Cooperative Learning

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Instructional Coaching

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Cooperative Learning

Cooperative Learning at a Glance

What is Cooperative Learning?

Cooperative Learning is learning mediated by students rather than the instructor. In cooperative learning, students work in groups to teach themselves content being covered. Teachers can utilize a variety of learning structures while providing cooperative learning.

Why use Cooperative Learning?

Cooperative Learning is an instructional strategy that allows students to take over the role of instructor. In many cases, because cooperative learning is by definition an interactive learning process, it can be more engaging than even outstanding lectures, and is consistently more engaging than less effective lectures. Cooperative Learning also is a method teachers can use to inject variety into their lessons, and, handled effectively, it provides a setting for students to learn important social skills.

What are the elements of Cooperative Learning?

Cooperative learning can involve groups of any size, from two students to very large groups, although triads are often considered ideal. Cooperative learning sessions can be used as a way for groups to cover material, problem solve, brainstorm, explore or invent new ideas.

How Should I Plan and Implement Cooperative Learning?

1. **Positive Learning Community:** Cooperative Learning may not be successful if students are not taught the skills of positive interaction. For that reason, before beginning cooperative learning, teachers should ensure that their classrooms have a positive learning environment. Teachers may want to work with coaches to ensure that effective classroom management procedures are in place and that they are teaching in a manner that creates a positive learning environment. (Please see Classroom Management Manual).

2. **Identify Learning Goal:** If the learning goal is mechanical learning, then cooperative learning should be designed to ensure that students master essential content. If the learning goal is metaphorical learning, then cooperative learning should be designed to ensure students have an opportunity to construct their own understanding of essential content.

3. **Pick an Appropriate Learning Structure:** Teachers should review the cooperative learning structures to identify the one that is most appropriate for the learning that is about to take place.

4. **Use the Learning Structure Effectively**: For best results, teachers should (a) clearly understand any structure before implementing it, (b) clearly explain the structure to students, (c) monitor students to make sure they understand how to implement the structure, and (d) de-bug the structure in advance.

IC CHEAT SHEET

1. Create a positive learning community.

2. Identify what kind of learning (mechanical or metaphorical) the cooperative learning structure will facilitate.

3. Pick an appropriate learning structure

4. Use the learning structure appropriately

Creating a Positive Learning Community

Teacher Expectations/Community Guidelines: Most groups of people come together more positively and effectively when there are clear guidelines for interactions. For example, people would find it difficult to play a game if the rules were unclear and constantly changing. Some structure is necessary for positive interactions.

During cooperative learning, at least two types of structures need to be in place. First, teachers need to clearly articulate the expectations they have for students when they are engaged in cooperative learning. At a minimum, teachers need to clarify how they think students should (a) act, (b) talk, and (c) move during cooperative learning activities. We refer to these as the ATMs. The ATMs can either be directly taught to students or co-constructed with students, but it is essential that they are clearly stated, understood, and followed by all students.

Second, a more positive learning community will be created in the classroom if community guidelines for interaction are created. The community guidelines describe how students and teachers interact with each other. Specifically, the guidelines refer to student-to-student, student-to-teacher, and teacher-to-student interactions. Again, these guidelines can either be constructed with students or directly taught by teachers, depending on the preference and style of each teacher and the learning needs of students. Experiential Learning activities, such as role-playing, can be a great way for students to master the social skills within these guidelines. Some possible community guidelines include the following:

- listen more than talk
- paraphrase before adding comments
- treat each other with respect
- speak positively; praise liberally
- stay focused on learning
- look for commonalities before disagreeing
- be fair
- respect differences
- do your share of the work
- speak so that other groups can also hear each other

Teachers clearly play an important role in creating a positive learning environment. Teachers can't expect students to interact positively unless they walk the talk. Thus, teachers should be careful to (a) praise students at least three times more frequently than they correct them, (b) listen authentically to students, (c) speak positively to all students, avoiding sarcasm or negative comments (aside from necessary corrections), and (d) build relationships with students by learning about them and their interests and frequently talking with them about those interests.

MECHANICAL VS METAPHORICAL LEARNING

What kind of learning is taking place?

Before choosing a cooperative learning structure and planning how to teach it, teachers should consider what kind of learning they want their students to experience. One way to think about learning is to sort learning into two organizing concepts: mechanical and metaphorical (Knight, 1999).

Mechanical Learning

Mechanical learning refers to the learning students experience when the knowledge, skills, and big ideas to be learned in a class are unambiguous, when the outcomes are unmistakable and straight forward, and when there is a right and wrong answer that can be clearly identified. Examples of mechanical knowledge might include phonological awareness, memorization of essential concepts and terminology, grammatical terms, math facts, and so on. When a teacher employs instructional practices to enact mechanical learning, the teacher wants students to master the content pretty much in same way that he or she understands it.

Metaphorical Learning

Metaphorical learning, as its name would suggest, shares attributes with metaphor; it is by definition ambiguous, and functions indirectly. Metaphorical knowledge has no clear right and wrong outcome. For example each person determines and develops their own understanding of intellectual attributes like aesthetic response, personal attributes like respect or heroism, and many creative acts such as higher-order writing activities. Metaphorical knowledge is complex, ambiguous, and so uniquely individual that we damage it if we reduce it to a simple right or wrong answer. When a teacher employs instructional practices to enact metaphorical learning, the teacher wants students to make their own sense of what they are learning.

What does this mean for cooperative learning?

When cooperative learning is used to support mechanical learning, the teacher sets up the learning structure to ensure that students master key knowledge, skills, or big ideas.

When cooperative learning is used to support metaphorical learning, the teacher sets up the learning structure so that students make their own sense of the knowledge, skills, or big ideas being learned.

CHECKLIST: CRITICAL ELEMENTS FOR ALL COOPERATIVE LEARNING

Critical Elements	√	Comments
Has the teacher written out the instructions for the learning that is to take place?		
Has the teacher written out expectations for how students should behave while they performing the cooperative learning task?		
Have the students been taught appropriate social skills to ensure that they interact positively during the task?		
Has the teacher carefully considered the optimal make up of each group of students?		
Has the teacher developed additional activities for students who finish their task(s) before other students finish?		
Has the teacher allotted sufficient time for each activity, without providing so much time that the learning activity loses intensity?		
Has the teacher planned additionally activities to use during the class if activities take less time than planned?		
Has the teacher planned how to adjust the learning experience if activities take more time than planned?		
Has the teacher de-bugged the activity?		

ADDITIONAL COMMENTS:

Turn-to-your-neighbor (TTYN)

Students are organized into pairs. Then, at various points through out the class, the teacher asks students to turn to their neighbor (another student in the class who occasionally works with them) to discuss the material. For example, students might paraphrase different components of content being covered during a learning session, or ask each other questions to confirm that they have mastered the material.

An Example for Mechanical Learning: Ask students to compare and contrast or confirm their understanding of learning by discussing what they have learned with another student in the class.

An Example for Metaphorical Learning: Ask students to brainstorm ideas with their neighbor.

Critical Elements for TTYN	√	Comments
Do all students know who their learning partner will be before they are asked to turn to their neighbor?		
Has the teacher clarified exactly (a) what tasks students need to do on their own and (b) what tasks students need to do with their partner?		
Has the teacher given students a limited activity with a clear outcome that can be completed in a short period of time?		

ADDITIONAL COMMENTS:

Think, Pair, Share

Think, Pair, Share, involves three components. First, each student is prompted to complete a task or answer a question that requires them to think. Second, each student is prompted to pair up with another student to compare, contrast or confirm the product created during the thinking phase. Students are also prompted to adjust their product based on their conversation with their learning partner. Third, students are prompted to share with the rest of the class what they have learned during the entire activity. Think, Pair, Share usually involves more complicated activities than Turn-to-your -neighbor.

Lyman, F. T. (1981). The responsive classroom discussion: The inclusion of all students. In A. Anderson (Ed.), Mainstreaming Digest (pp. 109-113). College Park: University of Maryland Press.

An Example for Mechanical Learning: Ask students to answer a right or wrong, close-ended question during the thinking phase. Then prompt them to check their answer by pairing with a partner to confirm or adjust what they have written. Finally, students can double-check their answer by sharing it with the entire group of students.

An Example for Metaphorical Learning: Present a Thinking Device to students, ask them an open-ended, opinion question, and prompt them to write their response. Then prompt students to pair with a learning partner to discuss what each partner has written. Finally, the students can share their various responses with the rest of the class.

Critical Elements for Think, Pair, Share	√	Comments
Do all students know their learning partner before they are asked to Think, Pair, Share?		
Has the teacher asked the right kind of question for the kind of learning students are about to experience?		
Does the teacher ensure all students have completed their responses independently before they pair with a partner?		

ADDITIONAL COMMENTS:

Jigsaw

Students are organized into groups with equal numbers of participants. Each group is given a portion of some larger task (perhaps an to read part of a chapter or part of an essay) being covered during the class. For example, six groups of students may be formed to study six different sections of a research article. Each group works to learn their material so well that they will be able to teach it to others. After each group has read and learned their portion of the material, the groups are reconfigured so that each new group has a participant from each of the previous groups. Then each member teaches the others his or her version of the material until everyone has taught their material and all the content has been covered.

An Example for Mechanical Learning: Assign students the task of learning some important content and then prompt them to teach it to others in a new group.

An Example for Metaphorical Learning: Prompt students to answer an open-ended question about a problem (such as global warming) from the perspective of a particular group (such as environmentalists, oil companies, politicians, babies). Then prompt students to join a second group, with representatives from all of the first groups, to hammer out a mutually agreeable plan to address the problem. At the end, have all students discuss which solution seems to be the best and why.

Slavin, R. E. (1980). Cooperative Learning in Teams: State of the Art. Educational Psychologist, Vol. 15, pp. 93-111.

Critical Elements for Jigsaw	√	Comments
Do all students clearly understand which groups they belong in for both parts of the jigsaw?		
Has the teacher checked group one's product, when appropriate, (usually during mechanical learning) to ensure that students' ideas are correct before they share them with other students in group two.		
Did the teacher check to ensure that their representatives from <u>each</u> of the first groups are included in each of the second groups.		

ADDITIONAL COMMENTS:

Value Line or Four Corners

The teacher presents an issue, topic, or question to the students. Then, the teacher assigns a value scale to each possible student response. For example, the teacher might introduce a 1-10 Scale where 1=strong agreement and 10=strong disagreement. Students are then asked to form a line based on how they rank their response based on the scale. After students line up, the teacher guides a discussion about the topic. After discussion, consider having the students reevaluate where they wish to stand in the line. An alternative to value line is to ask post four answers to a question and then ask students to go to the corner that best represents their answer or perspective.

An Example for Mechanical Learning: Post four answers to a question in a the corners of a room. Then, ask students a right or wrong question and prompt them to stand in front of the answer that they think is correct. Have each group explain why they think their answer is correct.

An Example for Metaphorical Learning: Ask students an opinion question. Explain that 1 stands for strongly disagree and 10 stands for strongly agree. Ask students to stand in the place on the line that best reflects their opinion. Ask each group to defend their position.

Kagan, S. (1994). Cooperative Learning. San Clemente: Resources for Teachers.
Kagan, S. & Kagan, M. (1998). Multiple Intelligences: the Complete MI book. San Clemente: Resources for Teachers.

Critical Elements for Jigsaw	√	Comments
Are my questions sufficiently challenging that they will provoke more than just one response?		
Is there room at the various places on the number line or in the room's corners for a large number of students to gather.		
Have you built in a mechanism to ensure that all students make their responses before they go to their chosen spot in the room (for example, students could be prompted to write their number on an index card and hold it up at their chosen spot on the number line).		

ADDITIONAL COMMENTS:

Round Table (also called "Round Robin")

Divide the class into groups and pose a question. Ask one student to write an answer on a paper and then pass paper to the person beside him or her in the group. Every student has a turn at answering the question. The group with the most correct answers is recognized. Another way of doing Round Table is to have all student answer on paper and then have the group put all of their answers together with, again, the group with the most right answers being recognized. At the end of the activity, review answers, strategies, and ways of improvement.

Kagan, S. (1994). Cooperative learning. San Clemente: Resources for Teachers.
Kagan, S. & Kagan, M. (1998). Multiple Intelligences: the Complete MI book. San Clemente: Resources for Teachers.

An Example for Mechanical Learning: Ask students in groups to answer a right or wrong question.

An Example for Metaphorical Learning: Ask students in groups to answer an opinion question.

Critical Elements for Jigsaw	√	Comments
Do the teachers questions have multiple answers.		
Does the teacher use a timing system to maintain a quick pace in the classroom.		

GOING DEEPER

This mini-manual is simply a quick overview for coaches interested in helping teachers use cooperative learning. To really refine and develop their learning, coaches should read widely in the field. Several excellent resources that can be used to extend the ideas in this mini-coaching manual, are listed below:

Spencer Kagan & Miguel Kagan's Kagan Cooperative Learning.

This book offers a comprehensive, in depth discussion of many cooperative learning structures mentioned in this manual, including, Numbered Heads Together, RoundTable, and Three-Step Interview. This book contains step-by-step structures, management tips, teacher-friendly activities and forms, and research on proven methods. The Kagan's have provided decades of training on Cooperative Learning, and this book summarizes what they have learned providing an idepth how-to guide for cooperative learning.

Kagan Cooperative Learning is available at http://www.kaganonline.com

Sue Vernon's Community Building Series:

My colleague Sue Vernon has created an excellent, empirically proven collection of manuals describing strategies teachers can use to build productive, positive learning communities and to teach essential social skills students need for productive and positive interactions. The *Community Building Series* includes procedures and materials that teachers can use to create a sense of community within inclusive classrooms. The three major outcomes associated with the program are that students feel both physically and psychologically safe, that students become involved in activities without fear of ridicule or rejection, and that the learning and performance of students is enhanced.

The *Community Building Series* is available from Edge Enterprises, 708 W. Ninth Street, Suite 107, Lawrence, KS, 66044, (785) 749-1473, toll free (877) 767-1487, fax (785) 749-0207.