CHAPTER FOUR

PROMOTING STUDENT PARTICIPATION AND MOTIVATION

Promoting *Self-Regulation*: Teaching Students *How* to Learn and Improving Student Learning

Murray (2000, 62) discusses the process of *self-regulation* in the learning process. She says: "Students learn best when they self-regulate — set their own academic goals, develop strategies to meet them, and reflect on their academic performance." Many college students know what they need to learn, how to learn it, and how to assess their performance. But there are also many students who are not skilled in this process.

Murray's article discusses the research of educators who have examined the self-regulation process. Professors Paul Pintrich (1995) of the University of Michigan and Barry Zimmerman (1998) of the Graduate School and University Center at City University of New York (CUNY) have studied the self-regulation process in education. Professors C.E. Weinstein and L.M. Hume (1998) and many other researchers support what Pintrich and Zimmerman have found. Basically, these researchers all agree that it is never too late to teach students *how* to learn. They believe that if we as faculty members include self-regulation strategies in our teaching, our students will learn more quickly and efficiently. Weinstein and Hume (1998), in fact, have found that the more students use effective learning strategies, the higher their grade-point averages and graduation rates tend to be.

How do we as teachers help students become self-regulators? The researchers tell us we should:

- Set clear learning objectives for our courses.

- Make regular assignments.
- Emphasize outlines.
- Suggest mnemonic devices and other memory strategies that will help our students retain material.

Zimmerman (1998) has developed a model that has been extremely effective with developmental students at CUNY. He suggests teaching students to see the self-regulation process in three phases:

- *Forethought* — Help your students set short-term, challenging, but attainable academic goals so that they can estimate their abilities. This *self-efficacy* approach helps students achieve their goals.
- *Performance* — Help your students develop learning strategies such as scheduling study time, using memorization techniques, and outlining course content.
- *Self-reflection* — Help your students evaluate how effectively their learning strategies allow them to meet their academic goals, and teach them to adjust their strategies as necessary.

Research (VanZile-Tamsen and Livingston 1999) has shown that the self-regulating process can significantly boost the performance of lower-achieving students. High-achieving students are usually self-regulators to begin with, but lower-achieving students can learn the process and thus improve their academic performance.

Research has also concluded that *motivation* plays a big role in the self-regulation process. Some students are consistent self-regulators, while others are self-regulators only in courses or disciplines that are of high interest to them. Zimmerman (1998) and VanZile-Tamsen and Livingston (1999) offer several ideas to help you motivate your students toward self-regulation:

- Organize your course to emphasize *reflective learning* (i.e., the type of learning whereby students not only learn the material but also pay attention to the learning process itself) and goal setting among your students.
- Spell out your course learning objectives up front. Your students should understand what they need to know across the course and for each exam.
- Emphasize concept relevance by using plenty of examples to explain each concept. Relate new concepts to ones you've covered previously so that your students will see connections amongst the material.

- Give frequent quizzes so that your students can tell how well they're learning the material.
- Tie feedback concerning student performance to key concepts. In other words, frame your comments on students' tests and assignments in terms of how well students' answers on exams match the objectives for the course. This is a kind of "after-the-test analysis" that will help students know what they should re-study.

Encourage students to use specific learning strategies by:

- Helping them define their learning tasks.
- Teaching them to organize their notes. For example, you might suggest ways for students to summarize your lecture content and fill in the gaps in their notes. You could even do an occasional spot check of students' notes to see how well (or poorly) they're doing in their notetaking.
- Teaching students about learning devices like mnemonic aids, how to outline material, how to create knowledge trees that categorize information in branches, and how to create a *study diary* or *log* to help them manage their time more effectively.
- Modeling and encouraging self-regulation. Pintrich (1995) suggests that we as teachers think out loud in class when we're analyzing a problem, admit when we don't have the information we need, and tell students how we plan to get that information. Such role modeling, Pintrich notes, helps students see that it's best to identify one's weaknesses in order to be able to compensate for them. In other words, students learn to identify what they don't know.

Research on the characteristics of highly effective teachers shows quite a bit of overlap with the research on teaching students how to regulate their own learning. When Guskey (1988) and his colleague Easton studied college teachers who had been identified as highly effective, they found that the teachers shared very little in common in terms of personal traits or background characteristics. What the researchers did find, though, was great commonality with respect to teaching strategies and instructional practices. Guskey and Easton created four categories to cover these strategies and practices:

- Planning, organization, and cues.
- Positive regard for students.
- Student participation.
- Feedback, correctives, and reinforcement.

In terms of *planning, organization, and cues*, highly effective teachers, according to the Guskey and Easton research:

- Spend considerable time planning and organizing their courses before the semester begins.
- Develop detailed course outlines, with clear objectives and grading criteria that reflect specific learning standards.
- Include daily class topics and assignments in their course outlines or syllabi.
- Feel strongly about the importance of flexibility and responsiveness to students' needs and interests. They put primary emphasis on student learning.
- Stress the importance of the first class meeting for setting the semester's tone.
- Set goals for their students on the first day of class, expressing confidence that every student can succeed and the expectation that students will work hard and attend every class meeting.
- Plan each class with an introduction at the beginning, a summary at the end, and clear developmental steps in between.

With respect to *positive regard for students*, highly effective teachers:

- Learn students' names in the first week or two of the semester.
- Use part of the first class meeting to get to know students.
- Make an effort to know individual students' traits and interests.
- Continue through the semester to acknowledge the individuality of each student.
- Avoid embarrassing students or harassing them with questions or demands.
- Stress the importance of student-teacher interaction.

In terms of recognizing the importance of *student participation*, highly effective teachers:

- Make sure all students get involved during class sessions.
- Continually assess to see if students are "with" them.
- Shift gears often to retain students' interest.
- Greatly encourage students' questions and participation.
- Utilize discussions.
- Are physically active during their lectures — they move around the room and speak to their students in an animated way.

With respect to *feedback, correctives, and reinforcement*, highly effective teachers:

- Give students regular feedback on their progress.
- Spend a great deal of time reading and evaluating (both orally and in writing) students' papers and tests.
- Make specific comments about what a student has done well, what the student needs to improve, and how the student can make those improvements.
- Arrange individual meetings with students who are having difficulty.
- Often provide individual help and refer students to campus services (e.g., academic skills center, counseling center, career center).
- Follow up with students who are having difficulty.
- Encourage *mastery learning* — that is, learning the material at a certain predetermined level of competency.
- Reward students' successes by praising students for their performance; by commenting on their progress throughout the course; and, sometimes, by offering bonus points for additional work, which students can then add to their exam scores.
- Use frequent verbal praise, where appropriate.
- Praise students privately before or after class when they do well.

The Guskey and Easton research seems to support the notion that highly effective teachers teach not only their disciplines, but do indeed teach students *how to learn*. In addition, they try to encourage their students to self-regulate their learning.

The Interactive Classroom

The interactive lecture.

To reach today's students — particularly the tired and unmotivated ones — our challenge as teachers is to add variety to our teaching strategies. The old-time lecture approach may capture some of today's students — but it will probably be a minority of them. Many lecturers, facing the glazed-over eyes of their students, try to create more-engaging lectures or make attempts at a more dazzling lecture style. While this effort is admirable, it will probably prove ineffective. Somewhere I once read an intriguing definition of the term *insanity*: Doing the same thing over and over again and expecting different results. If we as teachers want different results with students

who aren't responding to the lecture format, the prescription is clear: *We must change.*

Before I present the argument for change, I want to add a caveat: I do believe that *we can* become more dynamic lecturers, and thus capture the attention of more of our students. Silberman (1996, 19-21) suggests some techniques to grab students' attention at the start of a lecture and maintain that attention throughout:

- Start your lecture with an interesting story or anecdote that grabs students' attention.
- Begin the lecture with a provocative visual, such as a cartoon.
- Pose a problem or ask a question that is at the center of the lecture, so that students will be motivated to stay tuned in.
- Limit the major points of your lecture. Present key terms and concepts on an overhead transparency or chalkboard to help students remember them.
- Use plenty of real-life examples and comparisons, and try to relate your information to your students' prior life experiences.
- Wherever possible, use transparencies, flip charts, and handouts to give your students a visual as well as an auditory channel of learning.
- Periodically, stop lecturing so that you can ask students to give examples of the concepts you've presented so far.
- Present a problem or question for students to address based on the information covered in the lecture.
- Give students a test or quiz on the topic covered, toward the end of the lecture.
- Ask students to compare their notes with each other in order to review the lecture and clear up any questions they may have.

Morris Burns (1999), a professor of theater at the University of Texas, offers suggestions from the profession of acting that can be helpful to us as teachers and lecturers:

- Bring more feeling into your presentation of ideas so that you show enthusiasm for what you're teaching.
- Picture yourself successfully conducting your classes. Your imagination will pave the way for your successful performance in the classroom.
- Use your voice in ways that are conducive to effective communication — for example, speaking with inflection.

- Use the way you move in class to project enthusiasm and to connect with your students. For example, walk around your classroom and establish eye contact with students as you move all around the room.
- Think about the arrangement of your teaching environment. Check out the room where you'll be teaching, ahead of time. Plan ways to use the space to the best advantage — for instance, whether you should group students in circles or semi-circles.
- Prepare for class by thinking not only about the content you want to present, but also about your students as an audience and as individuals. Deliver your content in a way that is relevant to your students' lives.

All of this being said, even the most dynamic lecturers are today facing students who seem to need greater involvement. So many scholars in academia, following the work of John Dewey (1963) and Jean Piaget (1952), have espoused the idea that students learn more effectively when they're actively involved, when they're "doing" rather than passively receiving information. Faculty members who protest by saying they have too much material to cover to allow student participation, dialogue, or group work would be saddened to discover how few students are "covering" the material with them.

And how much of what we faculty members "cover" will students retain after our examinations? How much of this material will they actually use in their lives? Of course, this depends on the discipline of study. We desperately want the medical personnel assisting us in our times of need, and the pilots flying us to our destinations, to have retained what they've learned and practiced in school. However, much of the academic information we've learned in school — particularly if we don't use it in our daily lives — is forgotten within several years of graduation. So as important as the "body of information" we'd like our students to learn is, equally important are students' abilities to think critically, write effectively, speak clearly, make ethical decisions, and celebrate the richness of the diverse culture America has become.

Clearly the body of information we impart — *if* students take it in — may accomplish some of these goals some of the time. But the lecture format falls short much of the time. As James Eison (1999, 6) states: "... One way faculty can increase student involvement and learning is to lecture less and have students do more." The literature on human learning and memory tells us that the more actively involved students are in their learning, the greater the chances for their deeper understanding and long-term retention of material (Rosenthal 1990).

The lecture format is part of most courses, and it is a necessary part. But it's possible to make lectures more interactive and, therefore, more effective. One way to get students to do more, even within the lecture format, is to lecture for a period of fifteen minutes and then pause. During a *two-minute pause*, you can ask your students to work in pairs to compare and rework their notes. Usually you can do this without interacting with the students yourself. However, you could try a variation on this approach and ask students for a summary of the lecture up to that point. This would allow them (and you) to clarify the material. The lecture could then continue until the next pause. Bonwell and Eison (1991) showed that the "pause" procedure significantly improves student retention of material, both for the short term and the long term. It also motivates students to stay tuned in to the lecture and to take useful notes.

Whenever you use a lecture format, you can stop periodically to ask students questions. Even a lecture can be somewhat interactive if you pepper it with questions such as:

- How many of you believe that...?
- By a show of hands, has anyone ever...?
- How many of you agree that it's possible to...?

Whenever you lecture on a topic that is debatable, ask for a show of hands of students who lean to each "side" of the controversy. This technique pulls students into the topic, gets them interested in other people's opinions, and motivates them to learn more.

You can occasionally ask a non-threatening question that incorporates lecture material and gets students to raise their hands. For example, in large lecture when I discuss Pavlov's classical conditioning experiments with dogs, I ask students for a show of hands of people who have dogs or cats as pets. I then ask the students if they think their pets know when they're going to be fed. Not only are students better able to learn and recall that classical conditioning involves learning by association, but they're also more involved in the class through their participation and through their interest in who else has a dog or cat. This is certainly not a high level of participation, yet it helps students stay engaged with the material.

Bonwell and Eison (1991) also offer several other ideas for creating an interactive classroom environment. For instance, they suggest using quizzes during the lecture period to help students master the material they've just heard. Quizzes also allow students to consider their opinions, concerns, and remaining questions about the topic, and they give you the opportunity to assess the effectiveness of your lecture. Another idea is to try

demonstrations accompanied by questions like, "What do you think might happen if we do such and such?"

Bonwell and Eison go on to describe what they call *alternative* lecture formats — for example, the *feedback lecture*, which consists of two mini-lectures, each about twenty minutes long, separated by a small-group problem-solving session. Another alternative lecture format is the *guided lecture*. In this format, students listen to a mini-lecture of twenty-five to thirty minutes, then spend five minutes writing as much as they can remember about it. They then participate in small-group discussions in which they share basic concepts and data to construct more meaningful notes. As the instructor, you can be available for consultation and clarification. Finally, there's the *responsive lecture*, which sets aside one class period per week for student-generated, open-ended questions. (Obviously the practicality and effectiveness of Bonwell and Eison's suggestions will depend on the size of your lecture class and the space available in your particular classroom.)

Here are some additional suggestions on how to spice up your lectures and make them more interactive:

- In the first few lectures of the term, discuss how the subject matter relates to your students' lives. Make the first few lectures particularly engaging by showing your students how learning the material of your course may be relevant, and possibly enriching, to them personally.
- To add variety to the lecture mode, use visual aids such as the chalkboard, overhead transparencies, films and videos, slides, charts, tables, handouts, and, if you have the expertise, computer-based presentations. If you do decide to use visual aids, however, be sure they're clear and readable. If, for instance, your overhead transparency has several points on it, cover up all but the one(s) you're speaking about; otherwise students will try to write down all of the points and won't be listening to your explanations.
- Organize your lectures with numerous illustrations of concepts, and deliver your lectures with enthusiasm and humor.

Although lecturing may be the most *efficient* way to transmit information, it's usually not the most *effective* way for students to learn and retain material. *Active learning* exercises can supplement a traditional lecture or can be integrated within the lecture format. Faust and Paulson (1998) say that an active learning activity simply involves students doing something in the classroom other than listening passively to a lecture.

The more students are active learners — that is, the more involved they are in the learning process — the more they'll learn and remember.

Engaging your students — even the passive and resistant ones.

Once you've established a dynamic of trust and familiarity in your classroom, you can employ a variety of techniques to facilitate learning and active participation among your students.

Take textbook reading assignments, for example. Since one of the biggest stumbling blocks to students' active participation in class is that they haven't read the day's assigned material(s), you need to develop ways to encourage students to do their reading. One approach is to have your students respond in writing, at home, to questions that accompany the reading. Their questions and responses can then kick off discussion in the next class session. Or, you could collect and read the questions and responses — without referring to students' names — and then have the rest of the class consider them. You could then credit the students' work in some way. Paul (1999) suggests a close variation on this technique. She asks her students to do *idea sheets* at home. When they read an assignment, they're to write their own comments and questions on a sheet of paper and bring them to class. Paul asks the students to sign their contributions so that she can offer credit for them. She then flips through the contributions in class, commenting on what the students have written without identifying them by name. When a student hears his or her question read, and Paul says, "Yes, that is a very interesting question!" the student perks up. This creative introduction to the reading, based on students' own questions and comments, leads to a livelier discussion in which more students participate. Getting students to read their assignments is a first step toward promoting active engagement within your classroom.

Many of our students seem to have a sort of resistance to learning. Most teachers can identify this resistance by noticing student behaviors in the classroom that show the students aren't engaged in the class. For example, when students aren't focused — maybe they're staring out the window, talking to each other, or scribbling in their notebooks — they're probably telling us that part of them is resisting the learning process. So Paul (1999) suggests some strategies for combating that resistance — strategies that are linked to classroom dynamics. She involves students in the process of breaking down their own resistance to learning by calling attention to the behaviors that indicate to her that the students aren't focused on the class, and by engaging the students in a dialogue about what's going on with them. As teachers, Paul argues, we can empower our students by asking them, "What can I do to foster your learning?" Paul says your students might look at you blankly at first if you ask them this question. However, students eventually start to look at themselves as learners. This technique, then, opens the door for communication with them.

Sometimes, Paul tries what she calls a *content-to-process shift*. This technique involves stopping the class and saying, "Let's notice what is happening here: Some of you appear uninvolved, some of you appear to be talking to each other on another topic, etc. What do you think we should do to get things back on track?" When you use this method, students get to identify resistance to learning in themselves and take responsibility for their own learning. Of course, for the content-to-process shift to be effective and not backfire — with students becoming defensive — you must have already established a positive teacher-student rapport and a safe classroom atmosphere (see Chapter 3, "Creating a Welcoming Classroom Environment").

Strategies involving the classroom *design* can also enhance student involvement and participation in your courses. For example, if you simply move away from the front of the classroom, you'll often notice a clear change in your students and in the class environment. In large classes of thirty-five or more students, where a circle would be cumbersome, you can divide the room down the center aisle and ask students on both sides to face the center (and each other). Students who are facing each other rather than the back of someone's head are more likely to participate in class discussions. This set-up also gives you greater freedom of movement; you can walk down the center aisle to get closer to the students who prefer to sit in the back of the room. You can also establish eye contact with more students, and use overhead transparencies and other visuals to talk with the students about the course material from the back of the room.

Another classroom design strategy you can use involves mentally dividing the room into quadrants and then trying to involve the students in all four parts of the room. By simply walking to the different sections and addressing questions to those sections, you can easily engage more of your students. That's far better than talking to the few students who sit in the front of the room — the ones who are often already engaged in the material you're presenting.

The class discussion.

The class discussion can achieve so many of our goals as teachers. When students participate in classroom conversation, they become actively engaged with the course material. Through a process of listening, questioning, hypothesizing, and responding, students voice their struggles with the content. As Gillespie stated (1999, 5): "...Student confusion surfaces and is clarified. Problems are articulated and potential solutions generated. Students become engaged with the material, their interest and curiosity aroused. Opinions are challenged." All of this contributes to the develop-

ment of critical thinking skills, which is one of our major goals as educators.

In response to the question of why we should use classroom discussion as an instructional tool, Munde (1999a) offered the following reasons:

- To clarify concepts.
- To promote critical thinking.
- To promote active listening skills.
- To help students develop the skills of formulating and exploring ideas and opinions.
- To learn from our students.

McKeachie (1999) says that if we as faculty expect students to integrate, apply, and think, we should give them the opportunity to practice these skills in the classroom. So many studies (e.g., Slavin 1997, Borich 1996, Welty 1989) have demonstrated the value of class discussion in improving student attitudes toward learning, enhancing learning and retention of material, and promoting the development of critical thinking skills.

Of course, we must also recognize that a few students simply will not participate in class.

Some of them are excessively shy or may even suffer from social phobia. Students have a right not to participate verbally if they so choose; we shouldn't assume that nonparticipation means they're not engaged and not learning. However, one strategy that may bring even the quietest student into a classroom discourse — as suggested by Brookfield and Preskill (1999) — is to have every student find a two- to three-line quotation from the reading assignment. Ask each student to write down that quotation with the page reference, to be prepared to read the quotation out loud in class, and to explain why he or she chose it. (Note: There's a pretty strong movement on campuses these days to help students write and speak across the disciplines. This technique may break the ground for some students to start engaging in class discussions by asking and answering questions. I've found that, if students really don't want to do something I have asked them to do [because of social phobias or learning disabilities], they usually just tell me — and I would never insist.)

Many instructors have discovered techniques that don't work in promoting effective discussions. Attempting to begin a rich discussion with questions like "Are there any questions?" or "Do you understand?" is a strategy that will probably fail. The result is usually dead silence. I'm reminded of the 1986 movie, *Ferris Buehller's Day Off*, in which the high school teacher stands in front of the room after posing such a question, and

keeps repeating, "Anyone? ... Anyone?" His effort is met with the kind of lack of responsiveness that is one of our worst nightmares as teachers.

An extensive body of research has explored the role of the quality of questions teachers ask their students in promoting critical thinking and encouraging discussion. Edwards and Bowman's (1996) review of the literature suggests that if we as teachers improve our classroom questioning strategies, our students will develop higher-level critical thinking skills. Edwards and Bowman found that teachers who ask questions requiring higher-level thinking often get their students to respond at higher cognitive levels. In other words, our questions must challenge students to think critically and analytically. Unfortunately, in his extensive research, Barnes (1983) found that the overwhelming majority of teachers' questions — regardless of type of institution studied, student level, or discipline — were on low cognitive levels, often simply requiring recall from memory of previously learned material. The literature on teachers' questions suggests that we need to learn how to create questions that get our students thinking at a higher cognitive level. We also need to understand how to word our questions, how to deliver them, and how to listen to and respond to our students' answers.

Here are some strategies related to questioning and responding that may improve your students' level of thinking and the quality of your class discussions. Some of these suggestions appear in the work of Hyman (1979) and Davis (1993):

- Prior to class, think about the questions you might ask to help students understand the material you're teaching.
- Try to develop questions that go beyond asking students to recall facts or specific, "right" answers. Use a variety of types of questions.
- Ask only one question at a time.
- Wait for a response to each question. The longer you're willing to wait, the greater the number of students who will be prepared to respond.
- On occasion, ask students to write their responses to a question you pose. When you reconvene the class discussion, more students will be willing to participate.
- Ask students to write their responses and then share them with a partner. This helps students feel more comfortable speaking in front of the whole class.
- Reinforce students' responses with praise.

- Build on students' responses. Use students' names to praise them when you refer to responses they've given previously.

Interestingly, Edwards and Bowman's review of the literature (1996) also found a strong connection between teachers' questions and students' questions. For example, the number of questions we as teachers pose influences the number of questions our students ask in class. In a classroom atmosphere where students feel comfortable, both students and teacher may participate freely in discussions — because they feel safe. Another connection between teacher and student questions relates to the cognitive level of the questions being asked. Edwards and Bowman (1996, 21) say:

> Professors who want to increase the number of their students' higher-order questions will first need to ask more higher-order questions themselves. Although a tendency sometimes exists to blame students for their failure to demonstrate higher-order thinking skills, these findings suggest that students can be stimulated to raise more higher-level questions when teachers elevate their own level of questioning.

As we discussed earlier in this chapter, classroom design is a factor affecting the level of student responsiveness in our classes. It also affects the atmosphere we create. To set up the classroom to best promote student interaction, Silberman (1996) suggests the following arrangements:

- The U-shape design, which involves setting up the chairs in what looks like a horse shoe so that students can see each other.
- Subgroups at tables or their desks around the perimeter of the room, facing each other.
- The conference table approach.
- The circle or semi-circle.
- The *work station* arrangement, in which students sit at separate tables.

The classroom seating arrangement will influence both the atmosphere of the class and students' willingness to enter into discussions. Without an atmosphere of trust, safety, and connection, our attempts to lead rich classroom discussions are bound to fall short. There are many ways, both verbal and nonverbal, we can promote the kind of atmosphere in which students will be willing to participate. First and foremost, our students must feel we respect them as people and as students. As instructors, we must convey that respect not only by *what* we say in class, but also by our tone of voice, our facial expressions, our eye contact, our body language, and our posture. Even when students sometimes make ignorant remarks, we must be stellar diplomats. We must find ways to correct the

information by reframing it, while not diminishing the students. We must help students maintain their dignity in front of their classmates, even when we do not dignify their comments. In one of my own graduate courses in a large-lecture format, a student asked the professor a question. The professor responded, "Who cares?" No one, apart from the professor, ever spoke in that class again.

How can we foster a classroom climate that promotes participation? When students speak in class, we can use numerous strategies to reinforce their efforts. We can preface our responses by saying, "Yes, that is the kind of question that has troubled the researchers," or "Good point," or "Interesting question!" (Be careful, however; use these reinforcers moderately, and be sincere lest you be perceived as condescending.) Using students' names in class is also very reinforcing. For example, you might bring up a point made by a student earlier in the class: "As Maria suggested earlier..." The emphasis on creating a "welcoming" classroom atmosphere is based on the understanding that students are people first and learners second. Their ability to learn is dependent on their levels of self-esteem and on how comfortable they feel in our classes.

Planning and executing classroom discussions.

Although some instructors are very good on their feet and are able to facilitate an excellent discussion on the spot, most of us benefit from carefully planning our classroom discussions beforehand.

Gillespie (1999) makes a distinction between a structured discussion, with the teacher playing a strong leadership role, and a less-structured discussion, with the teacher playing more of a facilitator role. The type of discussion you choose depends on what you want the discussion to do. If you need to address some specific points, you'll need to carefully lead the discussion. According to Gillespie, the language of our questions in such an interaction should stimulate higher levels of critical thinking — such as comprehension, analysis, application, evaluation, and synthesis — and yet be quite directive: "What are the distinguishing characteristics of...?" "What do you think would happen if...?" On the other hand, if the goal of your discussion is problem solving, brainstorming, or getting students to share their opinions, you simply play the role of facilitator.

Planning a discussion involves deciding what material you want to cover within a class session and determining what questions you could ask to tap that material. Frederick (1981) offers some excellent suggestions for starting classroom discussions. He proposes that we identify goals and values of a particular assignment and then create relevant questions prior to or at the beginning of class. He says we can sometimes break students into

small groups for a discussion with clear instructions, a time limit, and some form of accountability. I believe it's necessary for us as teachers to clarify what our objectives are for the class session so that we can assess the quality of the discussion. Of course, one of the exciting aspects of a class discussion is that you're never really sure what turns it might take. Often, you'll need to be flexible enough to let go of your original agenda if what you see happening in class is worthwhile.

It's also important to prepare your students to discuss the assigned material. Eison (1999) suggests distributing, in advance, discussion questions that stimulate critical thinking about course content. He also recommends asking students to work together in pairs before opening the discussion up to the whole class. When I use this approach in my own classes, I notice that students seem to be more comfortable talking in the large group after having spoken to another student one on one.

As we discussed earlier, one of the biggest dreads of running a discussion is that we'll ask a question and no one will respond. You might be very uneasy about the silence, as many of us are. But you need to learn to get comfortable with it, and to not necessarily call on the first student with his or her hand up. Research has shown that, with each second we wait, more students become prepared to speak.

It's also important to pull into the discussion the students who usually are not the first to participate. One way to ensure that more students will be ready to join in the conversation is to ask the students to write down their responses to your questions. Not only does this tactic pull many more students into the discussion, it also gets everyone engaged with the material, and even improves the quality of the responses.

Once a discussion is under way, as the facilitator you should try to get students responding to each other. The temptation is often strong for *you* to respond to students' questions and comments, but that's a surefire way to limit student participation. Students are often more persuaded by their classmates' perceptions and opinions than by ours, and sometimes students do remarkably good jobs of correcting and challenging the ideas of their peers. Part of letting this student-to-student interaction happen involves changing your perception of your role as "imparter of information" to "facilitator of learning." As a facilitator, you need to pay attention to the nonverbal cues you're getting from your students and be responsive to them. For example, if one section of the class has been particularly quiet, you might say, "We haven't heard from this part of the class. Would anyone from this section like to address that point?"

Gillespie (1999) says that, as facilitators of effective discussions, we'll be required to think quickly on our feet and to sometimes redirect the focus

of discussion. When necessary, we'll have to find ways to correct misinformation, and to help students more fully and accurately elaborate upon their ideas. The essential ingredients for success in using discussion as a strategy, Gillespie notes, are "... an acceptance of the importance of discussion opportunities for effective learning, a belief in the potential of all students to learn, and a willingness to give students some responsibility for their own learning" (Gillespie 1999, 7).

Bartlett (1999) says she has rules of discourse for her classes that are aimed at promoting open expression and respectful listening. The rules encourage students to challenge each other's ideas but to avoid personal attacks. Among the rules:

- No hogging the floor.
- No blaming or shaming.
- No personal attacks.
- Always respect the confidentiality of the classroom.

Bartlett notes that when the open, non-threatening atmosphere of a classroom discussion breaks down, she stops talking about the topic and instead discusses process. (This approach seems very similar to Elizabeth Paul's [1999] *content-to-process shift*, described earlier in this chapter.) Bartlett uses a listening exercise in which she asks students to pair up, listen to each other's positions without interrupting and without formulating responses, and then repeat the respective positions back to each other. This technique defuses the negative energy that interferes with open classroom discussion.

To develop and maintain an open classroom atmosphere, sustain the energy in the class, and promote the wonder students can have for what they're learning, it's also necessary for us as teachers to practice "mindfulness," Bartlett says. "Mindfulness," she notes, "involves being fully present to the students, to their questions, to their faces, being responsive to their capacity for wonder and to their boredom. Only in this mode of mindfulness am I able to listen deeply to students. This means being willing to abandon my own agenda and follow the students' lead. If I see boredom creeping onto their faces, I shift gears" (Bartlett 1999, 54-55).

Aside from the possibility that students won't speak up during your classroom discussions, you also have to be prepared for the possibility that one or two students will *dominate* the discussions. This is a sensitive issue. You don't want to turn the monopolizer(s) off. But at the same time, if you let such a pattern continue, the other students may very well disengage. In one of our Writing Across the Disciplines committee meetings here at Mercer County Community College — where one of the topics we often dis-

cuss is students' oral communication skills — Donna Munde (1999b) suggested a technique to discourage students from dominating discussions (she cited Brookfield and Preskill's 1999 book, *Discussion as a Way of Teaching*, as the source of this idea): Use the "Circle of Voices" strategy to get everyone in the class involved. Ask a thought-provoking question, and allow up to three minutes of individual silent time or group time so that students can organize their thoughts. Then, give each student up to three minutes to speak with no interruptions. Each ensuing speaker must summarize the previous speaker's comments before presenting his or her own views. One or two students can serve as the class "summarizers" or official notetakers, and their notes can be distributed to the whole class so that all of the students have a written record of the class session.

Teachers who are sensitive listeners help their students learn to think critically. To foster critical thinking in our students during our class discussions, we need to become expert summarizers of students' questions and comments. Rather than dazzle — or, perhaps more accurately, overwhelm — students with all we know, we need to use their questions, responses, and comments in class as springboards to inspire and encourage them. We can often do this by summarizing what they've said, and sometimes even modifying or reframing it, to motivate them to go further. We can also encourage them to work with the material in a more in-depth way, to hypothesize, to see multiple perspectives, and to draw more legitimate conclusions.

Cooperative and *collaborative* learning

> Instructors can choose whether to be "a sage on the stage" or "a guide on the side" (King 1993). ... In doing so, they might remember that the challenge in college teaching is not simply covering the material but uncovering it (Sandler, Silverberg, and Hall 1996, 41).

The typical college classroom employs the "talking head" model of teaching. Students are supposed to listen to what the professor says, take notes, memorize the information, and later reproduce it for an exam. This teaching and learning strategy is known as the *transmittal* model in that teachers are supposed to transmit knowledge to their students, who are then supposed to absorb and understand it. In this model, students are passive recipients rather than active learners.

Faust and Paulson (1998) say that traditional lecturers often resist moving to *active learning* strategies because they're afraid they'll cover less material. "...Weighing content coverage against active learning," Faust and Paulson note, "creates a devil's bargain: Either teach more material and have students learn less, or teach less material and have students learn more

of it" (Faust and Paulson 1998, 17). They argue that exposing students to slightly less content but requiring them to engage the material more meaningfully is definitely the choice that better educates our students. My interpretation of what they're saying is that it is better for students to grapple with less content — but to grasp the depth of the material with all of its nuances so that they can analyze it — than to learn a lot of content at a superficial level. No matter how much material we're "covering" in our classes, if our students aren't learning and retaining it, what purpose does it serve?

King (1993) maintains that the transmittal model is outdated and is ineffective in teaching students critical thinking skills. An alternative, King suggests, is the *constructivist* theory of learning. According to this approach, *knowledge* doesn't come packaged in books, in journals, on CD-ROMs, or in teachers' minds, and is thus not able to be "transmitted." *Information* can be "transmitted," but knowledge is a state of *understanding* and can exist only in the mind of the individual learner. Thus, knowledge must be *constructed* or *restructured* by individuals, who continually try to assimilate new information with what they already know and understand.

In the constructivist view of learning, students use what they already know along with their prior experiences to help them incorporate and understand new material. This idea follows Piaget's theory (1952) of the active nature of the learning process. Learners must generate new relationships between and among new material, and between new material and what they already know. The constructivist model of teaching and learning places students at the center of the process and encourages them to think about ideas, discuss them, and make them meaningful for themselves. As the teacher, you're still responsible for presenting course material; but you present it in ways that encourage students to do something with the information, to interact with the ideas, and to relate the new material to the material they've already learned. The move from the *transmittal* model to the *constructivist* model of teaching and learning means that we as teachers have to figure out how to encourage active learning in our classrooms. It usually calls for shifting from straight lectures to a format that incorporates *collaborative* or *cooperative* learning strategies.

Some theorists use the terms *collaborative* learning and *cooperative* learning interchangeably, while others make distinctions between the two. The literature supports the idea that they're not one and the same. Although they share many common elements, *collaborative* learning is much more than simply using groups in class (Nygard 1991). Kenneth Bruffee (1984) says that, in collaborative learning, the teacher defines the task and then organizes the students to work it out collectively. In this learning model, which shares some theoretical underpinnings with feminist

pedagogies — that is, methods that promote equal opportunity in the classroom — students are no longer perceived as passive recipients of the teacher's knowledge, and knowledge is no longer viewed as objectified "truth." Wiener (1986) adds that knowledge depends upon social relations and intellectual negotiations. Collaborative learning, therefore, requires that student groups work on tasks that have more than one answer or solution, and that require, or benefit from, multiple perspectives. Thus, the completion of the assigned task benefits from collective judgment.

Collaborative learning is also distinguished from *cooperative* learning in that it requires students to reach consensus on an issue. This pushes students to work together rather than against each other. Listening to their classmates' divergent views helps students realize that perspective and bias play a role in everyone's thinking. Over time, students will eventually start challenging the ideas of the so-called "experts." When consensus works effectively, students do some genuine intellectual negotiation in which they share and revise their thinking. Wiener (1986) suggests that a group's effort to reach consensus is the major factor that distinguishes *collaborative* learning from simply having students work in groups (i.e., *cooperative* learning).

Another distinguishing feature of collaborative learning is that you, as the instructor, do not circulate among the groups of students. In fact, the collaborative learning model *discourages* teacher circulation among the groups in the belief that the teacher's presence can be intrusive. Your presence may, for example, heighten or inhibit the activity of the group. So you should instead simply serve as timekeeper, occasionally asking groups how far along they are toward completion and keeping them focused on the goal. By keeping your involvement to a minimum, your students will tend to take more responsibility for their own learning. During collaborative exercises, your role changes to that of class manager, in charge of setting the task, creating seating arrangements, putting together groups, overseeing group dynamics, and synthesizing once the students have reconvened into one large group. (Note: If students have to do some preparation at home to get ready for the group task, you may also need to solve the problem of the unprepared student. Some instructors have such students do the homework during class and then join their groups once they've finished the preparatory work.) You'll observe the workings and dynamics of the groups from afar and keep a low profile, though on occasion you may have to intervene and make adjustments as you deem necessary.

After your student groups have completed their tasks, you reconvene the large group and start synthesizing the students' work. Following each group's report to the entire class by the group "recorder" or "spokesperson" — during which there is no class or instructor discussion — you'll

need to use your knowledge and expertise in your field to help students synthesize each other's work. The goal is to have students see the similarities, differences, parallels, and contradictions among the various groups' perspectives. In doing so, your students will take more responsibility for their own learning, become more open to divergent points of view, and develop a greater investment in each other's contributions. Many studies also show that students who learn via collaborative exercises have greater long-term retention of the material.

Much of the research on group work has examined what Johnson, Johnson, and Smith (1991b) call *cooperative* learning. *Cooperative* learning shares so many characteristics with *collaborative* learning that Sandler, Silverberg, and Hall (1996) use the term *collaborative* learning to refer to any learning that occurs when students work together. Johnson et al. (1991b, iii), however, state that *cooperative* learning is "the instructional use of small groups so that students work together to maximize their own and each other's learning." They make a further distinction between simple small-group exercises and what they call *cooperative* learning. According to these researchers, to be considered *cooperative* learning, group exercises need to be *structured* in such a way as to maximize learning and cooperation.

Cottell, Jr. (1996) says that cooperative and collaborative learning strategies share a basic respect for all students and a faith in their potential for academic success. Another commonality is that both approaches feature a sense of community, with the understanding that learning is a social activity. Cottell believes that students who work together become more engaged intellectually, and that there may be synergistic effects resulting from this type of collaboration. Through the use of cooperative and collaborative learning strategies, Cottell says:

> ...The ensuing peer relationships can have affective results, such as helping students to foster positive social interactions that can help improve racial/ethnic relations, ameliorate sex-difference issues, neutralize the negative effects of stereotyping, and advance self-esteem (Cottell 1996, 1).

According to Cottell, another similarity between cooperative and collaborative learning is that:

> ... They share a belief that learning is an active, constructive process. As a result, learning is not passively absorbed, nor are facts simply added to an existing schemata. Students often take new material — including conflicting viewpoints — and integrate, reinterpret, and transform it until new knowledge is forged. Thus, learning is produced, not reproduced (Cottell 1996, 2).

Notice the similarity between Cottell's overview of the notion of students working together and the work of Sandler et al. (1996):

> As does any pedagogical strategy, the collaborative model brings with it its own ideological assumptions. Just as a lecture format assumes that the teacher's role is to impart knowledge to "sponge-like" students, collaborative approaches assume that students should be involved not just in receiving knowledge but in constructing it. A collaborative structure gives as much value to the process as to its product (Sandler et al. 1996, 44).

Using collaborative learning groups within a more traditional lecture- or discussion-type class may engage more of your students in the content of the course, improve their comprehension of the material, boost participation, and increase the likelihood that your students will actually apply what they've learned. Johnson et al. (1991b) say that all of these positive results are more likely to occur because, when students rehearse — that is, think about and discuss — information soon after they've received and processed it, they usually retain more of it.

In truly *cooperative* learning (which many might still call *collaborative* learning), the following criteria apply:

- Students have clear, positive interdependence. In other words, they depend upon one another to complete a task.
- Students promote each other's learning and success.
- Students hold each other personally and individually accountable to do a fair share of the work.
- Students use interpersonal and small-group skills, such as active listening and seeking clarification of other students' perspectives.
- Each group processes how effectively its members are working together.

There are several strategies for achieving this kind of accountability. One of my colleagues asks students to submit a narrative about their own contributions to the group and what they might have done differently to enhance the group's effectiveness in working together on a task. Sometimes, she asks students to rate themselves and their partners with respect to their levels of commitment and performance within the group (Johnson, Johnson, and Smith 1991b, iv).

Johnson and his colleagues say that when groups are structured this way, exercises can teach specific content and problem-solving skills while

maximizing the probability that all students will contribute and that no single student will wind up doing all the work.

Cooper and Mueck (1990) add certain additional criteria they deem necessary for cooperative learning exercises to be successful. These researchers believe, for example, that we as teachers should select the students for each group rather than allowing students to self-select their own groups. In Cooper and Mueck's experience, allowing students to select their own team members produces excessive socializing and off-task discussion within the groups. They suggest that we group students heterogeneously based on achievement, ability, and any other factors that may promote diversity of groups.

Silberman (1996) offers several other strategies for forming random groups. We can:

- Use color-coded cards so that all students with the same color can work together.
- Use nametags of different shapes and colors to designate different groups.
- Use students' birthdays, with students lining up along a wall according to the month of their birthday and then forming groups (depending on how many groups are needed).
- Use playing cards with jacks, queens, kings, aces, etc. to form four-person groups.

An even simpler way to form random groups is to have students count off, starting with 1 and ending with the number you select, depending on how many groups you want. Then all the 1's form a group, all the 2's form another group, and so forth.

There may be times when you'll want to select the groups, other times when you'll use a more random approach, and even times when you'll allow students to self-select their groups — despite the potential pitfalls.

Cooper and Mueck (1990) stress that all of the teams in your classroom must have some serious, task-oriented students who can produce a high level of student involvement and on-task behavior. The researchers also suggest that team building should be among the first activities you implement as the teacher to encourage group cohesiveness. You can do this in a variety of ways, as long as you allow the students to spend the first 10 to 20 minutes of their initial cooperative learning session getting to know each other. One way you might encourage group cohesiveness prior to students working on the task is to ask the group members to find several things they share in common. That simple task will usually get them talking and bonding with each other.

The benefits — and risks — of cooperative and collaborative learning.

Johnson et al. (1991b) summarize a wide body of research on cooperative and collaborative learning strategies. They found that, compared to individual or competitive learning strategies, group strategies often result in higher achievement, better student relationships, greater use of higher-level cognitive skills, increased self-esteem among students, more-positive student attitudes toward the subject matter, greater motivation and persistence, greater willingness to take on difficult tasks, and, usually, decreased absenteeism. (Decreased absenteeism is qualified because students who are unprepared to engage in collaborative exercises may actually skip classes.) In fact, the Johnson et al. (1991b) analysis of hundreds of comparative studies shows that the use of cooperative learning strategies promotes higher student achievement than either individualistic approaches or ones that rely on competition.

Eubanks (1991) concluded that collaborative and cooperative learning strategies correlate with increased rates of retention and persistence to graduation, particularly among minority students. Sheridan, Byrne, and Quina (1989), meanwhile, found that, after using collaborative strategies in their classes, many faculty reported that their students seemed to show more enthusiasm for the course, and were even more likely to visit them in their offices.

Sandler, Silverberg, and Hall (1996) cite studies that assess collaborative learning strategies from the perspective of students. The advantages of cooperative and collaborative learning strategies, according to students, include:

- The opportunity to master subject matter.
- The chance to have quality peer interactions.
- The chance to better understand divergent points of view.
- Greater class interest and enjoyment.
- Increased motivation to attend class.

Sandler et al. conclude that the de-emphasis on competition, the opportunity to be active learners, and the emphasis on listening skills and cooperation all contribute to make collaborative learning strategies useful teaching and learning tools, especially when it comes to increasing the class participation of women and minorities. The researchers further claim that faculty members who use collaborative learning exercises may reach more learners, and not just women and minorities. The research shows that *all* students seem to benefit from collaborative strategies, and that females and minorities simply seem to perform particularly well in collaborative environments.

One of the major concerns of Sandler and her co-authors, however, is that the traditional literature does not examine how gender and race affect individuals within groups. Structured, interdependent groups working on a common task may not automatically create a learning environment that is positive and fair to all students. Power dynamics that operate in society at large may govern the interactions of the collaborative groups if they're not supervised carefully. Sandler and her co-authors suggest that if students in a group project assume particular roles or assign roles to each other — such as recorder, synthesizer, and presenter — we as teachers need to ensure that women are not always chosen as recorders and men as presenters. In other words, we must ensure that roles within groups do not play out gender-based and race-based stereotypes. Otherwise this pedagogical strategy will follow the same patterns as those found in more traditional classes, with females and minorities participating less.

Similarly, Krupnick (1993) notes that we as faculty need to pay attention to gender, race, ethnicity, and class issues in group composition and dynamics, since some studies show that group work may reproduce traditional power relationships unless there is a deliberate and successful attempt to deal with gender and racial bias from the start of group activities. Cooperative and collaborative group exercises have the *potential* to help build better relationships among students who are different from each other. Many studies show that cooperation fosters more-positive cross-ethnic relationships than competition does. But we as teachers have to make sure that our cooperative and collaborative learning efforts don't "backfire," merely recreating and/or reinforcing conditions that have hampered some students all their lives, whether in the learning arena or elsewhere.

There will be other issues for you to deal with as well if you decide to integrate collaborative learning exercises into your classes. For example, Sandler et al. (1996) discuss the role of student responsibility and some students' resistance to the collaborative model. Many students may be used to the "traditional" lecture format; they might believe their role is to write down what the teacher says, and that any departure from this arrangement in terms of student participation is a waste of time. As a teacher, then, you'll need to guide your students toward assuming more responsibility for their own learning. You may need to explain the goals and benefits of active participation and group work, and show the contrast for them with the more passive traditional model. Your students may need to clarify their expectations about what participation means and how you assess and grade it.

Related to this issue of student responsibility is the most common worry about collaborative work voiced by faculty members: the "social loafing" phenomenon or "free rider" problem. Students often share this concern with their instructors. How do you and your students ensure that

all group members contribute to the final product? How can the process guard against the possibility that the final product is the result of the work of one or two highly motivated students? Sandler et al. (1996) admit that there is no way to eliminate these possibilities in collaborative work. But there are ways you can minimize the likelihood that the "free rider" problem will occur. Some assessment strategies, for example, are designed to lessen the possibility of "free ridership." For instance, you can assess individual performance within each group by requiring each group member to participate in an oral presentation, or to submit a report of who did what and how tasks were assigned within the group. You can administer a quiz, either written or oral, or select a student group member at random to take a quiz for the whole team. Typically, instructors who use both individual and group assignments devise a system to grade both the individual and group performances.

Grading is always a concern of instructors who incorporate collaborative learning models into their classes, not only in terms of how to weigh individual student performances but also in terms of its role in the authority and power issues we've discussed previously. As a teacher, you still wield a certain amount of power and authority by virtue of the fact that you evaluate your students and assign them grades. Some instructors who are committed to feminist pedagogies are experimenting with alternative models of evaluation in which students design methods of evaluation for their own work, or use semester-long portfolios or peer assessment strategies.

If you're interested in employing collaborative and cooperative learning activities within your classes, Johnson et al. (1991a) suggest the following essential components:

- *Interdependence* — As the instructor, you define the task your student groups must tackle. This is important, because you have to create a task for which the final product makes sense only as a collaborative effort. Students need to believe that they're engaged in a collective effort, and that their success is *interdependent*. You can ensure interdependence by assigning roles such as summarizer, recorder, reporter, synthesizer, researcher, "accuracy coach" (who makes sure everyone in the group understands what's going on and why), and observer (who oversees how well the group process is working).
- *Interaction* — Encourage your students to help each other. This approach differs markedly from other learning models in which student sharing of information is considered cheating.
- *Individual accountability* — Create *small* groups; usually groups of four or five students work well. Give individual as-

sessments to each student, ask each student questions, observe the groups in action, assign roles, and ask students to teach what they've learned to other students. Tell each group that it is responsible for educating all of its members, and that any group member may be asked to report the results of the group's efforts.

- *Development of social skills* — Collaborative exercises teach students valuable communication skills. Be sure to emphasize the importance of such skills by discussing how students will use them throughout their lives.
- *Mechanisms for group members to evaluate their progress and working relationships* — Your students must reflect on their effectiveness as individuals and as group members. They need to decide what behaviors are helpful in moving the group toward completion of the task at hand. In doing so, the students will improve how they work as a group to achieve their goals (Adapted from Johnson et al. 1991a, 16-25).

If these criteria are met, and you carefully design each group task so that the end product requires or benefits from collective effort, you should be able to use cooperative and collaborative learning strategies successfully in your classes.

Cooper and Mueck (1990) suggest that you can even use cooperative and collaborative learning strategies within your more traditionally structured classes, without a big class time commitment. They offer several simple exercises you can try to start experimenting with such strategies. For example, you can pause after fifteen or twenty minutes of lecture and ask pairs of students to reflect on the lecture material in particular ways (e.g., have students create examples or develop questions related to the lecture). Or, you could have groups of students form teams to study for exams; you could give them review materials and then ask them to reach consensus on effective answers.

Some specific group learning strategies.

There are many possible group learning strategies you can use, some of which are described in materials cited in the "References" section of this book. I'll briefly discuss a few of them here, though, so that you can get a sense of the types of specific tactics you can employ to help students learn from each other.

One of the many collaborative learning strategies is known as the *modified focus group*. This technique works in a variety of disciplines and contexts. In fact, it's the method I used in my research for getting students

and faculty members to generate ideas about improving college instruction. It's also the approach I use most frequently in my own classes.

For a modified focus group to operate successfully in your class, you have to set up a question or problem that requires collaborative effort and multiple perspectives to solve. Begin by asking your students to think about the issue presented and to do some writing about it. If you want to, you can ask the students to generate and then list a certain number of ideas. Groups of four or five students work best. (You can set them up randomly or with some objective in mind — as, for example, setting up heterogeneous groups to foster interaction among diverse students.)

Next, ask each group to select a recorder (making sure that women are not automatically chosen) and a reporter who will speak about the group's findings when the large class reconvenes. (Note: If you'd like, one person can serve in both roles.) You can also assign other roles, such as "observer of group process" and "synthesizer."

To ensure that everyone's ideas are heard, and that no one person dominates in a group, a round-robin process begins in which each group member shares one item from his or her list. When all the members of the group have shared their first idea, each group member then shares his or her second idea. The process continues until all ideas have been heard. The recorder writes everyone's ideas on newsprint, a flip chart, or a sheet of paper so that everyone can review all of the ideas that have been offered. During the round-robin process, there is no discussion of ideas unless clarification is needed.

Following the round-robin process, you can use one of two approaches to help students work toward a final product. The first approach involves having each group of students rank-order all of the ideas from the group's master list on a continuum of 1 to 5, with 1 being of least importance and 5 being of greatest importance. The group leader can then tabulate scores for each of the ranked items to determine the group's final rankings, which are then reported to the large group. A second approach involves getting students to reach consensus by discussing their ideas from the master list and coming to some sort of group agreement (which may or may not be "majority rules," although you should strongly encourage a consensus outcome). You may allow for minority reports if groups reach impasses in their attempts at consensus.

A last step in the modified focus group technique is reconvening the large class. Each reporter outlines the ideas of his or her group for the class, without discussion at this point (unless clarification is requested). Other group members may add to or clarify their own reporter's presentation. After all of the groups have reported and students have observed the multiple

perspectives on the issue at hand, you can synthesize what has occurred by encouraging students to analyze and share their perceptions and interpretations of the similarities, differences, and contradictions among the groups. This is an opportunity for a larger perspective to be created — one that is sometimes even larger than the sum of the various groups' insights.

Another cooperative learning strategy that has wide applicability is the *jigsaw* technique. King (1993) says that jigsaw exercises are designed so that each student in a group gets only one part of the learning materials, and must learn that one part in order to teach it to the others in the group. Each student's part is like a piece of a jigsaw puzzle, and because students must combine their pieces to solve the problem, each team member's contribution is highly valued.

The *jigsaw classroom* was first developed by Eliot Aronson (1999) in 1971. At that time, the school system of Austin, Texas, was desegregating and the schools were in turmoil. Aronson was called in to ease the process. Noticing that traditional classrooms were competitive, Aronson tried to apply what Gordon Allport (1954) had taught us about prejudice reduction. Allport had discovered that, in order for group contact to be successful in reducing prejudice, group members must have equal status and pursue common goals. Aronson et al. (1978) created what they called the *jigsaw classroom*. The goals of the jigsaw classroom were to reduce prejudice and raise the level of self-esteem of grade-school children. Aronson and his colleagues achieved these goals by putting the children in small, desegregated groups and making each child dependent on the others in his or her group to learn the course material and do well in the class.

To use the adapted jigsaw technique in the college classroom, you need to divide the material to be learned into several parts (no more than five or six). Assign your students to "home teams" with as many members as there are parts of the learning materials. Each home team member receives one part of the material to be learned. Students then assemble into "expert groups," where they gather with the other students who have received the same material they have. Within these groups, students read and discuss their part so they learn it thoroughly. They then return to their home teams and teach the part they've learned to their teammates. In this way, "jigsaw" emphasizes interdependence. On the other hand, each student is tested independently — which emphasizes individual accountability.

King (1993) also describes a cooperative learning technique known as *constructive controversy*. Here, students work in groups of four, and pairs of students within these groups are assigned to opposing sides of a controversial issue. Each pair researches its position, and then the pairs discuss the

issue as a team. This technique is designed to help students become more informed, not to encourage debate. In fact, after some discussion has taken place, pairs of students switch sides of the issue and then argue the opposing side. Each student is then tested individually to assess his or her comprehension of the material.

These are just a few examples of cooperative and collaborative learning strategies you can use with your students. Collaborative learning strategies promote the development of student friendships, reduce students' prejudices, and enhance their appreciation of diversity. Additionally, the very strategies that help students get to know and work with one another also pay other attractive dividends. Along with the valuable impact these strategies have on producing more tolerant citizens, they seem to enhance learning and retention of material and promote the development of critical thinking skills. Moreover, some studies have reported increased rates of retention of material and persistence to graduation among students — particularly minority students — who have participated in collaborative learning activities.

The Essence of Promoting Student Participation and Motivation

What all of this tells us is that, as dedicated teachers, we need to be experts in our disciplines; we need to master the teaching strategies that work for our students; and we need to show enthusiasm for our disciplines, for teaching, and for our students. Add to this already challenging mix another critical set of factors: Effective teachers connect with their students; create a safe, inclusive, respectful classroom environment; and set up exercises and learning tasks that foster interaction, learning, and bonding among students.

But what if there are students in your classes whose classroom behavior (perhaps their behavior is rude or inappropriate) interferes with your goals for this kind of classroom environment? In Chapter 5 we'll discuss this increasingly common scenario and explore what you can do about it.