Cooperative Grouping Strategies

Cooperative grouping is a teaching strategy at the forefront of 21st century learning. Increasingly, more, careers demand teams of people to function fluidly, using each other as resources to complete projects that no one individual could do alone.

The dilemma is that from K-20, many educators see the process of "teaming up to learn" as a waste of time and too difficult to manage without ongoing support. While we agree that it can be challenging to assess students' individual contributions to a team in order to check for mastery, the increase in active engagement, depth of learning, and higher critical thinking are undeniable.

In this white paper, we explore situations where cooperative grouping makes sense and others where it does not. We'll also discuss the skills that make cooperative grouping possible, setting expectations around them, and modeling them for students. While not every student may have the foundational skills to be an effective team member, they can certainly learn them. These soft skills, while not traditionally "testable skills," are among the most salient

and meaningful ones students can absorb in their academic lives, because they influence a lifetime of interactions.

Choosing the Right Assignment

When it comes to cooperative grouping, not all assignments are created equal. Doing assessments in teams is nonsensical—how can you determine which student knew what? First-time exposure to scientific phenomena can be done in group, but given their high level of engagement, more dominant students tend to "hog" the experience, diminishing the quality of others' experience in a critical context-building moment. What, then, is an ideal cooperative grouping assignment? PBLs.

Problem-based learning is a teaching method that closely mirrors real-world career experiences. In PBLs, students confront a scenario where their expertise has to be applied systematically and creatively to solve a problem that affects the world around them. In these problems, there are no "perfect solutions," so tackling them kindles meaningful discussion. Students will have to debate and challenge each other's method, solutions, and outcomes in problem-based learning, often revealing differing value systems.

Effective cooperative grouping projects have to satisfy four areas:

1) Group members must interact. It is not sufficient that each one creates a piece and submits it (e.g., each person creates a number of slides for a group presentation, presents only those slides, and essentially acts independently).

2) Group members must be individually accountable. As the teacher, if you were to ask a member of a group what their partners are doing for the group, that student would be able to answer accurately.

3) Cross-feedback is essential. Periodically, each group member should provide structured feedback to their partners on topics such as timeliness of completing work, quality of work, level of contribution, and understanding of one another's responsibilities.

4) High levels of group interaction are rewarded. High performing groups will produce better products, but we cannot judge on product alone. Evaluating group dynamics is also important and students should be rewarded for making more inclusive groups, groups where people can freely offer feedback, and groups that hold each member equally accountable. We'll explore a rubric for assessing group dynamics in the next section.

Once a project is chosen that fits the requirements of the assignment, the next task is to determine what an appropriate group size is and, more importantly, what an appropriate product is. Research suggests that groups of four or six are ideal. While smaller or larger groups are possible, smaller ones tend to be communicate less (partnerships and triads often "split up the work" without interaction) and larger groups enable some members to have a free ride.

Once the group size is determined, a product format should be selected. Be wary of student products that simply provide a solution—instead, seek out dynamic products that take the forms of debates, arguments and counter-arguments, or competing models. This will force students to work together to understand multiple sides of the problem and one another's point of view, and create solutions that challenge other group members' solutions.

The Soft Skills of Group Work

The characteristics of a successful group (and, incidentally, an exemplary group product) lie in the behaviors of individual students. It's not a

question of "if," but "when" conflict occurs; how will it be handled? As adults we sometimes forget how much work it takes for a group to function like a well-oiled machine—the way we speak, our body language, and our attitudes about other group members' abilities (or lack thereof) can dramatically affect how the whole group performs. It's the teacher's obligation to model what productive group behavior looks like, establishing discussion protocols and using specific examples of how to present yourself so that working together is more effective. The rubric below can help you shape some of the most important criteria for working together as a group.

Criterion	Excellent	Fair	Poor	Unacceptable
Listening	Often restates others views; does not interrupt; asks for others' opinions often; always maintains eye contact	Occasionally restates others' views; occasionally interrupts; occasionally asks for others' opinions; often maintains eye contact	Rarely restates others' views; often interrupts; rarely asks for others' opinions; occasionally maintains eye contact	Never restates others' views; always interrupts; never asks for others' opinions; rarely/never maintains eye contact
Openness to Others	Often asks follow-up questions to others' contributions; often responds positively to others' ideas	Occasionally asks follow-up questions to others' contributions; occasionally responds positively to others' ideas	Rarely asks follow-up questions to others' contributions; rarely responds positively to others' ideas	Never asks follow-up questions to others' contributions; never responds positively to others' ideas
Preparation	Completes group tasks on time; has a good understanding of others' responsibilities and points of view	Often completes group tasks on time; has a fair understanding of others' responsibilities and points of view	Rarely completes group tasks on time; has a poor understanding of others' responsibilities and points of view	Never completes group tasks on time; has no understanding of others' responsibilities and points of view
Contributions	Produces above expected quality work; offers the group input that significantly enhances others' work	Produces expected quality work; offers the group input that enhances others' work	Produces poor quality work; offers the group input that slightly enhances others' work	Produces unacceptable quality work; offers the group input that does not enhance others' work
Leadership	Often resolves group problems; often seeks opportunities to do more for the group; often invites others to contribute/participate more; often provides constructive feedback to others' contributions/ work	Occasionally resolves group problems; occasionally seeks opportunities to do more for the group; occasionally invites others to contribute/ participate more; occasionally provides constructive feedback to others' contributions/ work	Rarely resolves group problems; rarely seeks opportunities to do more for the group; rarely invites others to contribute/participate more; rarely provides constructive feedback to others' contributions/ work	Never resolves group problems; never seeks opportunities to do more for the group; never invites others to contribute/participate more; never provides constructive feedback to others' contributions/ work

By role-playing the differences between the performance levels of the rubric, students can comprehend what being an excellent versus an unacceptable team member looks and sounds like. Consider creating a rubric with students rather than using this one—as the teacher, you can guide them to the important criteria and then collectively

determine the quality levels. By creating a student-friendly version of the rubric as a group, you can simultaneously demonstrate who acted as an excellent team member, a fair team member, and so forth. Furthermore, students may be able to determine whether additional criteria should be included. Complete the group effort by discussing what sorts of careers would rely on teamwork and how they would benefit from higher levels of each criterion.

Assessing Group Work

Evaluating group work can be tricky. In periodic peer evaluations, students often err on the side of being too lenient or too critical of their group members. The best way to "norm" students' peer evaluations is to have periodic evaluations that are integrated into each student's final grade but also made public to the relevant group members so that they can make changes. Students should also be able to report out for their group at any time, demonstrating an understanding of their fellow group members' efforts.

Plan to also assess students in traditional formats as they work through their group projects. A periodic multiple choice quiz built around the learning standards in their projects will help you understand if they know the foundational content and will also remind the students that the group project is grounded in material they have learned in class. The knowledge and skills of the learning standards need to be applied for a project to be successful.

Combining three assessment dimensions—periodic peer evaluations, formative assessment quizzes, and the final product of the group—provides a fair way to assess the entirety of a student's work in a group project. If you communicate the grading policies before the projects begin, students will be more inclined to take a responsible approach to how they interact as a group. Nevertheless, there is no substitute for a gradual buildup to a large group project via collaborative daily work, modeling positive group behavior, and collectively creating a rubric to define what a successful group looks like.