Collaborative Learning Strategies

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- Think or Write-Pair Share (Mingle or Double Pair Share; Snowball)

  Think-pair-share is a low-effort, low-stakes strategy for short, collaborative, active learning. Learners are required to work independently, share their ideas with others, consider peer responses, and ultimately engage in discussions in a manner that starts to synthesize an exchange.
  Mingle pair share: students trade partners and continue discussion with a new person.
  Double pair share: pairs join each other to grow the groups from 2 to 4 members for continued discussion.
  Snowball share: groups continue to double, joining each other until the whole class is back together in discussion.

- Challenge or Stump Your Partner (content review activity)

  This activity is easy to implement, but does require a "pre" activity assignment to properly set the stage. Using the course content, have the students create questions designed to challenge or "stump" each other. For best results, have them submit their questions for grading and evaluative comments before you engage in the CL activity. Allow students to choose their first partner. Partners take turns asking each other their prepared questions until you call time. To improve the effectiveness of the activity, have students take notes on the questions they struggle to answer correctly. Switch partners and repeat as many times as you like.

  *Bonus – the students create their own exam material while answering each other's questions.

- Write Around (check for understanding)

  This activity is excellent for having students use their own words to explain or detail their knowledge about course content, which emphasizes writing fluency and reflection. Students take turns responding to open-ended questions in a round-robin format with each member expounding upon the previous responses of other group members. Place students in groups of 3 to 5 people, have them create seated circles facing each other, and have everyone write their name at the top of a piece of notebook paper. Pose a question and allow 30 to 90 seconds (flexible depending on the difficulty of the question) for students to compose a response. When time is called, have students pass their paper to the left and

allow 30 seconds for students to read their neighbor's response. Provide an additional 30 to 90 seconds for everyone to add, clarify, or expand upon the previous information as they respond. Ask students to write their name next to their response to facilitate grading. The process is repeated until all group members have contributed a response to each page. Finally, allow several minutes for students to verbally continue their discussions. I like to have students select the one paper that best answers the question I posed for sharing with the class.

- Sticky Note Storm (brain-storming activity)

  The teacher poses a question, sets a time limit, and gives students a moment to think before writing. Each student writes down as many answers as they can, one idea per sticky note, and places each answer in the center of the table. The goal is to generate as many ideas as possible to cover the table with sticky notes. At the end of each round, students review one another's ideas.

- Mind Maps (https://www.mindmeister.com/) or (https://coggle.it/?lang=en-US)

  Mind maps are a terrific way for groups to add ideas to a project board that everyone has access to electronically.

- Numbered Heads Together (differentiated instruction)

  This strategy holds each student accountable for learning the material and provides more "teachers" for struggling learners. After direct instruction of the material, the group supports each member and provides opportunities for practice and discussion of content material.
  Students are placed in groups and each person is given a number (from one to the maximum number in each group). The teacher poses a question and students "put their heads together" to discover the answer. The teacher calls a specific number to respond as spokesperson for the group. The spokesperson must not only have the correct answer, they must also be able to explain how the group came to that conclusion. Because no one knows which number will be called, all team members must be prepared. After the student responds, have the other groups agree or disagree with the answer by showing a thumbs up or thumbs down, and then explain their reasoning. If the answer requires clarification, ask another student in the group to expand on the answer.

  The extant research clearly suggests that NHT is a more effective learning strategy than voluntary hand-raising (Hunter et al., 2015).

- Listening Teams (concept clarification activity)

  Divide students into teams of four where each group member is assigned a specific role: Questioner, Agree-er, Nay-sayer, and Example Giver. After the lesson content has been delivered, have groups engage in discussion from their assigned perspective. Teams can then be called upon during the whole class discussion to provide their input.

- Fishbowl Debate (pre-writing activity)

  Almost any topic is suitable for a Fishbowl discussion. The most effective prompts (questions or texts) do not have one right answer or interpretation, but rather allow for multiple perspectives and opinions. The Fishbowl strategy is excellent for discussing dilemmas, for example. Fishbowl discussions are most effective when students have had time to prepare ideas/questions in advance.

  A Fishbowl discussion requires a circle of chairs ("the fishbowl") and room outside the circle for the remaining students to observe what is happening in the "fishbowl." Typically, six to 12 chairs will allow for a range of perspectives while giving each student an opportunity to speak. Set a time limit for discussion.

  Two ways to switch roles: 1) Have half the class sit in the fishbowl for ten to 15 minutes before announcing "Switch," at which point the listeners enter the fishbowl and the speakers become the audience, or 2) Use the "tap" system, where you direct students on the outside of the fishbowl to gently tap a student on the inside, indicating that they should switch roles. I like the second system because I can remove students from the center when they have contributed enough to the conversation.

  Before beginning the Fishbowl activity, you may wish to review guidelines for having a respectful conversation. Sometimes teachers ask audience members to pay attention to conversational behaviors by recording specific aspects of the discussion, such as the number of interruptions, examples of respectful or disrespectful language used, or speaking times (who is speaking the most or the least). You need to provide clear instructions for the students in the audience. Should they be taking notes about the topic of discussion?

  After the discussion, you can ask students to reflect on how they think the discussion went and what they learned from it. Students can evaluate their performance as listeners and participants, as well as provide suggestions for how to improve the quality of discussion in the future. These reflections can be in writing, or they can be structured as small- or large-group conversations.

- Case Based (requires pre-planning)

  Case studies have proven to be highly effective when used to increase students' critical thinking ability when used in collaborative settings (Lee, 2007). Case-Based Collaborative Learning (CBCL) provides a structured, student-centered approach to learning challenging material within realistic scenarios from the field. Using Knoop's (1984) analytical steps, students learn to:

  1) Identify the problem.
  2) Determine the underlying causes and symptoms of the problem.
  3) Identify any unstated assumptions you are making and determine whether they are justifiable.
  4) Brainstorm and list several strategies for resolution of case.
  5) Evaluate each alternative, and then choose and rank your top 3 strategies according to effectiveness.
  6) List your top 3 recommendations and present a rationale for each.

  https://instructionalmoves.gse.harvard.edu/cbcl

- Problem Solving (requires pre-planning)

  In problem-based learning (PBL), a particular problem is introduced for learners to solve over a given period of time. First, students must understand the problem at hand before proposing a solution or response. PBL is used to approximate the kind of work students will experience in future careers, as well as the way they need to approach problems in their daily lives.

Online CL Strategies

- Jigsaw Learning

  This strategy requires breaking down lesson content into smaller parts to be divided either among individuals within a group or with each group taking responsibility for one portion of the problem. Each group is expected to report to the class, contributing ideas in a bid to finding solutions to a problem at hand. The learning type is suitable when dealing with a large project(s) and is easily adaptable to online learning with the inclusion of breakout rooms.

  *NOTE: the key to making this strategy effective is having students teach each other the content they have learned in their group!

  EX: In a criminal justice course, a professor may choose to provide students with an unsolved crime to teach them about investigative techniques and enlist their

assistance with aspects of the case. The professor could choose to provide each group with their own case, assigning each individual with a specific investigative task, OR the professor could choose to have the entire class work on one case, with each group focusing on one specific area of investigation.

- Think-Pair Share

  Similar to in class think-pair-share, but students are placed on breakout rooms for discussions.

- Brainwriting (anonymous ideas)

  Brainwriting is a simple strategy for encouraging students to generate ideas before a discussion while ensuring that everyone has a chance for thoughtful participation. The instructor introduces a discussion topic ahead of the class. Students brainstorm ideas on their own time, then anonymously submit them (Google Surveys works well). At the beginning of class, students can read over the submissions, allowing the ideas to provide a starting point for classroom discussion.

  Brainwriting levels the playing field, allowing even shy students to participate. Typically, students generate more creative and exciting ideas than they would normally feel safe sharing in the classroom. This also prevents a phenomenon called anchoring, where early suggestions greatly influence the direction of the discussion.

- Mind Maps (https://www.goodfirms.co/blog/best-free-and-open-source-mind-mapping-software)

  Mind mapping software is particularly helpful when using collaborative learning for online learning. The immediate access all group members have to a project board makes virtual group work seamless and enjoyable.

- Daily/Weekly Discussion Forums

  This is a great way to help students connect with each other in an online setting. Rather than having weekly discussion forums, I like to space 5 to 7 discussions out through the semester. I plan discussion questions in multiple parts so that students have to engage with the material in a meaningful way. To enhance the discussions, students must not only post their own responses, but they must respond a specified number of times to their peers.

*KEY: Scaffold individual discussion topics by requiring students to read and complete activities before they are allowed to post about the topic. This guarantees that students come to the discussion informed and ready to make thoughtful contributions.

- Breakout Discussion Groups

  For best results, place no more than five students in each breakout room. I have found the most success when 4 students are in each breakout room. Online discussion groups work better when each group has a different question, problem, or topic to discuss and specific guidelines for their discussion time.

- Peer Review

  Anonymously pair students to review each other's work. Give students the tools they need to perform a successful review: sample reviews, assessment rubrics, and guidelines on giving constructive feedback. Studies have shown that the peer review process has numerous benefits for both the reviewer and the reviewee. Giving and receiving in-depth feedback from their peers helps students deepen their knowledge of the subject matter and improve their writing skills.

Before You Begin …

- Group work should take place during class time. Do not mandate group work outside of class.
- Build in peer review opportunities throughout CL activities. Accountability from peers and instructor greatly improves the active participation of all students.
- Do not tie group work to a presentation or poster which is mostly created outside of class.
- Provide multiple grades for each individual's contributions to group activities. Use both individual and team grading to determine CL success.
- Sell the activity to the students! If you are not positive about the experience, your students will not be either.
- Have the students teach each other rather than taking the sole responsibility for instruction.
- Finally: Keep an eye on the clock! Pace your CL activities by setting a timer to limit discussions for optimal results.

The Most Common CL Issues & Tips for Solving Them

- Conflicting Ability Levels
  - Carefully pair students or select the groups to distribute ability levels and learner strengths.
- Dominant vs. Passive Members
  - Initiate pair learning first, using these experiences to build toward larger group-based learning.
  - Set the expectations for collaborative efforts before you engage in an activity. Model a group discussion, for example.
- Individual Gaps in Content Mastery
  - Have students complete individual work toward the learning objectives before initiating collaborative groups.
- Personality Conflicts
  - Closely monitor pair/group discussions and work projects.
  - When conflicts arise, mediate or switch group members.
- Differing Work Ethics/Values
  - Have groups track input from each member! Equitable representation ensures that no one dominates the group experience & no one "skates".
- Wasted Discussion Time (off-task)
  - Closely monitor pair/group discussions and work projects.
  - Establish leading questions to guide students through discovery discussions.
  - Allow group "debriefing" time for students to reflect on their learning in group settings.
- Learning objective is not well suited for collaborative learning
  - Don't try to force a collaborative learning experience. If the objective is highly individualized, look for another opportunity to initiate group work.
  - Try ONE activity and allow yourself and the students to become comfortable with your expectations before adding another.

Resources – Articles

Smith, B.L. & MacGregor, J. T. (1992). What is collaborative learning? in *Collaborative Learning: A Sourcebook for Higher Education*, by Goodsell, Maher, Tinto, Smith & MacGregor. Penn State Univ. Press.

McKinney, K., & Graham-Buxton, M. (1993). The use of collaborative learning groups in the large class: Is it possible? *Teaching Sociology*, 21(4), 403–408. https://doi.org/10.2307/1319092

Lee, K. (2007). Online collaborative case study learning. *Journal of College Reading and Learning*, 37(2), 82-100.

Resources – Websites

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- https://www.mindmeister.com/blog/group-mind-mapping/
- https://www.facultyfocus.com/articles/course-design-ideas/group-vs-collaborative-learning-knowing-difference-makes-difference/
- https://eztalks.com/elearning/6-major-types-of-collaborative-learning.html
- https://www.edutopia.org/article/setting-effective-group-work
- https://www.facinghistory.org/resource-library/teaching-strategies/fishbowl

Resources – Images

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