

# Using Peer Learning in the Classroom

Tennessee Teaching and Learning Center

"How To" Pedagogy #2

## WHAT IS PEER LEARNING?

Peer learning encompasses several teaching and learning practices. "Peer tutoring," "peer instruction," "cooperative or collaborative learning" (group work), and "peer editing" are some of the terms referenced in pedagogy discussions. Some practices, such as peer tutoring, fall into the category of peer learning but mostly occur in contexts other than the classroom. Online peer learning can occur through discussion boards, blogs, and wikis rather than face-to-face. This handout will focus primarily on collaborative learning, particularly group work.

### Peer Instruction

Harvard Physics professor Eric Mazur has developed a widely used method of **peer instruction**. He uses peer interactions to provide short breaks in a lecture, thus giving students time to process information (an important strategy for better cognition):

*Lectures consist of a number of short presentations on key points, followed by...short conceptual questions on the subject being discussed. The students are given time to formulate answers and then asked to discuss their answers with each other. This process a) forces the students to think through the arguments being developed, and b) provides them (as well as the teacher) with a way to assess their understanding of the concept. (See Mazur, 1996)*

Peer instruction is now widely supported with clicker technology, although low-tech methods work as well.

### Small Groups and "Group Work"

Dee Fink (Michaelsen, Knight, & Fink, 2002) describes three uses of small groups: **casual, cooperative, and team-based**. *Casual* use of groups refers to the quick creation in class of student pairs or small collaborative groups (3 is recommended) to discuss a question or solve a problem. This allows students to actively engage with the material. *Cooperative* learning involves the use of groups to engage in more structured activities. These activities also give students time for active engagement, often providing opportunities for problem solving and application of content. *Team-based* learning involves a further level of structure and intentionality.



## WHY USE PEER LEARNING?

*"Peer learning works...if you organize and implement it well." Topping, 2005*

Several decades of research into collaborative learning confirms that students working in small groups tend to learn more and retain more of the subject matter (Millis and Rhem 2010; Michaelsen, Knight, Fink, 2004).

Students who are involved in 'group work' during class have been shown to develop a deeper understanding of the subject matter and increased problem-solving skills. (Cooper, 1990, cited in Davis 1993). The benefits of group work include engagement and development of team skills.

**THINK -PAIR -SHARE:** One of many informal methods that allow students time to process what they are being taught is "think-pair-share." The term refers to the process: students think (or write) about a question you give them, they pair up with another student, and they share responses.

**THE LEARNING CELL:** Students work in pairs and alternate asking questions on class materials to each other. One recommendation in creating effective learning cells is to randomly assign students in every class, which motivates students to arrive adequately prepared. Formulating and preparing for questions contribute to mastery of course content.

Contact the **Tenn TLC** for more information by calling 974-3807 or by email [tenntlc@utk.edu](mailto:tenntlc@utk.edu). Visit our site <http://tenntlc.utk.edu> and follow our blog <http://tenntlc.blogspot.com> for publications and faculty development information!

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"How To" Pedagogies #2 page 2



## HOW TO CREATE & MANAGE GROUPS

First, think about the course **learning objectives** and consider whether some form of peer learning could be helpful.

**Have a clear rationale for creating groups, one that you communicate to students.** You will need this rationale to positively motivate students and give them a clear direction. Before breaking students into groups, you must decide:

- The length of time that students need to think about a problem or issue.
- The number of students who need to be involved to create the dynamic of that you want (research shows that groups of 3 to 5 members work best).
- The formation of a group—as an informal group for a single class or as a formalized group or team.
- The assignment of group members: random, self-selected (by students), or instructor-assigned. Ideally, students express preferences to the instructor who then creates balanced groups.
- The product for which you want to hold students responsible.
- **Assign group roles**—particularly for informal, in-class group work—to increase student accountability. Roles include: **leader**, **note-taker**, **reporter** (one person takes notes but another reports back to the class), and **questioner / naysayer**. Other roles can include: elaborator (explains-extends group ideas), opinion-seeker (who solicits value statements from the group), and orienteer (one who shifts the group discussion when needed).

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## ASSESSING PEER LEARNING

**Formative Feedback** (non-graded feedback to the learner, designed to modify and improve learning):

- Use verbal feedback during group work. Walk around the room, check in with each group, ask for questions and listen to the group. Group members are more likely to ask more promptly for clarification when you approach them.
- Hold groups accountable by have a quick reporting of groups back to class—either all groups or a random selection. Have note-takers turn in their sheets.
- Respond to group work and involve the class in assessing the benefits of the group's work. Extend the class discussion into new areas and pursue new implications.

**Summative Feedback** ("grades"):

- Give groups clear information about grading and whether you will use individual or group grades, teacher or peer grades, or some combination.

## References

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