10

Using Small Groups to Coach Thinking and Teach Disciplinary Argument

This chapter proposes that one of the best ways to coach critical thinking—and to promote the kind of productive talk that leads to thoughtful and elaborated writing—is a goal-directed use of small groups. Because the small group tasks recommended here usually require groups to produce a piece of writing—a brainstormed list, a thesis statement, a paragraph to be read aloud, an outline for an argument—these collaborative activities teach students how to make disciplinary arguments.

The suggestions in this chapter represent only one of many ways to use small groups in the classroom. MacGregor (1990) has identified at least six different root systems of the many intertwining vines that compose the collaborative learning movement: the experiential learning practices of Dewey, Piaget, and Vygotsky; the "cooperative learning" movement associated with David Johnson and Roger Johnson; the learning community movement, in which interdisciplinary teams of teachers become colearners with students in pursuing a many-faceted, multidisciplinary problem; the various disciplinary approaches to small groups, such as Kenneth Bruffee's work in rhetoric and composition or Uri Treisman's work with study groups in mathematics; and such problem-centered approaches as Harvard's case method. In addition to MacGregor's list, we should also add problem-based learning, often associated with the University of Delaware (Duch, Gron, and Allen, 2001).

The fruit from all these intertwining vines has been harvested by Barkley, Cross, and Major in their important synthesis *Collaborative Learning Techniques: A Handbook for College Faculty* (2005). This compendium of collaborative learning techniques (which they call CoLTs) provides a wealth of strategies for using small groups, ranging from the quick classroom use of unstructured "buzz groups" to elaborately planned use of structured teams whose members work cooperatively over multiple class sessions in purposeful stages designed by the instructor (see, for example, their discussion of "jigsaw," pp. 156–162).

The approach to collaborative learning taken in this chapter focuses on one of these many ways of using small groups—a way that I have found is particularly adept at integrating critical thinking, talking, and writing to help students learn to use the lens of a given discipline to ask questions and produce arguments. This approach integrates two pedagogies that have long influenced my own teaching: George Hillocks's "environmental mode" of teaching (1986, pp. 113–131) and Kenneth Bruffee's methods of collaborative learning using "consensus groups" (1983, 1984, 1993). Teachers who already use small groups undoubtedly will have developed methods and approaches somewhat different from those I describe here, but they may find this approach a useful addition to their repertoire. Other teachers may not have tried small groups, preferring to use class time for lecturing, leading whole-class discussions, or conducting other activities that involve the whole class rather than autonomous small groups. My goal in this chapter is to suggest small groups as another strategy for these teachers to consider.

The method I describe here might best be characterized as a goal-oriented use of small groups, aimed at giving students supervised practice in disciplinary thinking under the tutelage of the teacher as coach. This approach differs, for example, from what Barkley, Cross, and Major call "buzz groups," in which students exchange ideas in small groups without having to achieve consensus or give formal reports, or what Brookfield and Preskill (2005) call "circular response," in which each speaker begins by summarizing the views of a previous speaker in order to promote attentive listening and mutual respect. The method I describe has the specific goal of teaching question-asking and argument. It has a consistent and recurring rhythm:

1. The teacher presents a disciplinary problem requiring critical thinking (resulting in a claim with argument rather than a "right answer").
2. Students work together in small groups to reach consensus on a "best solution" to the problem.

3. In a plenary session, group recorders present their group's solutions and arguments.
4. As the reports unfold, the teacher coaches students' performance by pointing out strengths and weaknesses in the arguments, showing how the alternative claims emerging from groups often parallel on-going disciplinary debates, and otherwise offering constructive critiques.
5. At the end, the teacher may also explain how this problem would be (or has been) approached by experts.

The Advantages of a Goal-Oriented Use of Small Groups

According to Bruffee (1993), the pedagogical effectiveness of the consensus-group method was demonstrated in the late 1950s by Abercrombie's research in educating medical students at University Hospital in London. Abercrombie (1960) found that her students learned diagnostic skills more powerfully if they were placed in independent groups to address a diagnostic problem. The use of small groups did not lead simply to a pooling of knowledge, as if each student held one piece of the solution. Rather, collaborative learning promoted argumentation and consensus building: each student had to support a hypothesis with reasons and evidence in an attempt to sway the others. The improved thinking grew out of the practice of formulating hypotheses, arguing for their adequacy, and seeking a reasoned consensus that all group members could support.

The methods used by Abercrombie in medical training can be extended to classrooms in any discipline. By presenting small groups with critical thinking problems to wrestle with, teachers can create an environment of productive talk that leads to greatly enriched inquiry, analysis, and argument. The goal of each task is not to have small groups come up with the "right answer" but to come up with reasonable, supported answers that they will be asked to defend later in front of the whole class. On occasion, these answers will surprise the teacher with their sophistication and cogency; in my own field of literature, I often find that my view of a novel or a poem has been reshaped by the arguments of my students. Truly, the purported expert can become a colearner in such a setting.

There are several advantages of this goal-directed way of using small groups. First, this approach is particularly effective at helping students learn specific thinking strategies. Hillocks (1986) and Hillocks, Kahn, and Johannessen (1983) have shown that having students work independently in small groups on purposefully designed and sequenced tasks (what these

researchers call the "environmental mode" of teaching) produces significantly higher levels of thinking—as measured by the degree of precision and elaboration in written arguments—than the lecture method, whole-class discussion methods, or nondirective group work.

A second advantage is that the method described here can be adapted to large lecture classes, even in lecture halls where students have to turn around in their seats to form groups. Whereas it is nearly impossible to lead a whole-class discussion in a room of two hundred students, it is entirely possible in a large class to give students a critical thinking task, have students work with their neighbors for ten minutes or so, and then ask representative groups to present and justify their solutions. I have personally made extensive use of small groups in classes of seventy-five students (students sat in five-person groups in a large open room), and I have observed group work conducted in large lecture halls. Thus this use of small groups can bring a powerful dimension of critical thinking and active learning to a lecture class. If a lecture transmits understanding of disciplinary subject matter, goal-oriented small groups can help students practice using this subject matter on problems requiring argument. Lectures and small groups together can help students learn both the conceptual and procedural knowledge of the discipline—both the discipline's subject matter knowledge and the discipline's ways of conducting inquiry and making arguments. (For more on using active learning methods in lecture settings, see Davis, 2009, and Bligh, 2000, pp. 251–290.)

Sequence of Activities for Using Small Groups During a Class Period

To work a small group activity smoothly into a class period, teachers might consider the following approach, which combines a small group session with a subsequent plenary session.

Designing the Task

A good small group task, like a good writing assignment, needs to be carefully designed. Good tasks present open-ended critical thinking problems that require "best solutions" justified with supporting arguments. Typical tasks ask students to reach consensus on a solution to a disciplinary problem; when consensus is impossible, students can also "agree to disagree," in which case final group reports will include majority and minority views with clarifying explanations of the causes of disagreement.

Many disciplinary problems can be used interchangeably either as small group tasks or as formal or informal writing assignments (for a heuristic for designing tasks, see Chapter Eight). Small group tasks can also be used in conjunction with a formal writing assignment to help students brainstorm ideas for an upcoming essay, discover and rehearse arguments, or critique rough drafts. In these cases, the small group tasks promote exploration of ideas needed for the essay. In all cases, a good small group task promotes controversy, has a product, can be accomplished in the specified time limit, and is directed toward a learning goal for the course. Further discussion of the design of small group tasks appears later in this chapter.

Forming Groups

There are many ways to form groups and much debate about the various benefits of permanent versus ad hoc groups, randomly assigned versus preplanned groups, homogenous versus heterogeneous groups, and so forth. My default method is to set up randomly assigned five-person groups, which I determine using a shuffled deck of 3x5 cards (the size of the deck determined by the size of the class); each card has a group number with one card in each group labeled "recorder." After I pass out the cards, I ask the "ones" to go to one part of the room, the "twos" to another part, and so on. In lecture settings, an alternative is having students in odd-numbered rows turn around to speak with classmates in even-numbered rows, forming small groups as best they can and choosing their own recorder.

In each group, the recorder's job is to take notes and to report the group's consensus solution at the plenary session. Therefore the recorder has to watch the clock and keep the group on task, directing the discussion toward the ideas he or she will need to make a good report. In essence, the recorder is both leader and secretary. (See the further discussion of forming groups and assigning roles later in this chapter.)

Assigning the Task

If possible, the task should be given to students in a handout or on a PowerPoint slide. The task should specify the question or problem to be addressed, the required group product, and the time limit. Times specified can be anywhere from a few minutes to a full class hour; however, if teachers want to integrate a complete cycle of activities into a fifty-minute class, they typically limit the small group activity to ten to fifteen minutes, thereby allowing time for group reporting and critiquing in a plenary session. To keep conversations focused and on task, groups should always be responsible for creating a product—usually a written product such as a thesis statement, list of pros and cons, idea map, outline of an argument, a drawing, a graph, or a group-composed paragraph. The point here is that

conversations are generally more focused, elaborated, and sustained when each group has to "go public" with a product. For example, consider the differences between the following less effective and more effective tasks:

Less Effective

As a group, discuss your reaction to Plato's *Crito.*

More Effective

As a group, propose a list of three significant questions you would like to have the teacher address or the class discuss regarding Plato's *Crito.* Your initial list (which you will hand in to the instructor) should include at least six questions. Then reach consensus on what you consider your three best questions. Your recorder will write these questions on the board and will explain to the class why your group considers them pertinent, interesting, and significant. Time: 15 minutes.

Teachers might consider collecting and critiquing the written products during the first weeks of class as a way of signaling the importance they attach to group work.

Completing the Task

Once students understand the task, the teacher lets the students work on the problem independently. Some teachers believe it is best to leave the room entirely and not to return until it is time for the plenary session. This strategy signals to students their autonomy from the instructor and their responsibility for forming their own knowledge communities. Other teachers like to wander from group to group as a resource person or to eavesdrop from a corner of the room. What often surprises teachers is the amount of noise generated by the groups. My own experience suggests that despite the noise, it is best to keep all groups in the classroom rather than to allow some to go into the hall or into separate rooms. The loud hum in the room actually stimulates participation and draws groups closer together in tight circles.

Group Reporting

When the allotted time is up, recorders from each group report their group's solution to the class as a whole. (In large classes, the teacher usually asks only a representative sample of groups to report.) Although teachers vary in how they ask students to report, what works best for me is to insist on formal reports from groups: the recorder has to stand and present the group's consensus in an impromptu speech, thus practicing the kind of

speaking skills that will be demanded on the job after college. The reports are not supposed to be "summaries of what the group talked about"—like minutes of a meeting—but actual persuasive presentations of the group's required product. (If group cannot reach consensus, I allow minority reports.) By putting pressure on recorders to make effective public speeches, I know the recorders will put pressure on groups to stay on task.

Plenary Discussion and Critiquing of Group Reports

As groups report, the teacher is challenged by the need to respond productively to group solutions, which are often confounding in their assortment of strong and weak ideas. Disagreement among the groups provides a wonderful occasion to stimulate further whole-class discussion of the problem. The instructor must help the class synthesize group reports by pointing out strengths and weaknesses while often praising and legitimizing views that are different from his or her own. The students are especially eager to hear the teacher's solution to the collaborative task. In giving it, the teacher not only represents the expert views of the disciplinary community (or one of the expert views) but becomes a powerful role model for the kind of arguing strategies that the discipline uses and values. But the teacher is now more vulnerable, more at risk, than in a lecture setting. After working independently, students are more confident in their own views. They become less passive, more active in raising questions, more challenging as audiences. For me, the class discussions that follow small group work are among the most stimulating, challenging, and satisfying of all my teaching experiences.

Relating the Task to the Learning Sequence

The best small group tasks are clearly related to some ongoing purpose that the teacher should make plain to students. Perhaps the task prepares students for a lecture that follows or focuses attention on key points or controversies in material just covered. Or perhaps the task requires students to sum up and synthesize readings and lectures or to become engaged in a new problem about to be explored in the course. Frequently, also, the task may be integrated with an upcoming formal writing assignment and allows students to talk through their ideas prior to writing. Because many students expect teachers to lecture, they will better accept collaborative work as "serious learning" if the teacher explains how the task relates to course goals. (For an extended example of a history teacher who successfully integrates small group tasks, writing assignments, and lectures into a semester-long course design, see "Arguing and Debating: Breihan's History Course" in Walvoord and McCarthy, 1990.)

Suggestions for Designing Productive Small Group Tasks

In my own approach to collaborative learning, I like to identify both a disciplinary content goal and a thinking or arguing goal for each task. Thus, for the *Crito* task described earlier, the teacher's content goal is to stimulate careful reading of *Crito,* to engage students in independent discussion of the text, and to see if students raise the same kinds of questions that have intrigued generations of commentators. (They often do.) The thinking skills goal is to increase students' ability to pose self-sponsored questions about a text and to determine what makes some questions better than others.

I find that in designing collaborative tasks, I rely extensively on the following strategies.

The Thesis-Proposing Strategy

In this approach, the instructor gives students a disciplinary problem framed as an open-ended question to which students must propose and justify a "best solution" answer. To keep students on task, I often ask groups to summarize their consensus solution in a one-sentence "thesis statement," which the recorder writes on a whiteboard, places on newsprint, or projects on a screen. Recorders then present justifying arguments supporting the thesis when they make their reports. If groups cannot reach consensus, I ask for a majority thesis and at least one minority thesis.

According to Fullinwider, three theories are frequently used to defend preferential hiring for both African Americans and women: compensatory justice, social utility, and distributive justice. Using one or more of these theories, address this question: To what extent is the legislature's proposed veterans preference law just? (Your thesis should summarize your argument.)

. . .

We have examined four alternative approaches to the design of a digital data-recording device for Company X's portable heart defibrillator. Which solution should be chosen and why?

. . .

In the text we've just read, the author quotes Peter Berger, an important American sociologist, to the effect that we are in "bondage" to society. Elsewhere that same author says, "In sum, society is the wall of our imprisonment in history." Your friend, I. M. Punker, rubs his hand through his orange hair, touches his nose ring, and says, "Nonsense. I am my own person, free to do whatever I want. I have already broken through the bondage of society." Which of these two views of human freedom does your group most agree with—Berger's or Punker's? Defend your choice with an argument that you must summarize in a thesis statement.

. . .

In what way, if any, is Jackson Pollock's *Autumn Rhythm* different from the results of a monkey throwing paint at a canvas? Your thesis should include one or more "because clauses" specifying your supporting reasons.

The Template Strategy

Using this strategy, the instructor gives students a template or mapping frame that forecasts the shape of a short essay but not the content. Students have to create content-specific point sentences to head each forecasted section and develop a supporting argument for each one. Often the instructor can include in the task a blank tree diagram or an outline indicating the slots that students' ideas must fit. This task requires not only that students generate ideas but also that they place these ideas within a clear structure. (For further examples of template questions, see Chapter Six, pages 141–142 and Chapter Eight, page 155.)

Based on the data about the "Acme Brewing Company" that you studied last night, what do you now think are the causes for this company's precipitous loss of market share? Place your solution into a frame that begins with the following sentence: "There are X [indicate a number] main causes for Acme's loss of market share. First, [state the cause and support it] . . . Second, . . . Third, . . . " Continue with as many causes as your group determines.

. . .

[Instructor provides a table giving chronological data about housing starts.] Your task is to create a graph telling the housing start story and then to write a paragraph that incorporates your graph. Begin your paragraph with this sentence: "The collapse of the economy in 2009 can be shown by the precipitous drop in housing starts beginning in. . . . " Your paragraph must include a graph that tells the housing-start story. Be sure to label the graph properly, give it a figure number, and reference it in your text. Your paragraph must tell verbally the same story that the graph reveals visually.

The Question-Generating Strategy

This strategy is particularly effective for teaching the art of question asking in a discipline. After instruction in the kinds of questions asked by a particular discipline, the teacher breaks students into groups and has them brainstorm possible questions related to topics that he or she provides. After this phase, groups must then refine their lists into the two or three best questions and explain why each question is a particularly good one. (This is the strategy used in the earlier *Crito* example.)

Carefully observe this [poem, graph, statistical table, painting, advertisement]. What aspects of it puzzle you or intrigue you? As a group, pose three good questions that emerge from your observation of the item.

. . .

Now that you have studied the six levels of questions in Bloom's taxonomy, use the taxonomy to develop test questions about Chapter Six in your text. Ask at least two questions at each level of the taxonomy. Recorders should be prepared to explain why you think each question fits its respective level.

. . .

Scientists often pose research questions that have the following generic structure: "What is the effect of X on Y?" For example, "What is the effect of varying amounts of light on the growth of *Escherichia coli*?" or "What is the effect of an improved freshman advising system on students' retention rate between the freshman and sophomore years?" Using these examples as models, develop three good research questions that you could ask about each of the following topics: steroids, day-care centers, gangs, student test performance.

The Believing and Doubting Strategy

The "believing and doubting game," coined by Elbow (1973, 1986), asks students first to enter imaginatively into the possible truth of any statement, arguing in its favor (the believing game) and then to stand back from it, adopting a healthy skepticism (the doubting game). To use this strategy with small groups, the instructor gives students a controversial thesis and asks them to generate reasons and supporting arguments for and against the thesis. Angelo and Cross (1993, pp. 168–171) discuss a similar strategy using pro and con grids. (For a fuller discussion of the believing and doubting game, see Chapter Nine, page 176.)

The overriding religious view expressed in *Hamlet* is an existential atheism similar to Sartre's.

. . .

Baccalaureate engineering programs should be extended to five years.

. . .

The eighty-three-year-old stroke victim described in the case study should be informed of her daughter's diagnosis of terminal cancer.

The Evidence-Finding Strategy

The instructor's goal here is to have students use facts, figures, and other data or evidence to support a premise. In my own discipline of literature, this task often means finding textual detail from a poem, novel, or play that might be used to support an argument. In other disciplines, it might mean using primary evidence derived from library, laboratory, or field research. Such tasks teach students how experts in a field use discipline-appropriate evidence to support assertions.

Our design group recommends the choice of conventional steel bearings over air bearings for this application because the steel bearings will give comparable performance at a lower cost. Support this claim with the evidence needed to make it persuasive to both engineers and managers.

. . .

Although Hamlet claims to be putting on an antic disposition, at several places in the play he goes over the line and seems to lapse into genuine madness. What passages in the text could be used to support this assertion? How would you make the argument?

. . .

Your textbook describes typical kinds of problematic behaviors that children exhibit in kindergarten. You believe that a particularly unruly child—we'll call him Martin—would benefit emotionally from repeating kindergarten next year rather than entering first grade. Martin's parents are adamantly opposed to holding Martin back. What evidence might you use to help Martin's parents appreciate your advice on this issue? [Create your own hypothetical evidence for our hypothetical child, Martin—but make it plausible and realistic.]

Note that in working on an evidence-finding task, students often discover what teachers once struggled to learn themselves: that evidence is often selectively chosen, framed, and "interpreted." Conclusions supported by evidence can remain ambiguously open to further interpretation; a strong evidential case can often be made against the thesis as well as for it. Such ambiguity generally unsettles beginning college students, who expect the "experts" to know the right answer and who have not yet realized the extent to which arguments are not the same as proofs. (See the discussion of Perry's developmental theory in Chapter Two.) Teachers need to help students confront and endure such ambiguity, confident that doing so helps them move higher on Perry's scale of intellectual growth.

The Case Strategy

The use of small groups is particularly powerful in conjunction with cases that require analysis or decision making. Often small groups can be asked to make a decision at a key juncture in the case and to justify the decision with an argument. If the decision moment involves conflicting points of view from different stakeholders, each group can initially be assigned one of the stakeholder roles and asked to devise the best arguments it can from the assigned perspective. (For further discussion of cases, including an example, see Chapter Eight, page 159; see also Barkley, Cross, and Major, 2005, pp. 182–187, and Bligh, 2000, pp. 277–278.)

The Norming Session Strategy

This strategy, which is also discussed in Chapter Fifteen, helps students internalize the criteria by which the instructor will judge their formal essays. The instructor passes out three or four student essays from previous classes (with names removed) and lets students, in groups, rank the essays and develop arguments justifying their rankings. Later, in the plenary session, the instructor reveals his or her own rankings and initiates a general discussion of grading criteria for essays. Often teachers discover that students have erroneous notions about what teachers look for in a formal essay, particularly when they are learning the thinking processes and rhetorical conventions of new disciplines. For an excellent illustration of how a sociology professor conducts a collaborative norming session (complete with examples of student essays on the topic of ethnocentrism), see Bateman (1990, pp. 110–116). For a way to use norming sessions in a faculty development workshop, see Thaiss and Zawacki (2006, pp. 158–159).

The Peer Review Workshop Strategy

A common use of small groups in writing courses is the peer review workshop, in which students read and respond to each other's work in progress. The goal of these workshops is to use peer review to stimulate global revision of drafts to improve ideas, organization, development, and sentence structure. (Chapter Fifteen, pages 295–302, give detailed suggestions for using small groups for peer review. See also Barkley, Cross, and Major, 2005, pp. 251–255.)

The Metacognitive Reflection Strategy

Another effective use of small groups, discussed in detail by Bruffee (1993, p. 47), is to ask students to consider their own thinking and negotiating processes metacognitively. This strategy is especially useful when small groups produce solutions that strike you as off-base or just plain wrong. Our authoritarian impulse is to tell the groups that their answers are wrong and show them the right answer. Another approach, however, is to say that the class's solutions differ considerably from those of most experts in this field. A subsequent metacognitive task is to send students back into small groups to analyze the differences in reasoning processes between themselves and the experts. According to Bruffee, "The task is to examine the process of consensus making itself. How did the class arrive at its consensus? How do the students suppose that the larger community arrived at a consensus so different from their own? In what ways do those two processes differ?" (p. 47). The effect of this approach, in my experience, is to deepen students' understanding of how knowledge is created: instead of accepting (and perhaps just memorizing) the "right answer" based on

the teacher's authority, students struggle to understand the principles of inquiry, analysis, and problem solving used by the experts to arrive at their views. They consider an answer not only a product but also the result of a process of disciplinary conversation.

The Group Paper Strategy

Another common practice is the group or collaborative paper in which teams of students work together to write one paper. This method is an attractive way of reducing the teacher's paper-grading load while giving students extensive practice at the kinds of group interactions common in professional life. Team writing or joint authorship is common in business and the sciences, so these disciplines are particularly well suited for group papers, but many humanities professors use the strategy also. Exhibit 10.1

EXHIBIT 10.1

Instructions for Group Project

You will be assigned to a group to argue, using empirical evidence, for or against one of the following statements:

a. Capitalism provides fertile ground for the cultivation of virtue.

b. Equality, justice, and a respect for rights are characteristics of the American economic system.

c. A concern for ethics significantly undermines one's chances for success in a competitive market economy.

1. Consider material from Chapters Three and Four of your text as you begin to develop strategies for your argument. Also, be sure to define key terms in the proposition you are defending or refuting.
2. There will be no regular class on Thursday, [date]. You will have this time to use in whatever way your group judges best—for example, brainstorming, strategizing, or preliminary library research. Additional group meetings will have to be arranged by the groups themselves.
3. Each group will submit on Tuesday, [date], a formal essay presenting the best argument it can make for the position it has been assigned to argue. Who will be responsible for what tasks and how the essay will be written—for example, who will be responsible for its typing—are matters to be decided by the group.
4. Supporting arguments and evidence in the essays must be adequately and properly documented by means of footnotes or endnotes. Each essay must have a substantial bibliography—at least three good entries for each group member.
5. Each essay must run to at least five pages. The instructor is more interested in the quality of arguments than in the quantity of information.
6. The instructor will evaluate each group essay, and each person will evaluate the contribution of his or her group's members to the group effort. Individual grades will be based on both evaluations. (The instructor has each student fill out an evaluation sheet ranking the contributions each group member made to the group. The instructor then determines a grade for each individual, using a formula based on the group grade for the paper and the individual rankings provided by the groups.)

is a group assignment for a course in business ethics, from philosophy professor Kenneth Stikkers.

For further examples of collaborative writing assignments, including a sample peer evaluation sheet, see Lunsford and Ede (1990, pp. 251–258). Many other ideas for assigning and grading group projects—including strategies for discouraging freeloaders—can be found on the Web (search for "group writing" or "collaborative writing").

Making Small Groups Work

The substantial body of research on small group interaction and strategies for team building is too vast to be summarized here, but I can provide a few tips that may prove helpful in making small groups work.

What Is the Best Size for Groups?

Bruffee's review (1993, p. 32) of the research on small group dynamics indicates that the best size for classroom consensus groups is five students; six work almost as well. Groups larger than six are unwieldy and dilute the experience for participants. Groups of four tend to divide into pairs, and groups of three tend toward a pair and an outsider. In contrast to in-class consensus groups, long-range working groups (collaborating, say, to write a research report together) seem to function best when they are smaller—groups of three seem optimum. Smaller groups also work better for peer review sessions, in which dyads are often appropriate.

Should You Form Groups at Random or According to Some Distributive Scheme?

When forming permanent or semipermanent groups, some teachers like to ensure diversity—different learning styles, different aptitude or skill levels, different majors, different backgrounds, and so forth—so they wait to form permanent groups until they have gathered the appropriate data about their students. Others find that randomly formed groups work adequately. I personally tend toward randomly formed groups, except that I try to make them heterogeneous by gender in order to avoid all-male or all-female groups. I also mix nonnative speakers in with the rest of the class so that native students can experience multicultural perspectives and nonnative speakers can get practice conversing with native speakers.

How Do You Teach Groups to Work Well Together?

Students often need some initial instruction on why you think group work is valuable, what benefits they can expect to get from group activity, and how they can best learn to work together.

One approach is to give students tips on group interaction. I start by explaining Carl Rogers's theory of empathic listening (1961), which forbids person A from expressing disagreement with person B unless person A can accurately summarize person B's argument. I give students an exercise requiring careful listening, giving them practice in walking in someone else's shoes (Bean, 1986; see also Brookfield and Preskill's "circular response" strategy [2005, pp. 79–81]).

A teacher can also help students see how differences in learning style, gender, or ethnicity can explain some of the ways that various people behave in groups. For example, extroverts on the Myers-Briggs Type Indicator (MBTI) like to think through an issue by talking out their ideas with others and are therefore apt to be vocal and engaged in group discussions (Jensen and DiTiberio, 1989). Introverts, in contrast, like to think privately about an issue before talking about it and are often uncomfortable arguing in groups, although they listen carefully and take in what everyone is saying. Teachers can thus point out that quiet people in groups are often listening more carefully and thinking more deeply than their body language might indicate. Such persons, the instructor could explain, often have much to say but will be reluctant to say it until they are ready or until the group gently encourages them to contribute. To take another example, Myers-Briggs "judgers" reach decisions rapidly and are often impatient with an indecisive group that talks a problem to death. In contrast, MBTI "perceivers" resist early closure and want to talk through all possible points of view on an issue before reaching a decision. When students understand such differences in learning styles, they become more tolerant of classmates' behaviors that would otherwise annoy them. (For further discussion of learning styles, see Chapter Four, pages 62–65.)

Other differences worth discussing involve gender and culture. The class might discuss how the socialization of males in American culture tends to reward decision making based on abstract rigorously applied principles, whereas females tend to be more concerned with the interpersonal dimension of decision making (Belenky, Clinchy, Goldberger, and Tarule, 1986; Gilligan, 1982). At the cultural level, the teacher might explain that Americans often state their desires bluntly and assertively in ways that would seem rude in many Asian cultures, where the expression of desire would be masked in roundabout conversation. (For a detailed analysis of promoting discussions across cultural and gender differences see Brookfield and Preskill, 2005, Chapters Seven and Eight.)

Another approach for helping groups work well together is to explain to students the positive value of conflict. I explain that the creative dialectic of thesis-antithesis-synthesis works well only in an atmosphere of conflict-

ing views. By showing students how conflict generates creative thinking, the teacher can help students welcome disagreements and see how a watered-down compromise that no one really likes is less valuable than a true synthesis that seems better than either of the original views.

To promote healthy conflict, the teacher can discuss *egothink* and *clonethink*. One kind of group dysfunction (egothink) occurs when members simply express their own opinions vociferously without trying to reach a higher level of understanding. The converse phenomenon (clonethink) occurs when the group quickly agrees with the first expressed view and decides that its task is over. Effective groups need to monitor their discussions, trying to steer a middle road between egothink and clonethink.

For a more elaborated and detailed discussion of forming groups, assigning roles, and helping groups perform optimally, see Barkley, Cross, and Major (2005); Brookfield and Preskill (2005); Bruffee (1993); D. W. Johnson and F. P. Johnson (1991); D. W. Johnson and R. T. Johnson (1991); Johnson, Johnson, and Smith (1991); Slavin (1990); Spear (1988); and Morton (1988).

The Controversy over Using Small Groups: Objections and Responses

Of course, not all teachers are as enthusiastic about small group work as I am. Many teachers choose not to use small groups in the classroom for pragmatic, pedagogical, or philosophical reasons. Before closing out this chapter, I would like to respond briefly to some of the objections that my colleagues have raised against using small groups. My purpose is not to be polemical but simply to clarify some of the issues in ways that might help professors decide what role, if any, small groups might play in their own teaching. (For a comprehensive literature review of the research on small group learning, see Barkley, Cross, and Major, 2005, pp. 3–26; for a meta-analysis of the effects of small group learning on undergraduates in science, mathematics, engineering, and technology, see Springer, Stanne, and Donovan, 1999.)

Using Small Groups Takes Minimal Teacher Preparation or Skill

Perhaps the most frequent objection made by my own colleagues is that using small groups seems like a lazy way of teaching, requiring little out-of-class effort or in-class teaching skill. Compared with the time and scholarship needed to prepare a good lecture, the preparation time for small

group work seems minimal: put the students in groups, ask them a question, leave the room, and *voilà*, you're an innovative teacher.

In response, I must acknowledge that small group teaching looks easy—in fact, its practitioners can sometimes be observed wandering the halls while their students are working in groups. However, as with other modes of instruction, there are both well-prepared and ill-prepared users of small groups. The well-prepared teacher is hardly lazy: the use of small groups described here is a goal-directed form of teaching that places heavy emphasis on task sequencing and overall course design. Planning a good small group task demands articulation of course goals, identification of a particular goal to be addressed in the task, design of the task, and placement of the task within a sequence of learning activities, many of which include lectures and other kinds of class discussions. Thus the preparation time for using small groups can be extensive. In-class teaching skills come into play during group reports and plenary sessions, where the teacher integrates class discussion with short lectures that present the teacher's (or the discipline's) expert perspectives on the problem the groups have just addressed. (For a discussion of how a peer observer should evaluate a course taught through collaborative learning, see Wiener, 1986.)

Small Group Work Reduces the Amount of Productive Class Time Spent with the Teacher

Another objection is that small group work reduces classroom contact between student and professor. Students pay tuition to learn from professors, not from fellow students. At one workshop I shall never forget, a professor excoriated me: "Collaborative learning is unethical. I would be abdicating my professional responsibilities if I deprived students of time spent with me as teacher, especially when they are yet untrained to work independently." Behind this objection is the obvious fear that small groups leave the blind leading the blind.

In defense of small groups, however, I would argue that small group sessions are not really time away from the teacher (who has constructed the task and is observing behavior) any more than a scrimmage game at basketball practice is time away from the coach. In any discipline, the progress of new learners ought to be measured, at least partly, by what they can do independently of the teacher when faced with a new disciplinary problem requiring critical thinking. What we aim for is their ability, when confronting a new problem, to think and write like members of our discipline. Goal-directed small group work provides supervised practice in these skills.

What distinguishes this process from the blind leading the blind is the teacher's eventual entry into the conversation. The teacher's entry starts

as a conversation between the teacher and group recorders, who must present a sustained argument in response to the problem posed in the collaborative task. Soon the conversation expands to include the whole class. Disagreements between teacher and students promote genuine discourse because the students, emboldened by group support, are not simply passive note takers. The teacher must play a complex, rhetorically savvy role, representing the discipline by bringing the best reasons to bear on his or her own claims. In hearing the teacher's response, students have access not only to the teacher's thinking and knowledge but also to the way arguments are structured and elaborated in the discipline. And in arguing back, in differing from the teacher's views, students move toward becoming autonomous thinkers who can join the conversation of the discipline.

Small Group Work Devalues Eccentricity and Teaches Social Conformity

Underlying many objections to group work is the belief that group consensus stifles creativity by forcing a leveling of talents. These objectors say that group work devalues the individuality of our potential artists, rebels, eccentrics, loners, and geniuses. From a Marxist perspective, collaborative learning is simply the latest example of how the colleges serve the needs of capitalists (Myers, 1986a). Today's business world no longer wants colleges to produce free-thinking individualists; it wants genial, cooperative team players. Thus collaborative learning becomes the new fad among educators at the same time that the fiercely independent, cigar-chewing boss is being replaced by the committee and the team.

These objectors are right in asserting that some students work better individually than in groups. But unless we reject completely the goal of preparing students for careers after college, it would be unfortunate indeed if these individualistic students had no experience whatever working in groups. Given that teamwork and committee work are essential parts of professional life in America, even our most eccentric geniuses can benefit from collaborative learning, which can serve as a learning laboratory for problems students will face throughout their lives.

The other element of this objection—that collaborative learning values consensus over difference—seems grounded in a false premise equating consensus with conformity. There is a qualitative difference between conformity—an easy and quick acquiescence to the first thesis produced by a group member—and a synthesis reached through dialectic conversation. In my own experience, group work does not suppress eccentric and individualistic ideas but in fact gives them a chance to be aired and tested in group conversation. Often creative insights come from shy persons who would never venture their ideas in front of the teacher and

the whole class. What I observe in small groups is a lot of genuine exploration, elaboration, and shifting of ideas. Collaborative learning, far from promoting conformity, gives students opportunities to flex their own muscles, to push against the teacher, to test their own wings.

In this regard, it therefore seems impossible to avoid the political implications of collaborative learning, which does, I think, decenter the teacher. In a collaborative classroom, the teacher's arguments compete with arguments coming from various student groups. These arguments cannot simply be dismissed by an appeal to authority. The teacher must defend his or her views through the rules of reason. As a teaching method, collaborative learning is thus powerfully symbolic in conveying to students a view of academic life as rational dialogue rather than right answers dispensed by an authority.

Conclusion: Some Additional Advantages of Small Groups

I have argued in this chapter that using small groups in the classroom can be a powerful form of active learning, giving students the opportunity to practice disciplinary inquiry and argumentation under the tutelage of a teacher as coach. Hillocks (1986) and others have demonstrated the effectiveness of the method in producing measurable advances in the quality of thinking reflected in student writing. In addition, it gives students space to pursue their own lines of thought and test them against the thinking of their professors.

In closing, I would like to mention also the social advantages of collaborative learning—advantages that should not be lightly dismissed. Small group work can promote student interaction and friendships, help students develop leadership skills, and foster diversity. Students in a collaborative learning class get to know each other well. Groups sometimes meet outside of class for coffee or meals. Often group mates friend each other on Facebook or sign up together for classes in later terms. From a less rosy perspective, small-group work can also help students work tolerantly with persons they actively dislike. Additionally, small group work gives students practice at leadership, especially when they serve as recorders for a group discussion and must make a presentation to the whole class. Finally, collaborative learning takes advantage of the rich diversity of students at many of today's colleges and universities, allowing students to bring fascinating, varied, and often troubling life experiences to bear on issues related to the course. The opportunity to stimulate conversations of consequence among such diverse groups of people and to promote friendships among them is one of the joys of teaching through small groups.