

## Overview of Collaborative Learning Techniques: Reciprocal Teaching CoLTs

*Source: Collaborative Learning Techniques by Barkley, Major and Cross (Jossey-Bass, 2014)  
With additional adaptations from George Washington University Teaching & Learning Center*

### 7 Note-Taking Pairs

Students pool information from their individual notes to create an improved, partner version. Useful for helping students acquire missing information and correct inaccuracies in their notes and learn to become better note takers. There is a difficulty if both partners have the same faulty understanding or information. Periodically assessing the students' notes can be helpful. The assessment might take the form of having the pair of students respond to a question or a quiz. Traditional review of notes might be augmented by asking the students to highlight the changes they made to their notes during the review.

#### *Group size*

Pairs

#### *Time on task*

5 to 15 minutes

#### *Preparation*

Providing initial guidance and examples of note taking can be effective. Decide how pairs will be formed. Decide how to break the material into multiple parts.

#### *Procedure*

1. Students individually take notes for the major points in a lecture or a chapter.
2. Students form pairs. (Need a separate procedure to do this.)
3. Partner A summarizes the main points for the first part of the lecture or chapter.
4. Partner B offers additional information or corrections.
5. Partner B summarizes the main points for the next part of the lecture or chapter.
6. Partner A offers additional information or corrections.
7. Continue until complete.

### 8 Learning Cell

Students quiz each other using questions they have developed individually about a reading assignment or other learning activity. The activity is useful for engaging students actively in thinking about content and encouraging them to challenge each other to pursue deeper levels of thought. This can be very useful for helping students develop question asking skills and checking their understanding. Having the students develop the questions in advance of class is effective and reduces the amount of time on this task. Having the students show a list of questions before participation can also be useful. Unprepared students may lose participation points. The exercise might be assessed by having students respond in writing to one of the partner's questions or by reporting to the class on a difficult question.

#### *Group size*

Pairs

#### *Time on task*

15 to 30 minutes

#### *Preparation*

Providing initial guidance and examples of good questions can be effective. Determine the content to be examined in the questioning. Determine how to form pairs. Determine the

procedure to alternate the questioning and answering. For example use a fix time or allow the questioning to continue until a question is resolved.

#### *Procedure*

1. Ask students to individually develop a list of questions and answers dealing with the major points in a lecture or chapter.
2. Form pairs.
3. Explain process for alternation.
4. Student A asks the question and Student B answers. Student A can offer additional information if student B's answer is not satisfactory.
5. Repeat with alternating roles.

### **9 Fishbowl**

Students form concentric circles with the smaller, inside group of students discussing and the larger, outside group listening and observing. This CoLT is particularly useful for providing opportunities for students to model or observe group processes in a discussion setting. The technique serves two purposes. The first is to provide structure for in-depth discussion. The second is to provide the opportunity for students to model or observe group processes. It is important to have a level of trust with the class in order to dissipate the anxiety of students in the inner circle. A hand out with questions for the outer circle to answer can be effective.

#### *Group size*

Three to five students in side and the remaining students on the outside

#### *Time on task*

15 to 20 minutes for discussion and 10 to 15 minutes for debriefing.

#### *Preparation*

Decide on the topic and let the students in the inner circle know ahead of time of the activity. This will allow the students to prepare. Decide on the instructor's role. The instructor might be part of the inner circle, the outer circle, or separated from the discussion. Physical constraints of the classroom may make the use of this CoLT difficult or impossible. An alternative may be to have the inner circle of students be placed in the front of the room. Decide on the procedure for creating the inner and outer groups

#### *Procedure*

1. Separate the class into the inner and outer groups.
2. Review the general guidelines. Only inner circle students speak. Outer circle students take notes on content and process. All students can speak during the debriefing.
3. Start the activity taking note of the time for discussion.
4. When the discussion is complete have the whole class discuss the content and process.

### **10 Role Play**

Students assume a different identity and act out a scenario. This can be useful for engaging students in a creative activity that helps them "learn by doing." The notion of a role indicates that the student must apply knowledge and understanding from a perspective other than their own. The notion of play indicates that the students should use their imagination and have fun. However, make sure that the students understand what the learning goals are. Some students may not enjoy this activity or feel uncomfortable in the exercise. To reduce anxiety, try to build a nonthreatening environment and allow adequate time for preparation. Use ice-breakers well before the exercise so the students will feel more comfortable with each other. Make sure to allow adequate time for debriefing.

Assessments may be possible by video recording the role playing and have other student groups assess the content of the performance. This can be done in a brief written essay.

*Group size*

Two to five students

*Time on task*

15 to 45 minutes

*Preparation*

Design of the scenario will take the most time. The instructor will need to identify the different perspectives that can be taken, the structure for the exercise, the number of characters, and how the characters can be combined in the structure of the scenario. Consider the roles that non-characters might also play: moderator, observer, reporter and so on. Decide on time limits and student selection procedures.

*Procedures*

1. Form student into groups with sufficient students to take on each character.
2. Present the scenario and allow time to discuss the scenario and request clarifications.
3. Ask the students to assume the character roles. Inform the students of the time limit.
4. Instruct the students to begin role play.
5. After the role playing activity discuss the students' interpretations of the characters.

**11 Jigsaw**

Students develop knowledge about a given topic and then teach it to others. This CoLT can be useful for motivating students to learn or process information deeply enough to teach it to their peers. The students have the opportunity to discover the weakness of 'surface learning' by having to teach other students. It can be useful by having a brief discussion about good teaching prior to the activity. If the components are well-designed the student group will be either able to solve a problem about the topic that requires all of the components or be able to better understand the relationships among the components.

*Group size*

Four to six and recombine to four to six

*Time on task*

Variable

*Preparation*

Find topics that are simple enough for students with a good grasp of the material to be able to teach it to their peers but complex enough to require discussion of the content and how to teach it. Determine how the main content item can be divided into components. Decide how to form groups and how to rearrange the groups. Students may complain that they are "doing the teacher's work". It will be useful to have a response ready or explain prior to the exercise what the purpose of this CoLT is. Determine time limits for working on mastery and teaching and how to rearrange the students to build new groups.

*Procedure*

1. The instructor presents a list of topics and makes the division of the content into components clear.
2. Form groups that are charged with developing expertise on one of the topics.
3. Students in the groups work to gain mastery of the topic and determine ways to help others learn the material.
4. After sufficient time, rearrange the groups so that each group has only one 'expert' on each component. Each student will be an 'expert'. Collectively the members of this new group will cover all of the content components.

5. The class as a whole reflects on the activity.

## **12 Test-Taking Teams**

Students prepare for a test in working groups, take the test individually, and then retake the test in their groups. This CoLT is useful for helping students assess and improve their understanding of subject matter as they also teach each other test-taking strategies. By the retaking the exam together the individual students benefit from the collective knowledge of the group. Since the group score is generally better than the individual score, the activity also demonstrates the value of collaboration. The activity might be applied to a single exam or many exams. It is effective in students building bonds with other students.

### *Group size*

Four to six

### *Time on task*

Variable but proportional to exam

### *Preparation*

Identify the content the students should master and prepare for normal teaching. A study guide might also be prepared. Determine the procedure for assigning students to groups. Determine how the groups should meet. There are several alternatives. The students might meet in a previous class session or part of a previous class session. The student might meet in the first 15 minutes before the exam. The students might meet outside of class time. The complexity of the material to be covered on the test should be considered. Consider different grading systems. One possibility is to have the 'exam grade' be based on both the individual and group exam.

### *Procedure*

1. Form students into groups.
2. Allow students to prepare for exam in groups. Administer the test to individuals and submit exam to the instructor.
3. Before returning the graded individual test, reform the groups and have the groups take the exam.
4. Distribute both the individual and group exams.