

## Learning in Groups: Design Strategies

---

Pottruck Technology Resource Center, Simmons College

"Collaboration ...makes it easier for scientists to work on interdisciplinary problems – which happen to be among today's most important and interesting scientific problems."

James Surowiecki, *The Wisdom of Crowds*

"Today's complex problem solving requires multiple perspectives. The days of Leonardo da Vinci are over."

E. Wenger, R. McDermott, & W. Snyder  
*Cultivating Communities of Practice*

Collaboration is integral to almost every contemporary profession, yet the process of collaboration can be extremely challenging. Course groupwork helps students prepare to thrive and grow as intellectuals in collaborative settings.

When thoughtfully designed and implemented, groupwork challenges students to learn how to: assess the dimensions of a task or problem, reflect, advocate a perspective (think independently), listen, recognize value in the insights of others (learn interdependently), strategize to develop viable problem-solving methods, divide up work to accomplish a common goal, support colleagues, address interpersonal challenges, and co-author or co-produce projects.

Because groups in everyday life are often spontaneous and emergent, it is easy to underestimate the upfront planning and design that is necessary for groups to succeed in an academic setting. According to education specialist Elizabeth Cohen, "The teacher who has no more tools for the planning of groupwork than an initial attraction to an idea ... is likely to run into trouble."

Consider the following worst-case scenarios: In one group a student dominates, leaving little room for the participation of others. Another group's work grinds to a halt when the members become embroiled in unresolved conflict. Yet another group chatters away about anything and everything *but* the assignment. Finally, a fourth group produces excellent work, but it is evident that several members are freeloading off of others.

Given these scenarios, it is easy to understand why some educators shy away from incorporating group projects into their courses. But the reward of good groupwork is worth the investment – many of the most critical types of learning can *only* be accomplished in the context of a group. In addition, groupwork provides a setting in which heterogeneous learners can develop deep investment in their own learning.

In focusing on accomplishing a commonly held goal, a disconnected roster of students can be transformed into a "community of practice" that is committed to learning. According to sociologist Etienne Wenger, communities of practice "generate excitement, relevance, and value to attract and engage members ... good community design can invite, even evoke, aliveness."

### What's involved in designing group assignments?

Some dimensions of solid groupwork design – such as articulating clear goals and strategies for assessment – are inherent to all good teaching. But for groups of learners to succeed, the teacher also needs to design a task that will generate the

excitement and “aliveness” that is characteristic of a community of practice. When planning groupwork, keep the following criteria in mind:

**Clarity of goals** – What do you want students to understand and be able to do? What kinds of interactions do you want to see and hear as the groups carry out their assignment? If these goals aren’t crystal clear to you, it is unlikely that the groups will stay on task. In addition, it’s important to make these goals explicit for your students. Develop written rubrics that will help the group understand what is expected of them – and why. It’s also crucial for groups to set their own norms for behavior. If the groups are involved in fleshing out norms, goals, and strategies for implementation they will be more likely to hold each other accountable and be invested in their work.

**Processes for assessment** – How will you know if the group has achieved its learning goals? For example, how will you design the task so that artifacts of the group’s work (journals, online discussions, products, etc.) provide you with sufficient evidence of learning? Will you just look at the final product, or do you also want the group to also document its process of decision-making?

Who will be involved in the assessment process – will students also be involved in assessing their own work and the work of their peers? Consider developing tools for periodic self/group assessment that will help your students keep sight of learning goals and monitor their own progress. In addition, ongoing (formative) assessment provides you with useful information for identifying groups in need of help. Instead of hovering over the group and interrupting their progress you can intervene only when needed.

**Tasks appropriate to the goals** – Is the task you are asking groups to take on appropriate to the learning goals? Cohen distinguishes between tasks that involve “limited exchange” (such as drilling each other on vocabulary and spelling) and tasks that are based on “equal exchange” (projects that require multiple abilities and therefore no one person can do the task alone). Limited exchange tasks help students tackle acquisition of straightforward subject content, but information is likely to flow from better students to weaker students, resulting in uneven participation. Equal exchange tasks challenge students to define the problem and a strategy for solving the problem – providing a context in which all group members can make a valuable contribution.

To help you decide which kind of task is appropriate for the assignment’s learning goals, consider the characteristics that Cohen provides for the two types of work:

*Limited Exchange*

- Has a single right answer
- Can be done more quickly and efficiently by one person than by a group
- Is too low level
- Involves simple memorization or routine learning

*Equal Exchange*

- Has more than one answer or more than one way to solve the problem
- Is intrinsically interesting and rewarding
- Allows different students to make different contributions
- Uses multimedia (involves sight, sound, touch)
- Requires a variety of skills and behaviors
- Rewards reading and writing
- Is challenging

Sometimes faculty and students become so involved with implementing an activity that they lose sight of the project’s original intent. Groupwork may be fun, but it also needs to be carefully crafted to align with goals. There also need to be built-in

strategies for keeping groups “on task.” Provide each group with a succinct, written statement that outlines the assignment and points out how each component furthers overarching goals for understanding and skill development. This document can be used as a touchstone to help groups reflect on how what they’re *doing* relates to what they’re *learning*.

**Thoughtful instructional design** – How will the task be carried out? What aspects of the task will you leave undefined so that students make their own implementation decisions? What aspects of the task will you clarify explicitly up front? How will the task’s design integrate individual work with group work?

Business journalist James Surowiecki analyzed the characteristics of successful or “wise” crowds. These characteristics are also relevant to instructional design for group learning. Surowiecki identifies four conditions that characterize “wise crowds”:

1. *Diversity of opinion*  
(each person should have private information, even if it’s just an eccentric interpretation of known facts);
2. *Independence*  
(people’s opinions are not determined by the opinions of those around them);
3. *Decentralization*  
(people are able to specialize and draw on local knowledge); and
4. *Aggregation*  
(some mechanism exists for turning private judgments into a collective decision).

When possible, build individual reflection and independent work into the group’s process. This fosters a generative “diversity of opinion,” “independence,” and “decentralization” that will allow each person’s strengths to emerge. For example, prior to coming together as a group, students can be asked to gather information on their own. Independent investigation, interviews with people outside the class, reflective journaling, etc. provide each student with something to bring to the group. In coming together, the students have an opportunity to pool their work, to analyze and aggregate individual input into collective, deepened, understanding.

**A place for extended collaboration** – Extended groupwork is very difficult to achieve in a classroom setting. It can take 20-30 minutes to explain the group project and address students’ questions. Then it can take 15 minutes or more for a group to warm up and get into the flow of their work. At this point, you’re 45 minutes into the session – with not enough time for the groups to do their work! In addition, some of the most valuable group projects unfold over several sessions or weeks.

The online environment makes groupwork much more manageable. It provides a place for students to post their independent work so that other group members can read and reflect on everyone’s contributions in the interim between face-to-face sessions. Work that is initiated in a classroom setting can be carried out online after the session, or preparatory work can be posted online and then pooled when students meet face-to-face. Some groupwork can be accomplished entirely online – which makes it possible for collaborative groupwork across schools or institutions. Another advantage is that, in the online environment, each person’s contribution is evident. This makes it easier for the teacher to spot groups with uneven participation or interpersonal problems.

At Simmons College, Academic Technology has a staff of instructional designers and instructional technologists who can help you design and implement groupwork. If you want help – or if you want to kick around ideas and get feedback, give us a call at x2677.

This paper is one in a series of articles developed by Academic Technology. Each thought piece provides suggestions and resources about a topic related to teaching and learning. Other articles are available at

<http://my.simmons.edu/services/technology/ptrc/resources/articles.shtml>

## Readings and Resources

Elizabeth Cohen, *Designing Groupwork: Strategies for the Heterogeneous Classroom* (New York: Teachers College, 1994).

“Collaborative Learning: Group Work and Study Teams”  
<http://teaching.berkeley.edu/bgd/collaborative.html>

“Enhancing Experiences of Group Work”  
<http://www.iml.uts.edu.au/learnteach/enhance/groupwork>

“No More Group Work, Please!”  
[http://clte.asu.edu/active/no\\_more\\_gw.pdf](http://clte.asu.edu/active/no_more_gw.pdf)

James Surowiecki, *The Wisdom of Crowds* (New York: Doubleday, 2004)

Etienne Wenger, Richard McDermott, and William Snyder  
*Cultivating Communities of Practice* (Boston: Harvard Business School Press, 2002)

“Seven Principles for Cultivating Communities of Practice”  
<http://hbswk.hbs.edu/pubitem.jhtml?id=2855&t=knowledge>