In-Class Collaborative Learning Techniques

JOHN COMBS, PIE ASSOCIATE 2020-2021

What is Collaborative Learning?

- More than putting students together and dividing up the work.
- Active engagement in collaboration toward stated learning objectives
- Meaningful learning
- Promotive Interaction
- Individual and Group Accountability

Why Collaborative Learning is Important

- We cannot simply "transfer" our knowledge to students
- Collaborative learning supports conclusions from modern learning theory
- Enhances: Achievement and Productivity
- Positive Attitudes and Ethics
- Quality of Interpersonal Relationships
- Psychological Health

Johnson and Johnson 1989, 1994; Johnson, Johnson and Smith, 1991, 2014; Pascarella & Terenzini 2005; Romero, 2009; Springer, Stanne, & Donovan 1999.

Types of Collaborative Learning

- Informal: activities are casual, short, typically last one class period

- Formal: activities require advance planning, handouts, pre-teaching, may last most of one class period or multiple class periods

- Team-Based Learning: course structured around the use of permanent "teams", requires considerable preparation and supervision

A Sample of Collaborative Learning Techniques

- Think-Pair-Share
- Pairs Check
- Talking Aloud Paired Problem Solving (TAPPS)
- Jigsaw
- Structured Controversy
- Affinity Grouping
- Round Table

Think-Pair-Share

▶ Informal

▶ Give students an engaging* question/problem

▶ Think = Students think on their own

▶ Pair = Have students discuss response with neighbor (short, 1-2 min)

▶ Share = Students share their discussion with the class

▶ Know how you will present the problem to students and how the students should report out

▶ Conclude by synthesizing responses, correcting incorrect answers

Pairs Check

- Informal
- Put students in pairs
- Students coach each other on class problems or
- check partner's reading notes for accuracy, completeness
- Quick: approx. 2 minutes
- Make sure students have sufficient background knowledge
- Provide sample problem solutions or summarize readings at the end

Talking Aloud Paired Problem Solving (TAPPS)

Procedure

- Relatively informal
- Students solve a series of problems in pairs, each with a role
- One talks, walks through process, thinks aloud
- One listens, asks questions, encourages the talker
- Students switch roles with each new problem

Caveats

- Explain the two different roles beforehand
- Teach problem-solving skills before using this activity
- Requires an environment of trust

Jigsaw

Students work in groups to become "experts" on a particular topic and discuss ways of teaching it to others

Students form jigsaw groups, where they are the sole expert on that topic

"Experts" lead discussion and teach topic to others

Formal: requires careful preparation, instruction, and consideration of the different topics.

JIGSAW

Round 1 – Focus Groups

Divide students into groups and give each group a different text to read and discuss.
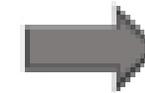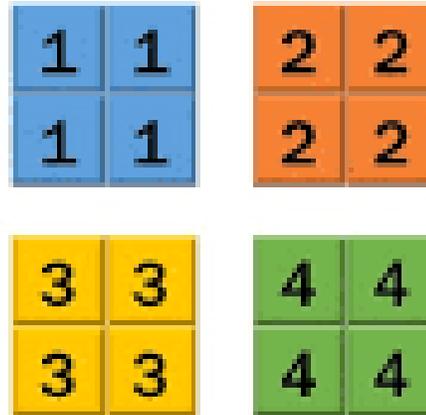
Round 2 – Task Groups

Mix the groups so that students can bring their specific focus to a common task or problem.

Jigsaw developed by Aronson (1971)
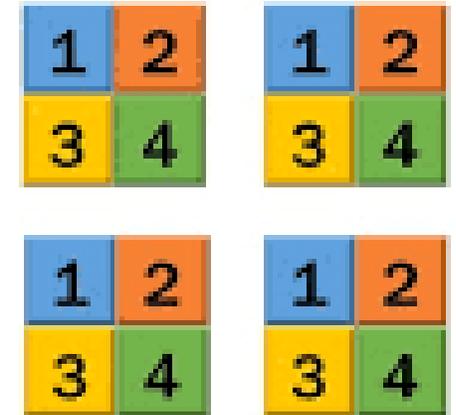
Structured Controversy

- ▶ Pairs within groups of 4 are assigned opposing sides of an issue
- ▶ Pairs research their assigned position
- ▶ Goal is for each side to share as much info as possible
- ▶ Pairs then switch sides
- ▶ Formal: requires advance consideration of issues to be used, availability of resources on the topic, and time limit

Affinity Grouping

▶ Students individually generate ideas/words about a complex topic

▶ In groups, students sort these ideas based on similarities, common themes

▶ Students create a title or heading for each grouping

▶ In person: sticky notes or slips of paper

▶ Online: use virtual stickies in apps like Google Jamboard or Miro

▶ Requires careful preparation of the topic, time (approx. 30-45 min),
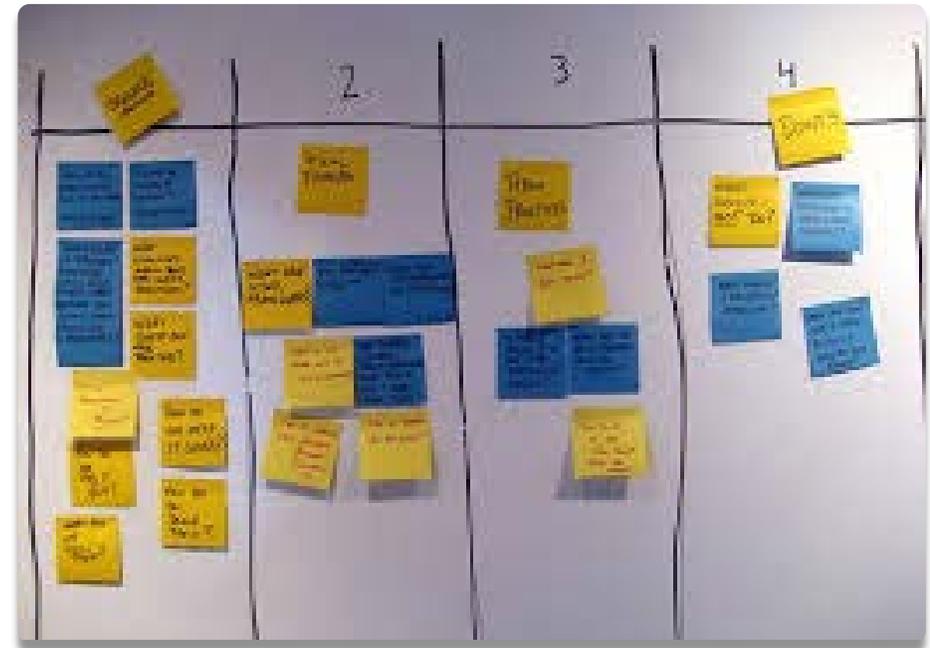
Round Table

- Students take turns responding to a prompt
- Each student responds with a few words or sentences in turn
- Process ends when time is up or when everyone has ideas on the page
- Online: use threaded discussion on Canvas or shared Google Doc
- Requires careful consideration of the prompt
- May be hard for students who have difficulty expressing themselves in writing

Further Reading

▶ Barkley, E.F., Cross, K. P., & Major, C. H. (2005). *Collaborative learning techniques: A handbook for college faculty*. San Francisco, CA: Jossey-Bass.

▶ Nilson, L.B. (2016). *Teaching at its best: A research-based resource for college instructors*. San Francisco, CA: Jossey-Bass.

▶ Woolfolk, A. (2011). *Educational psychology*. Boston, MA: Pearson