise.

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Degree of autonomy is the key to collaborative learning because the issue that collaborative learning addresses is the way authority is distributed and experienced in college and university classrooms. It would be disingenuous to evade the fact that collaborative learning challenges our traditional view of the instructor’s authority in a classroom and the way that authority is exercised.

This issue is much too complex to go into here. But perhaps we can get a provocative glimpse of the possible rewards that might accrue from pursuing it further if we take a brief look at the nature and source of the authority of
knowledge in any autonomous working group. Return for a moment to my friend Jim and me at work together on his manuscript. What was the source of the authority exercised in that work? Where was it placed and how did it get there? Not to put too fine a point on it, where did I get the authority to comment on his writing?

The answer, of course, is that Jim and I together generated the authority in our group of two. And to occur at all in this way, that generation of authority required certain conditions. For starters, we like each other. We have read each other's stuff. We respect each other's intelligence. We have similar interests. We have worked together professionally in other circumstances. In short, we were willing to collaborate.

It was under these conditions that Jim granted me authority over his work by asking me to read it. The authority of my knowledge with regard to his manuscript originated primarily with him. I mean "primarily" here in the strongest possible sense. My authority began with his request, and the principal claim to the validity of my authority resulted from that request.

Furthermore, and equally important, when I responded positively, I agreed to take on and assert authority relative to him and his work. In that sense, the authority of my knowledge with regard to his manuscript originated primarily not only with his granting me the authority, but also with my accepting it, both, of course, in a context of friendliness and good grace.

Willingness to grant authority, willingness to take on and exercise authority, and a context of friendliness and good grace are the three ingredients essential to successful autonomous collaboration. If any of these three are missing or flags, collaboration fails. These three ingredients are essential also to successful semi-autonomous collaboration, such as classroom collaborative learning.

But when instructors use semi-autonomous groups in classes, the stark reality is that willingness to grant authority, willingness to take it on and exercise it, and a context of friendliness and good grace are severely compromised. Classroom authority does not necessarily begin—as Jim's and mine began—with the participants' (that is, the students') willing consent to grant authority and exercise it. In a classroom, authority still begins in most cases with the representative or agent of the institution, the instructor. Furthermore, except in highly unusual classrooms, most students start the semester as relative strangers. They do not begin, as Jim and I did, as friends. It is not surprising that, as a result, in many classrooms students may at first be wary and not overly eager to collaborate.

That is, collaborative learning has to begin in most cases with an attempt to re-acclimatize students. Given most students' almost exclusively traditional experience of classroom authority, they have to learn, sometimes against considerable resistance, to grant authority to a peer ("What right has he got to...?"), instead of the teacher. And students have to learn to take on the authority granted by a peer ("What right have I got to...?"), and to exercise that authority responsibly and helpfully in the interest of a peer.

Skillfully organized, collaborative learning can itself re-acclimatize students in this way. Once the task is set and the groups organized, collaborative learning places students working in groups on their own to interpret the task and invent or adapt a language and means to get the work done. When the instructor is absent, the chain of hierarchical institutional authority is for the moment broken. Students are free to revert to the collaborative peership that they are quite used to exercising in other kinds of extracurricular activities from which faculty are usually absent.

Of course, students do not always exercise effective collaborative peership in classrooms, especially at first, because they have all so thoroughly internalized our long-prevailing academic prohibitions against it. And it need hardly be added that non-autonomous groups, in which the instructor insists on remaining in direct authority even after the task is set and the groups organized, cannot re-acclimatize students in these ways, because the chain of hierarchical institutional authority is never broken.

Because we usually identify the authority of knowledge in a classroom with the instructor's authority, the brief hiatus in the hierarchical chain of authority in the classroom is at the heart of collaborative learning in the long run also challenges, willy-nilly, our traditional view of the nature and source of the knowledge itself. Collaborative learning tends, that is, to take its toll on the cognitive understanding of knowledge that most of us assume unquestioningly. Teachers and students alike may find themselves asking the sorts of questions Abercrombie asked. How can knowledge gained through a social process have a source that is not itself also social?

This is another aspect of collaborative learning too complex to go into here. But raising it momentarily gives us a hint about why collaborative learning may empower students to work more successfully beyond the confines of college or university classrooms. Collaborative learning calls on levels of ingenuity and inventiveness that many students never knew they had. And it teaches effective independence in an increasingly collaborative world that today requires greater flexibility and adaptability to change than ever before.