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| **ILLINI INSTRUCTOR SERIES** **Students Learning Together:** **Collaborative or Cooperative Learning** ***Having students learn in groups is a powerful way to engage students intellectually with the content of your course.***Two widely accepted principles about knowledge and learning—learners construct their own knowledge and learning is an inherently social phenomenon—support the use of group learning. Working in a small group provides learners with opportunities to articulate ideas and understandings, uncover assumptions and misconceptions, and negotiate with others in the process of creating a product or reaching consensus. Group activities enable students to discover deeper meaning in the course material and improve creative thinking skills. The most effective use of group work is that which engages students with higher-level content that is thought-provoking, difficult to understand, or has multiple interpretations.  ***What’s the difference between collaborative learning and cooperative learning?***  The terms *collaborative learning* and *cooperative learning* are often used interchangeably to refer to educational activities in which students work together and with the instructor toward a common intellectual goal. Collaborative and cooperative learning differ in some fundamental ways that influence how group activities are organized and presented to your classes. Briefly put, collaboration is a philosophy of interaction, whereas cooperation is a structure of interaction designed to facilitate the accomplishment of a task (Panitz, 1997).  Collaborative learning highlights the contributions of individual group members, stresses the sharing of authority, and leads to consensus building on topics without a clear right and wrong answer. Dialogue among students is stressed; teacher intervention is not. Group governance and group processing remain in the hands of the students (Panitz, 1997). In cooperative learning, the instructor designs a task and a group structure for accomplishing the task, including the assignment of roles to group members. Cooperative learning is often thought of as a subset of collaborative learning that has students interacting under specific conditions set up by the teacher: positive interdependence, face-to-face interaction, individual accountability, collaborative skills, and group processing (Johnson, Johnson, & Smith, 1998). ***How should I use group learning strategies?*** It is not unusual for instructors to vary their approaches from cooperative to collaborative from course to course or even within an activity (Millis & Cottell, 1998). We can note that cooperative learning is more teacher-directed and makes most sense for learners needing more structure. Collaborative learning is characterized by more equal distribution of power and is appropriate for those needing less externally-imposed structure. It is worth thinking about where your class is in their progress toward becoming self-directed learners.  Cuseo (2002) lists the major forms of collaboration between students as (1) small group discussion where students share views on an issue; (2) group project or group report; (3) study groups; (4) collaborative learning groups in which students reach consensus; and (5) cooperative learning characterized by structures (or procedures), which are content-free ways of organizing the social interaction of the group. Learning some cooperative learning structures is useful because you can use them in different settings for many purposes. Group activities, thus, range from informal group discussions to highly structured small group activities. They can take place in class or out of class. Such activities can be short (part of one class session) or long (extended projects that take weeks, a semester, or more). The degree of guidance from you, the instructor, varies according to your purpose.  Group learning activities work best when preceded with time for the students to think *individually* about a problem or question, either in class or as an out-of-class assignment. The activities should be challenging, engaging, and meaningful. It is also important to provide enough variety in learning activities to maintain student interest and enthusiasm. Tasks for the group work include linking course materials to personal experience, developing arguments, summarizing content, problem solving, analyzing data, and question-generating. ***What are some small group learning activities I can use?***  Let’s look first at **informal group** work. The groups are temporary, with no time spent on assigning people to groups, getting into groups, or assigning roles. They last one session or less and are used to ensure cognitive processing and engagement in learning. They require little preparation time and are easy to use in both lecture and discussion classes. * *Pairs. Think-pair-share.* Students are given a prompt (a question, problem, visual, etc.) and first asked to think about the prompt individually and jot down ideas. Students then form pairs, talk about their responses, and formulate a joint response. Some pairs are then called on to summarize their discussion for the class.
* *Pairs. Think-pair-square.* Same as above, but two pairs of students join together to share and compare the results, rather than moving to a whole group discussion.
* *Pairs. Turn-to-your-neighbor discussions.* Students to "turn to a neighbor" and brainstorm answers to a question or discuss a solution to a problem. Call on students for answers. Ask the class for a show of hands of who agrees or disagrees with an answer.
* *Pairs. Pair-and-compare.* During a 2-3 minute break in lecture, students form pairs to compare their notes, remaking the notes by adding information or correcting as needed.
* *Small group discussion.* Select a well-worded, thought-provoking question to initiate the discussion. (The best questions are prepared ahead of time—not during class!) Allow students enough time to think about the question before they share their ideas with their group. Some method of [reporting out](http://www.oir.uiuc.edu/Did/Resources/Illini%20Instructor/reportingout.htm) to the whole class can be used.
* *Small group homework check.* Have students do their homework individually outside of class. During class on the day the assignment is due, have students form groups and then compare their answers to the assignment. The students in each group must agree on answers and turn in a group solution along with their individual work.

Sometimes it is useful to use **more formal structures**. The groups are often formed by the instructor and may stay together for an extended time (weeks or even the entire semester). The instructor assigns roles, specifies the objective of the task, explains the cooperative learning structure to be used, monitors both student learning and group functioning, and helps students process how well their groups worked. Naturally, these structures are more complicated. * *Small groups. Three-step interview.* Four-member groups subdivide into pairs. One member of each pair interviews the other using open-ended content questions that you provide (step 1). They then switch roles (step 2). Each student then shares the information obtained from his or her partner with the whole group (step 3). Students report what they heard and not what they said.
* *Small groups.* [*Jigsaw*](http://www.oir.uiuc.edu/Did/Resources/Illini%20Instructor/jigsaw.htm)*.* This structure is useful when a topic or problem is complex and involves multiple perspectives. Each group member takes responsibility for one part of the problem, meets with students from other groups who have the same responsibility (the expert group), and then teaches his or her part to the members of the original group. [*Within-team jigsaw*](http://www.oir.uiuc.edu/Did/Resources/Illini%20Instructor/withinteamjigsaw.htm) is one variation of the traditional jigsaw.
* *Small groups.* [*Roundtable*](http://www.oir.uiuc.edu/Did/Resources/Illini%20Instructor/roundtable.htm). Group members each record a contribution in response to your prompt on a single page that is passed from one member to the next. The paper may go around more than once.
* *Small groups.* [*Send-a-problem*](http://www.oir.uiuc.edu/Did/Resources/Illini%20Instructor/sendaproblem.htm)*.* Each group proposes solutions to problems or issues identified by another group or by the instructor.
* *Pairs.* [*Dyadic essay confrontation*](http://www.oir.uiuc.edu/Did/Resources/Illini%20Instructor/dec.htm). In response to an assigned reading, students write an essay question and model response to the question. During class, students exchange questions with another student and write a spontaneous response to that question. The pairs compare the spontaneous response with the model response for the two questions.
* *Whole class.* [*Corners*](http://www.oir.uiuc.edu/Did/Resources/Illini%20Instructor/corners.htm). Students move to a corner of the room based on their response to a multiple-choice question, level of agreement with a statement, interest in a topic, or other personal characteristic. Students in each corner can discuss why they came to that corner and select highlights to share with the whole class. You can also use this to form teams—heterogeneous teams by selecting one individual from each corner to make a 4-member team, or homogeneous teams by selecting individuals in one corner to make a team.

***How should groups be formed?*** Groups can be as small as two students or as large as the whole class. The formation of the groups depends on your goals for using groups.  **Random approaches:** When you are using temporary informal groups for a class activity, random assignment to a group works well. You can form random groups by* Simply having students “turn-to-your-neighbor” for pair work or “form teams of three” for group work.
* Counting off—24 students would form groups of four by counting off 1-2-3-4-5-6, 1-2-3-4-5-6, etc. All of the ones would become a group and so on.
* Using color-coded cards—students pick up colored cards as they enter class and all students with the same color work together.
* Using playing cards—students are given cards as they enter class and those with same numbered card work together.

 **Instructor-selected groups:** For longer projects, instructors may want to create heterogeneous teams that distribute students into different groups based on ability, strengths, experience, gender, ethnicity, or some other characteristic, depending on the purpose of the assignment. Instructors first learn about the students in one or more of the following ways:* Collecting student data sheets that include
	+ course-related information—major, courses taken in the discipline
	+ experience—work, travel
	+ personal information—where they live, phone number, email, interests
* Administering questionnaires with questions relevant to the project
	+ Strengths—have students rate themselves on their ability with certain computer programs, writing ability, organizational ability
	+ Learning styles
* Having students prepare a resume
* Using data such as academic progress in the course, race, gender

 Instructors then form groups according to a plan, such as having individuals with certain kinds of experiences or strengths in each group, having students with different learning styles in each group, having groups that do not have only one woman or only one minority member, and so on. **Student-selected groups** are not generally recommended, although some report positive results with student-selected groups as long as the goals and purposes are clear (Cooper, 2003).  ***What is my role as the instructor?***  In a traditional lecture class, the instructor's primary function is that of the expert who supplies information, solutions, and meaning. Group learning assumes that the instructor is not always the sole source of knowledge and that students can make valuable contributions.  When you use collaborative or cooperative learning, you will think of yourself more as facilitator, coach, and role model. Your leadership is important to help the students understand what is expected of them. Since a goal of group learning is to keep the students actively engaged, your goal as facilitator is to design activities that allow knowledge to be discovered, explored, and shared.  Instructors who are accustomed to a traditional teacher-centered classroom often find it difficult at first to involve the students. You may find yourself instinctively lecturing, or talking more than you had wanted. In addition, students accustomed to traditional classes may at first resist having to participate. It is important at first to seek a balance between your expectations and those of your students. On the first day of class and in your course syllabus, let your students know you will be using collaborative/cooperative learning strategies. Faculty report that the key to success is to start small. ***Final Words***  Don't give up! With experience you will learn to design effective collaborative activities, assign groups, facilitate group work and debrief groups. You will learn to anticipate a wide range of student reactions to collaborative learning. Ultimately, in time you will develop your own activities to meet the needs of your teaching style and course content.  **Additional resources:**  Contact the Center for Teaching Excellence at (217) 333-3370 or did@uiuc.edu. Cooper, J. (2003). Group formation in cooperative learning: What the experts say. In J. L. Cooper, P. Robinson, & D. Ball (Eds.), *Small group instruction in higher education: Lessons from the past, visions of the future* (207-210). Stillwater, OK: New Forums Press. Cuseo, J. B. (2002). *Igniting student involvement, peer interaction, and teamwork: A taxonomy of specific cooperative learning structures and collaborative learning strategies.* Stillwater, OK: New Forums Press. Johnson, D. W., Johnson, R. T., & Smith, K. A. (1998). Cooperative learning returns to college: What evidence is there that it works. *Change, 30* (4), 27-35. Millis, B. J., & Cottell, P. G., Jr. (1998). *Cooperative learning for higher education faculty.* Phoenix: Oryx Press. Panitz, T. (1997). Collaborative versus cooperative learning—A comparison of the two concepts which will help us understand the underlying nature of interactive learning. *Cooperative Learning and College Teaching, 8* (2). Also available at <http://home.capecod.net/~tpanitz/tedsarticles/coopdefinition.htm> (accessed 5/07/04).  *June 2004* |

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