Cooperative learning is defined by an emphasis on positive interdependence among students to learn course materials, face-to-face interaction, individual accountability, the development of interpersonal and small group skills, and group processing of group functioning. In the last 10 years, lower-, upper-, and graduate-level psychology courses at the College of Notre Dame, in Maryland, have been reorganized to function as collaborative courses. Typical class activities in the courses include small group discussions of assigned reading and exercises, summaries of research articles presented to and discussed in small groups, and integrative group analyses of videos or other presentations. The use of student groups in the courses is guided through several stages, including their formation at the beginning of the term, development, the assessment of groups and individuals, and the resolution of conflicts. Collaborative learning activities employed fall into two categories: long-term projects, involving the completion of a research project and/or presentation by two or more people working together outside of class, and in-class exercises, using spontaneous or instructor-formed groups for a particular exercise only. In reorganizing courses, collaborative learning experiences can be introduced in small stages into existing class formats until faculty are ready to undertake the total redesign of courses. (BCY)
COLLABORATIVE LEARNING
ACROSS THE PSYCHOLOGY CURRICULUM:

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STRUCTURE AND PROCESSES OF COLLABORATIVE LEARNING

Benefits of Collaborative Learning

Collaborative (often called cooperative) learning is defined by five key elements: positive interdependence, face-to-face interaction, individual accountability, interpersonal and small group skills, and group processing of group functioning (Johnson, Johnson and Holubec, 1986.) The positive interdependence of group members means that they need to rely on each other for learning course material, rather than just on their teacher or on themselves as individuals. It is what distinguishes the collaborative learning group from a discussion group.

While faculty are usually able to structure small group discussions and individual accountability into their courses, they may be reluctant to use collaborative learning as a pedagogy due to unfamiliarity with its many varieties or inexperience in developing collaborative learning groups. Both of these issues will be addressed in this presentation.

Why would college faculty want to include more collaborative learning in their courses? "Active learning," an umbrella term which includes collaborative pedagogies, has been recognized for both involving students in learning and aiding them to think about psychology more deeply than relatively passive lecture techniques do (Meyers and Jones, 1993). Active learning is described as a process in which students talk and listen, read, write and reflect, stimulated by class structures or teaching strategies such as small group discussion or cooperative projects (Meyers and Jones, 1993). Collaborative learning's specific benefits include students' development of increased interpersonal and group process skills (e.g. Bryant, 1978 and our own course evaluations.) This benefit often extends to their faculty mentors as well!

Faculty and Student Roles in Collaborative Learning Experiences

Faculty roles in collaborative learning classes and exercises differ considerably from those involved in primarily lecture or large group discussion classes. They include structuring learning experiences for student groups, facilitating team building and effective group process, consulting to small groups on issues related to course content, managing and resolving group conflict, as well as teaching interpersonal and group skills to students. The challenges for faculty attempting to employ collaborative strategies include the necessary shift from the more familiar presenter role, the need to create new types of learning experiences while still maximizing coverage of content, practical issues of group development and intervention, as well as decisions about group vs. individual accountability and evaluation.

Reciprocal to changing faculty roles, student roles differ from passive note-taking and occasional questions or answers to questions. Student roles in collaborative learning classes and exercises include active reading and listening, eliciting information from others in group, asking questions to clarify course concepts, thoughtful contributions to small group discussion of course material, critical thinking about the subject (e.g. research articles, concepts, example), mastering interpersonal and group skills, and facilitating their own learning through group participation and leadership. The challenges for students in this new mode include finding ways of effective cooperation with others who differ from them (e.g. in motivation, ability or work habits, as well as in demographic ways), coping with logistical and scheduling problems in out-of-class projects, and balancing work load equitably among group members.
There are numerous ways the faculty member may utilize collaborative learning to increase students' depth and breadth of comprehension of psychology. Entire college courses may be restructured around collaborative learning or collaborative experiences of long or short duration may be incorporated into more traditionally-structured courses. In the last ten years, we have successfully reorganized numerous lower and upper level, as well as graduate, psychology courses to function as collaborative courses. These include Theories of Personality, Social Psychology, Child and Adolescent Development, Introduction to Counseling, and graduate Adulthood and Aging and Social Relationships courses. We have also successfully developed long-term collaborative projects in many courses (e.g. Introductory Psychology, Child and Adolescent Development, Experimental/Statistical Methods, and graduate Leadership Seminar) as well as used short collaborative exercises in all our classes.

COURSES STRUCTURED AROUND COLLABORATIVE LEARNING GROUPS

General Structure and Processes in a Collaborative Learning Course

The collaborative learning course is characterized by standing discussion/project groups (ideally 5 - 6 members each) which engage in a variety of group learning activities in class and occasionally outside of class. We have found that groups of 7 or more members encourage social loafing and groups of fewer than 5 members become too small when one or two members are absent.

Typical class activities include, instead of class lecture, one or more of the following:
1. Assigned reading/exercises: Students have read the text or other reading assignments or have done workbook exercises. They come to class prepared to discuss this material in their small group. Each group later turns in a daily grade sheet on which all students have rated their level of preparation on a Likert-type scale (e.g. 4 = all reading/exercises thoroughly completed, 3 = reading/exercises mostly or superficially completed).

2. Jigsaw exercises: Students summarize an original research article using a "journal article summary form," with 2 - 4 different articles assigned within a group. Students with weaker backgrounds are always assigned to double up on an article. In class, students first meet in "article groups" to discuss and clarify major aspects of the article, and then present their article to their regular small group. Groups have an integrative question to discuss, which will be an essay question on the next test.

Examples: What are the major influences on aggression against women?
Compare and contrast the impact of transformational and transactional leadership styles on subordinates.

3. Integrative group analyses of video or other presentations: The small groups view and then discuss stimulus materials such as videos and draw conclusions about concepts in human behavior. A temporary "group secretary" records and reports these to the class as a whole. The instructor helps the class process similarities and differences between group conclusions.
Members of collaborative learning groups often form study groups to prepare for examinations, meeting outside of class hours. Critical thinking, application and analysis questions form the bulk of the test, sometimes essay and sometimes in multiple choice format. Test questions are given ahead of time; for multiple choice tests, students receive the questions (but not the multiple choice answers) and work together (usually in their regular small group) to take a mastery approach to the questions before taking the examination as individuals.

**Group Development in a Collaborative Learning Course**

Group development proceeds in structured stages. In *Forming Groups*, the first class begins the process. We usually divide students randomly into groups, by counting off to have a maximum of 6 persons per group. We often use an "introduce yourself to a partner" 5 minute discussion, followed by partners introducing each other to the new small group.

At this time we explain the collaborative learning concept, including the benefits and functioning of small groups. Especially with older students or high achievers, we need to address the misgivings students often have about depending on others for learning outcomes. Group members are asked to set norms for "how you want to work together to learn psychology." Confidentiality of any personal sharing in the group is given as a norm by the instructor if students neglect to include it.

*Developing Groups* proceeds informally, as the instructor moves from group to group in the first few class meetings, helping students learn how to explain and clarify concepts. About two weeks into the course (depending upon number of class meetings), we solicit the first group feedback, with a form asking students to list group members and identify what they, other group members and the instructor could do to improve the group's functioning. After completing the form, group members talk together about what's working and what needs improvement. As a consultant, the instructor helps groups plan strategies to increase their effectiveness. The instructor then receives all the forms, planning additional interventions where necessary. After two more weeks, we do another evaluation to check group progress using the same process.

*Assessing Groups and Individuals* is done through a midterm evaluation which asks for feedback on how individuals in group are contributing, including ratings/rankings on level of preparation, participation, and group leadership. A final group evaluation uses the same format as the midterm one, and asks for individual progress since midterm in qualitative and quantitative form. In some courses points earned through midterm and final group feedback are a small but significant percentage of course grade (e.g. Introduction to Counseling).

*Resolving Group Conflicts/Problems* is an as-needed process. We have found it helpful to follow the following principles. First, keep the group as the focus for problem-solving. Resist the temptation to take charge; and instead encourage group members to resolve their problems internally. Second, keep the focus on the conflict/problem rather than on the person(s) involved. Students tend to see others as uncooperative or wrong in their work habits, while not recognizing their own potential contributions to the problem. (This is particularly true with the "I can't trust others so I'll do all the work myself" type, who can often be identified by their tendency to say "I" instead of "we" when discussing group issues or tasks.)
Third, keep the focus on the interpersonal and group skills needed to resolve the current problem, and on the long term benefits of developing these skills. Even when a group member is clearly abdicating her responsibilities, others are challenged to utilize the experience to increase their own skills. Fourth, only if within-group resolution is not successful does the faculty member make a personal group or individual intervention, depending upon the nature of the conflict/problem. This involves directly confronting the person or concern, asking for that individual or group's input on how to solve the problem, identifying the steps necessary to improve the situation, pointing out the negative consequences of failing to resolve it and follow up to see the eventual outcomes.

**DISCRETE COLLABORATIVE LEARNING ACTIVITIES**

**Long Term Projects**

Collaborative learning activities which stand on their own and don't require a course structure fall into two broad categories, long term collaborative projects and in-class exercises. The prototypical long-term project involves completion of a research project and/or presentation by two or more people working together outside of class. Courses in which we have found good use for group research project/presentations are Introductory Psychology, Child and Adolescent Development, Social Psychology and, of course, Research Methods.

The first step is structuring the project, by dividing the assignment into sections, which are due sequentially through the course. In the syllabus, we describe the complete assignment, especially what is due for each stage or section. We indicate what percentage each assignment is worth, its due date, how each segment contributes to the total project and whether it can be revised and by when. We also clearly identify which segments of the project are to be turned in by individuals and which are to be turned in by the whole group. We schedule one or two check-in conferences with timing clearly indicated.

Next we pair or group students, using a variety of processes. When students know each other, self-selection often works best. When students don't, we have found it helpful to group by similarity of what they are interested in investigating or by compatible schedules. The latter is especially valuable when some students commute and some are residents. Students can request consultation, individually or in groups, at any point during the project. At the end of course or project, we have students evaluate each member's contribution to each group task and to group functioning. We assign the same grade to each student for group tasks based on quality of assignment, unless there are drastically disparate contributions. Sometimes we assign a group grade and an individual contribution grade.

When group problems aren't informally resolved, we schedule a conflict resolution conference: First, each person is asked to clarify her expectations and to articulate her fears. We then, particularly for women students, differentiate between relationships in a task oriented group and in a friendship. We establish a contract with clear behavioral expectations for each person and schedule follow-up to determine if the contract is being met or needs modifying.
In Class Exercises

In-class collaborative learning exercises use groups or pairs formed only for the purpose of that exercise. Spontaneous groups/pairs are sometimes formed informally by the students or the instructor groups students with particular strengths and weaknesses, e.g., students who have had research methods with students who haven't.

Sometimes exercises are based on material prepared for class. Some possibilities are:

1. Students compare homework problems/questions, identifying questions which they want to ask the professor.

2. The group evaluates each student's examples of a construct (e.g., types of conformity) and decides which of them are accurate. They then present the best to class or each member indicates how he/she would revise the original examples.

3. In group discussion, students relate a newspaper or research article read to material from text or class discussion. Alternatively, students read and analyze research article at home and compare their analyses with others in group.

4. Students apply a concept from their readings to practical examples, e.g., as a group they design child care to foster secure attachment, or identify probable brain injury location from a case description of symptoms.

Some exercises allow the instructor to check comprehension of material just introduced in class or help students to develop a new concept. These may be just a few minutes long or may require more time. For such "quickies," students don't move into groups but talk to the person sitting next to them as a respondent who agrees or disagrees. These could include turning to a seatmate and defining a concept just introduced, repeating the description the instructor just gave, or giving an application of the concept.

In somewhat longer exercises, the informally gathered group may identify examples of a new construct from possible instances given by the instructor, e.g., of dependent and independent variables from list of hypotheses. They could apply material just presented in lecture or video, e.g., write a research conclusion from data analysis, or give evidence from a just-watched film that babies are biased to be social. Another possibility is to have them collect some data to provide concrete illustrations of concepts, e.g., to measure the height of other students and graph the distribution to illustrate central tendency and variability.

Conclusion

The structure and process of collaborative learning courses, projects and exercises is a tremendously beneficial challenge for psychology faculty. In well-designed and facilitated situations, students take an active role in their own learning and as a consequence learn more and more deeply. Collaborative learning experiences can be introduced in small stages into existing class formats until faculty are ready to take the plunge into total redesign of courses. Psychology faculty, with more knowledge of group process than most disciplines, are logical candidates to accept this invitation.
References


