

Asked students to help each other understand ideas or concepts

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Why this Teaching Method Matters

Students helping other students learn is a powerful classroom technique. Collaborative learning uses this approach to achieve content-focused and process-oriented goals, both of which are important for college learning success. Research (1) shows that cooperative learning improves students' achievement, persistence, and attitudes. Collaboration with fellow learners increases motivation and helps students take responsibility for their own and their peers' learning (2, 3, 4). Included among the process-oriented goals achieved by collaboration is the development of marketable skills such as problem-solving, project management, team-player competencies, communication, and social skills (5). One of the "7 Principles for Good Practice in Undergraduate Education" is cooperation (6), and well-structured group work and other collaborative activities that ask students to help

each other learn pay big dividends in student academic success and in retention (7).

IDEA Item #18 highly correlates with other teaching methods addressed in the IDEA questionnaire. These include item #1 (displaying a personal interest in students), #2 (helping students answer their own questions), #5 (forming teams or groups to facilitate learning), #7 (explaining the reasons for criticism of student academic performance), #15 (inspiring students to set/achieve challenging goals), and #16 (asking students to share ideas/experiences with others of differing backgrounds). In addition, this method also correlates strongly as a learning strategy with learning objectives related to item #25 (working in a team), item #26 (developing creative capacities), and item #32 (interest in learning more by asking questions/seeking answers).

Applying this Teaching Method in the Classroom

Because learning experiences built around student collaboration are not prevalent in lecture-based classes (the kind of classes that predominate in many college experiences), you may not have many models for designing an environment that prompts students to help each other learn. It is also true that your students may not have done much successful collaborative learning. Address learners' inexperience with successful peer involvement in the learning process by providing an explanation of why this approach works and how your students will benefit. Students helping each other learn mimics humans' innate learning process, a process for which we are genetically and environmentally engineered. This is enough of an explanation, and a powerful one, to help your students understand why peer learning is suitable in the college classroom – their brains are built to learn via collaboration. One of the reasons learning is often difficult in college is precisely because it is not collaborative (see Smith [8] for fascinating reading and plenty of support to convince your students that peer learning works). You can also share with students the idea that most employers will not lecture for fifty min-

utes and give a test a week later to determine whether employees have earned paychecks – your students will do in your classroom what they will be doing on the job as they work in groups, make presentations, tutor each other, etc. Their future on-the-job learning will mimic their learning in your classroom, a powerful argument for the process. That peer learning skills help make life-long learning easier is an additional convincing argument given the need for future worker-earners to adapt to, and survive in, a rapidly changing workplace.

That said, there seems to be a natural receptivity to working with and learning from peers, at least for traditional college-aged learners. Much has been written of millennial learners' engagement with collaborative activities (e.g., 9, 10, 11). Good collaborative learning experiences leverage this propensity. An excellent example is Harvard professor Eric Mazur's student group discussion technique where groups of students convince each other of correct responses to Mazur's prompts, then share their choice of correct answers (12, 13).

Since students may not have much experience with peer learning, be sure to describe what the process looks like, what students will do, what outcomes they will produce within what time frame, and how they will access support and resources. This is the key to successful peer learning, and it requires careful planning on your part.

Here are some planning tips. 1) Peer learning can take many forms – use a variety of approaches (group work, presentations to the class by teams or individuals, jigsaw technique [14], class discussions in which you solicit alternative explanations from students, etc.). 2) For group work projects, provide a group charter in which students specify who will do what, operational guidelines, contact information, deadlines, etc., giving students confidence that you know what you are doing and can help them succeed with peer learning, and it enables assessing performance in many areas. 3) Structure the collaborative learning process so that there are assessment points throughout for you and for the students' self- and peer-assessment to identify how you and they will know if they are helping each other learn. For example, progress reports, are one way to do this. 4) Support your students by facilitating and acting as a resource in both content and process, a different role from the implicit possessor/dispenser of knowledge role sometimes assumed by lecturers. 5) Celebrate students' inventiveness as they discover teaching metaphors, techniques, and approaches you may never have considered.

Applying this Teaching Method Online

Today's students are savvy and frequent Internet users who have adapted to the online experience as a natural extension of how they communicate and form relationships (9), and they expect to see and use new technologies in their online classes. Brindley, Walti, and Blaschke (2009) provide advice on "how to incorporate small group learning experiences into [online] courses that are inviting and provide productive, engaging, and skill building spaces for learners, which encourage them to repeat the collaborative learning experience independently" (15). The authors provide seven specific recommendations for structuring effective online group and collaborative learning experiences along with ideas for how to implement the suggestions: 1) facilitate learner readiness for group work and provide scaffolding to build skills; 2) establish a healthy balance between structure (clarity of task) and learner autonomy (flexibility of task); 3) nurture the establishment of learner relationships and sense of community; 4) monitor group activities actively and closely; 5) make the group task relevant for the learner; 6) choose tasks that are best performed by a group; and

7) provide sufficient time.

Many online platforms are designed to encourage peer-to-peer discussion and interaction. Consider having students post responses to a course blog or other discussion forum, and ask students to respond to each other's posts in order to foster conversation. Some instructors "count" a good response to another student's post as much as an original post, helping to validate to students the value of learning from each other. Or ask students to find and share resources relevant to the course using a social bookmarking service. This kind of assignment can empower students to find connections between course content and their own personal and professional interests and, importantly, share those connections with their peers. See (16) for more ideas for using social media to help students learn from each other.

While their social media activities and other Internet usage usually makes it easier for online learners to adapt to the virtual classroom, instructors need to help today's students understand the differences between their class activity and their other activities within the digital universe. For instance, providing a link to information about proper "netiquette" in your syllabus (e.g., 17), and holding students accountable to the guidelines, is excellent practice to help ensure that class discussions and other interchanges in your online course do not include the kinds of inappropriate postings that students may routinely make in other of their electronic venues.

Assessing this Teaching Method

The rules of good formative assessment apply to peer learning (18). Particularly important among these are providing immediate feedback, frequent feedback, and feedback that enables students to clearly distinguish between good and bad choices and decisions (3). This can be done easily in on-line as well as face-to-face classes by using technologies such as wikis, blogs, twitter posts, etc. – all examples of tools that are increasingly becoming part of course management system options as well as being freely available as stand-alone technologies any instructor can use. You can structure feedback in group work by defining it and the required check point reports each group creates in the group charter. All peer learning demands careful overview by the instructor in the form of facilitation and oversight; this is why frequent input from learners is important – it affords you the chance to ensure that no misinformation or misunderstanding exists. Also, it is extremely important in peer learning activities to provide learners guidance in the form of solid rubrics for their output. One successful method is to provide examples of output meeting varying levels of achievement

as defined by the rubrics. Journals and other ongoing reports (oral or written) will also keep groups on task and help you to follow their progress.

References and Resources

1. Springer, L., Stanne, M. E., & Donovan, S. S. (1999). Effects of small-group learning on undergraduates in science, mathematics, engineering and technology: A meta-analysis. *Review of Educational Research*, 69, 21-51.
 2. Paris, S. G., & Turner, J. C. (1994). Situated motivation. In P. R. Pintrich, D. R. Brown, & C. E. Weinstein (Eds.), *Student motivation, cognition, and learning: Essays in honor of Wilbert J. McKeachie* (pp. 213-238), Hillsdale, NJ: Erlbaum.
 3. Michaelsen, L. K., Knight, A. B., & Fink, L. D. (2003). Preface. In L. K. Michaelsen, A. B. Knight, & L. D. Fink (Eds.), *Team-based learning: A transformative use of small groups* (pp. vii-xi), Westport, CT: Praeger.
 4. Weimer, M. (2002). *Learner-centered teaching: Five key changes to practice*. San Francisco, CA: Jossey-Bass.
 5. Sheetz, L. P. (1995). *Recruiting trends: 1995-1996*. East Lansing, MI: Collegiate Employment Research Institute, Michigan State University.
 6. Chickering, A. W. & Gamson, Z. F. (1987) Seven principles for good practice in undergraduate education. *AAHE (American Association for Higher Education) Bulletin*, 39. (7), 3-7.
 7. Robinson, P. L. (2006). *Predicting college freshman success: The relationship between peer learning, help seeking, math self-efficacy, English self-efficacy and institutional integration*. New York, NY: Proquest.
 8. Smith, F. (1998). *The book of learning and forgetting*. New York, NY: Teachers College Press.
 9. Tapscott, D. (2009). *Grown up digital: How the net generation is changing your world*. New York, NY: McGraw-Hill.
 10. Coates, J. (2006). *Generational learning styles*. River Falls, WI: LERN.
 11. Prensky, M. (2010). *Teaching digital natives: Partnering for real learning*. Thousand Oaks, CA: Corwin.
 12. Mazur, E. (1997). *Peer instruction: A user's manual*. Boston, MA: Addison-Wesley.
 13. Derek Bok Center for Teaching and Learning. (2008). *From questions to concepts: Interactive teaching in physics*. Cambridge, MA: Bok Center. <http://www.youtube.com/watch?v=IBYrKPvFwg>
 14. Aronson, E., & Patnoe, S. (1997). *The jigsaw classroom: Building cooperation in the classroom*. New York, NY: Addison Wesley Longman.
 15. Brindley, J. E., Walti, C., & Blaschke, L. M. (2009). Creating effective collaborative learning groups in an online environment. *International Review of Research in Open and Distance Learning*, 10 (3). <http://www.irrodl.org/index.php/irrodl/article/view/675/1271>
 16. Joosten, T. (2012). *Social media for educators: Strategies and best practices*. San Francisco, CA: Jossey-Bass.
 17. Albion Netiquette home page. (n.d.). <http://www.albion.com/netiquette/>
 18. Huba, M. E., & Freed, J. E. (2000). *Learner-centered assessment on college campuses: Shifting the focus from teaching to learning*. Needham Heights, MA: Allyn & Bacon.
- IDEA Paper No. 38: *Enhancing Learning—and More!—Through Cooperative Learning*, Millis
- IDEA Paper No. 47: *Promoting Deep Learning*, Millis
- IDEA Paper No. 49: *Effective Classroom Discussion*, Cashin
- IDEA Paper No. 52: *Considerations in Online Course Design*, Creasman