

TEACHING ELEMENTS

HELPING SMALL

GROUPS SUCCEED

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When small-group work goes well, students “achieve higher grades, learn at a deeper level, retain information longer, are less likely to drop out of school, acquire greater communication and teamwork skills, and gain a better understanding of the environment in which they will be working as professionals.” (Oakley, et al.) When small-group work doesn’t go well, the experience can be incredibly frustrating for students and instructors. But what can instructors do to help their students succeed? This teaching element is for instructors who hope to incorporate significant small-group work in their courses. This guide isn’t necessary for those who implement informal groups that last only the length of a single class period.

WHY AM I ASSIGNING GROUP WORK?

It seems straightforward enough, but make sure that your group project or other group activities align with course goals and student learning outcomes. If group work makes sense for your course, be clear with students about why you are assigning group work and how that work is important to the course. Help to personalize this work for students by explaining how it can help them learn and develop skills they’ll need in their academic and professional lives. Kate M. Martin, in her blog post, “More than Get into Groups of Four: Understanding the ‘Cognitive Whys’ and the ‘Social Hows’ of Group Work,” shares questions that she asks herself before assigning a small group project.

- What do I think students will get out of group learning that they cannot achieve by working individually?
- What kinds of group interaction skills and knowledge will be necessary for graduates when they enter the job market? Do they know this?
- What do students need to reflect on regarding their own abilities and experiences with group learning? And how do we help them act on this reflection?
- What do students need to know about others’ previous experiences and attitudes about working in groups? And how do we help them act on this information?
- How can I structure early group interactions to set a tone that ensures balanced participation and establishes the importance of everyone having a voice once the actual work begins?

As you consider the answers to these questions, consider groups that you’ve been part of. Which groups were successful and why? If you’ve been part of an unproductive group, what characterized that experience? How could you help students to avoid those pitfalls?

Considerations for Online Groups If you’re considering assigning group work in an online course, even more rigorously address these questions. Carefully think through whether a group project makes sense for your online course, or whether interaction among students might best be encouraged through some other means, such as discussion. If you do choose to assign a group online project, make sure to consider how you will step students through the tasks and what tools (whether checklists or forms or tools in MyCourses) you will employ to facilitate their work.

HOW SHOULD I STRUCTURE THE LEARNING TASK?

Assigning group work is a balancing act. How do you provide the necessary structure for the task and for the student groups, but still allow students to take charge of this learning experience? Consider these suggestions, drawn from research by Barkley, et al., and by Michaelson and Black.

- The task must be relevant to course goals and learning outcomes. Students must understand course concepts to complete the task. Otherwise, the project will seem like busywork and neither the instructor nor students will have any idea how well the concepts are understood.
- The task must require the groups to produce a tangible output. Otherwise, neither the instructor nor the students will have any idea about whether or not students have developed the ability to use the concepts effectively.
- Be sure to match the task to your students' skills and experience. The task cannot seem so easy that working with the group isn't necessary. Successful completion of the task should require student interdependence.
- While the task should require interdependence, students should be held accountable for individual work. Consider how you can use individual assignments as a part of the larger group project. (See more about this in the sections on keeping group work on track and on grading group projects.)
- The task, and perhaps some class time, should be structured so that groups spend the majority of their time engaged in the kinds of activities that groups do well (e.g., identifying problems, formulating strategies, processing information, making decisions) and a minimum of time engaged in activities that individuals could do more efficiently working alone (e.g., creating a polished written document). "In fact, the greater the length of required written documents, the less students are likely to learn from the assignment. (i.e., when groups are assigned to produce a lengthy document, the only thing that is likely to be done by the group is deciding how to carve up the project into manageable pieces -- the rest will be individual work.)" (Michaelson & Black, 1994)

Considerations for Online Groups If you are working to structure the task for an online class, ensure that work for all stages of the project takes place in a centrally accessible location—the wiki, the MyCourses discussion board, etc. Also make sure that all communication in the group takes place in a way that can be recorded, such as in Adobe Connect. These recordings provide accountability and can help group members track participation and more readily self-assess and perhaps diagnose and address problems with group dynamics. You can also use these recordings to more accurately assess individual participation.

For more information on tools that you can use with small groups in both online and face-to-face modes, see the following Teaching Elements available from Teaching and Learning Services: [Adobe Connect](#), [Online Discussions](#), and [Wikis](#).

HOW SHOULD GROUPS BE FORMED?

Once you've determined why you will ask students to work in small groups and you've devised a task and structure that makes sense, how do you actually form the groups? If you plan to have student groups meet outside of class (or synchronously online), make student availability a primary criterion for group formation. (You may wish to use Doodle or some other tool to gauge availability.) Otherwise, research by Oakley et al. and others suggests heterogeneous groups formed by the instructor are most beneficial, particularly in the first two years of a curriculum. Possible considerations for ensuring heterogeneity could be gender, campus/commuter/international students, major, grade in the class. Also,

- "Student assets should be evenly distributed among the groups. Instructors should ask themselves, 'What would make a difference in how students are likely to perform?' Student assets typically include such things as work experience, previous relevant course work, access to perspectives from other cultures, etc." (Michaelson & Black, 1994)

- Consider the effect of group size on productivity and group dynamics. Research recommendations vary. Some recommend three, four, or five students in each group. Barkley, et al, in *Collaborative Learning Techniques* report that while Bean recommends groups of five (because four members split off into two pairs and three split into a pair and an outsider), another researcher, Smith, recommends that for longer term groups, having three members is ideal for ease of scheduling meetings and maximizing involvement.
- Instructors should create the groups. Oakley, et al, found that while the students preferred to choose their own groups, students also admit that their worst group experiences were in those groups formed by students. Oakley and her colleagues also find that in their own classes, cheating is reduced in instructor-selected groups.

WHAT SHOULD STUDENTS DO TO PREPARE FOR GROUP WORK?

When groups write down expectations, form policies, and draft formal process documents, they are more likely to be successful. Researchers at the University of Minnesota also found that unless instructors require students to submit these documents, students won't do this important administrative work. For more information on how to require students to complete these tasks, including links to sample documents, see Christina Petersen's blog post, "Helping Student Teams Perform Well."

You may also want to have groups discuss how to handle common group dynamic problems, such as "hitchhikers." Oakley, et al, found that when you required students to discuss group work case studies that dealt with students who are just along for the ride, groups tended to operate more smoothly. See also the sample group work policies and the questionnaires in Oakley. For even more information about challenges of group dynamics, see the Eberly Center's page [Group Projects Aren't Working](#), and specifically [Students Lack the Necessary Teamwork Skills](#). See also the [Conflicts?](#) page of the student teamwork website from the University of Minnesota.

Researchers consistently recommend that student groups be provided with a list of group roles. Avoid designating any one role as "Leader." As students draft group policies, they can assign roles. All roles should incorporate leadership responsibilities and all roles should contribute well-defined content to the group project. These roles can rotate, depending on the length of time that the group stays together. The Eberly Center at Carnegie Mellon University has compiled a list of common small group roles including "Facilitator," "Recorder," "Reporter," and "Devil's Advocate." See their full [group work webpage](#) for more information.

HOW CAN I HELP KEEP GROUP WORK ON TRACK?

Whether online or face-to-face, provide students doing group work with frequent opportunities to check understanding of a topic and get feedback from fellow group members and from the instructor. These frequent deadlines can also help keep group work on track.

After students have set expectations for how the group will work together, they should have an opportunity early on to self-assess their process and discuss how their expectations are being met. To facilitate this process, you may want to assign a brief project to allow groups to test out their policies and roles, and have the provide feedback to other group members by using RIT's online [Peer Eval](#) tool. For more information on formative assessments and group work, see Christina Petersen's blog post, "Helping Student Teams Perform Well." See, too, her post on "Adjourning Activities: Wrapping Up Team-Based Projects."

HOW DO I GRADE GROUP WORK?

Before the semester begins, determine how you will assess group work. Will you assign a grade to a group's process apart from their product? How much weight will you give to individual contributions to the group project and how much weight to the group project overall? In calculating the total grade, how will you factor in the peer evaluations of group process and product? For suggestions on how to evaluate individual and group efforts, both the Oakley article and the Eberly Center [group work website](#) have suggestions, including forms and rubrics.

WHERE CAN I LEARN MORE?

Books

Barkley, E. F., Cross, K. P., & Major, C. H. (2005). *Collaborative Learning Techniques: A Handbook for College Faculty*. San Francisco: Jossey-Bass.

Articles

Crutchfield, T. N. and Klamon, K., (2014). Assessing the dimension and outcomes of an effective teammate. *Journal of Education for Business*, 89 (6), 285-291. Maryellen Weimer writes about the Crutchfield article in her blog *Faculty Focus*. See more at: "[What Do Students Want from Their Teammates?](#)"

Oakley, B., Felder, R. M., Brent, R., & Elhadj, I. (2004). Turning Student Groups into Effective Teams. *Journal of Student Centered Learning*, 2 (1), 9-34.

Websites

Self-enroll in the RIT Online sample course in MyCourses (listed as SampleRITOC). Click on the Content tab, then scroll down to Group Activities in Learning Activities to find group work materials.

The Eberly Center at Carnegie Mellon University has created an extensive resource for group work: <http://www.cmu.edu/teaching/designteach/design/instructionalstrategies/groupprojects/index.html>

The University of Minnesota Center for Teaching and Learning has an excellent site in teamwork for students: <http://teamwork.umn.edu> See also TILT: Techniques in Learning and Teaching <https://uminntilt.wordpress.com>

The Center for Teaching at Vanderbilt University has a wide range of helpful information related to teaching and learning: <http://cft.vanderbilt.edu/guides-sub-pages/cooperative-learning/>

REFERENCES

Barkley, E. F., Cross, K. P., & Major, C. H. (2005). *Collaborative Learning Techniques: A Handbook for College Faculty*. San Francisco: Jossey-Bass.

Eberly Center: Teaching Excellence & Educational Innovation. (n.d.). *Using Group Projects Effectively*. Retrieved 1 12, 2015, from Design and Teach a Course: <https://www.cmu.edu/teaching/designteach/design/instructionalstrategies/groupprojects/index.html>

Martin, K. M. (2012, 5 8). *More Than "Get into Groups of Four" – Understanding "Cognitive Whys" and "Social Hows" of Group Work*. Retrieved 1 11, 2015, from TILT: Techniques in Learning and Teaching: <http://uminntilt.wordpress.com/2012/05/08/more-than-get-into-groups-of-four-understanding-cognitive-whys-social-hows-of-group-work/>

Michaelson, L. K., & Black, R. H. (1994). *Building Learning Teams: The Key to Harnessing the Power of Small Groups in Higher Education*. Retrieved 1 12, 2015, from UNC Charlotte The Center for Teaching and Learning: <http://teaching.uncc.edu/learning-resources/articles-books/best-practice/large-classes/building-learning-teams>

Oakley, B., Felder, R. M., Brent, R., & Elhadj, I. (2004). Turning Student Groups into Effective Teams. *Journal of Student Centered Learning*, 2 (1), 9-34.

Petersen, C. (2015, 1 5). *Helping Student Teams Perform Well*. Retrieved 1 11, 2015, from TILT: Techniques in Learning and Teaching: <http://uminntilt.wordpress.com/2015/01/05/helping-student-teams-perform-well-a-framework-for-using-teamwork-umn-edu/>