

Collaborative and Active Teaching in College Classes

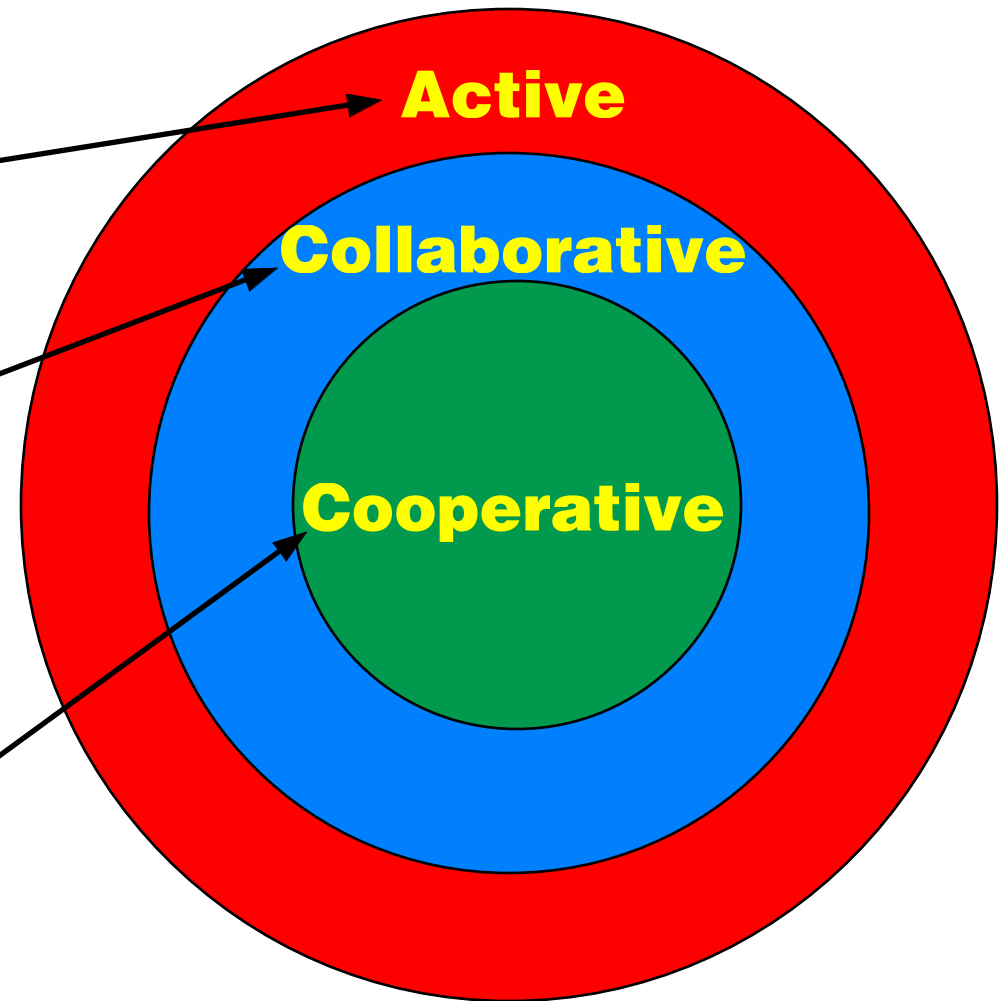
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Student-Centered Learning Terms

Students are **ACTIVE** in the classroom - in groups or individually

Students work in pairs or groups

Students work together in structured group activities that meet specified criteria



Cooperative Learning: an instructional approach in which students work in teams on a learning task structured to have the following features:

1. Positive interdependence. There must be a clearly defined group goal (complete the problem set, write the lab report, design the process) that requires involvement of every team member to achieve. If anyone fails to do his/her part, everyone is penalized in some manner.

2. Individual accountability. Each student in the team is held responsible for doing his/her share of the work and for understanding everyone else's contribution.

3. Face-to-face promotive interaction. Although some of the group work may be parceled out and done individually, some must be done interactively, with team members providing one another with questions, feedback, and instruction.

4. Appropriate use of interpersonal and teamwork skills. Students should be helped to develop leadership, communication, conflict resolution, and time management skills.

5. Regular self-assessment of team functioning. Teams should periodically be required to examine what they are doing well together and what areas need improvement.

Collaborative Teaching

Also called peer-to-peer teaching and interactive teaching.

Students work in pairs or in groups on in-class problems and, often, on homework problems.

Less structured than Cooperative Learning, easier to do, better for imparting life-long learning skills.

Lot's of different interactive exercises possible with large groups; most involve breaking the group down into smaller groups.

Active Teaching

**Least structured of all and easiest to implement.
Best of all, there's NO down side.**

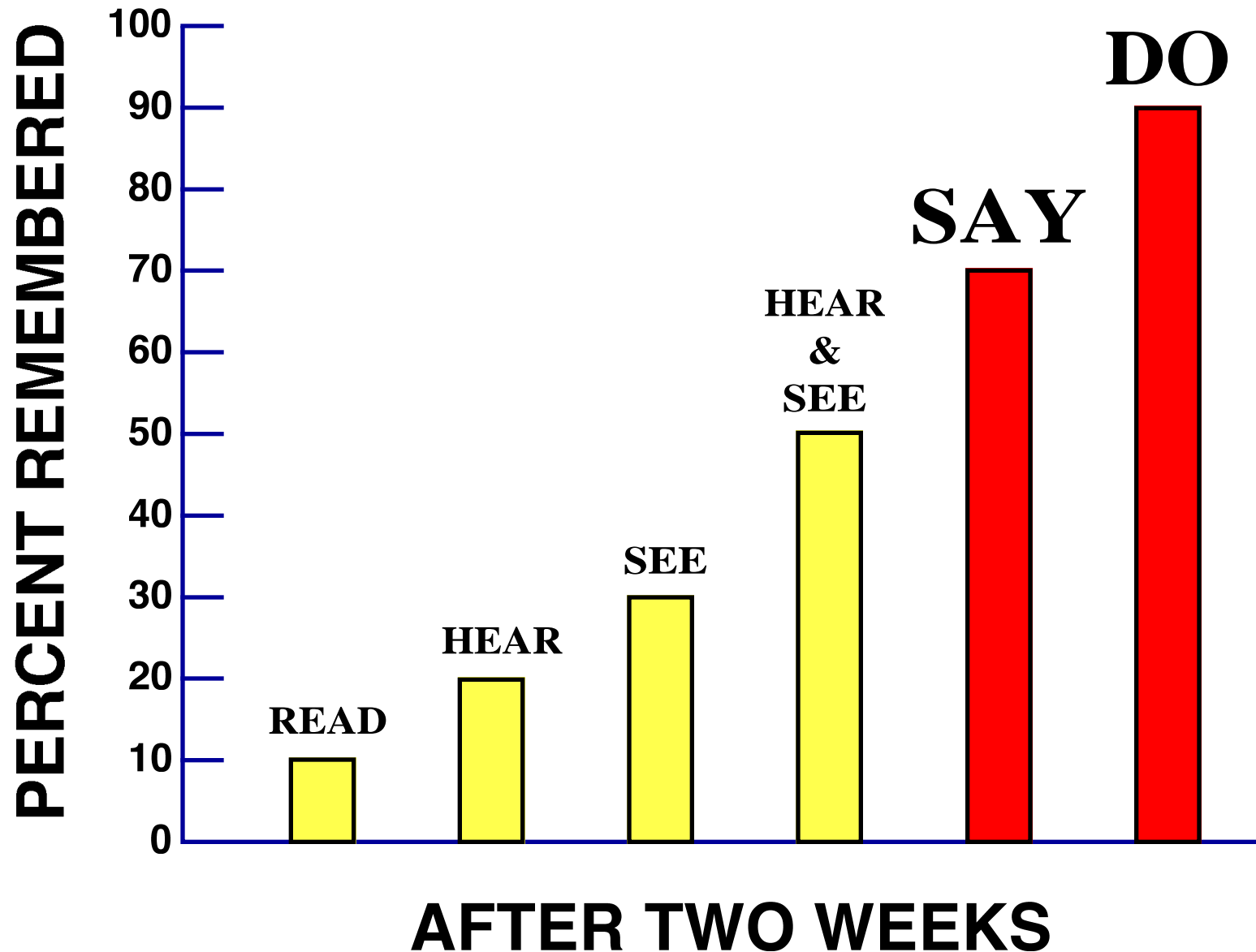
**Students work singly or in groups on ANYTHING
that's convenient to do in the classroom so long as the
students are ACTIVELY engaged during class.**

**Easy-to-learn techniques. Can be done by new teachers
and by those who have taught for years using a lecture-
only format.**

**Immediate results. Positive impact on student
attention during class. Positive impact on teaching
evaluations.**

**Students learn more, complain less, and do better on
homework assignments and tests.**

Step Up to Active Teaching



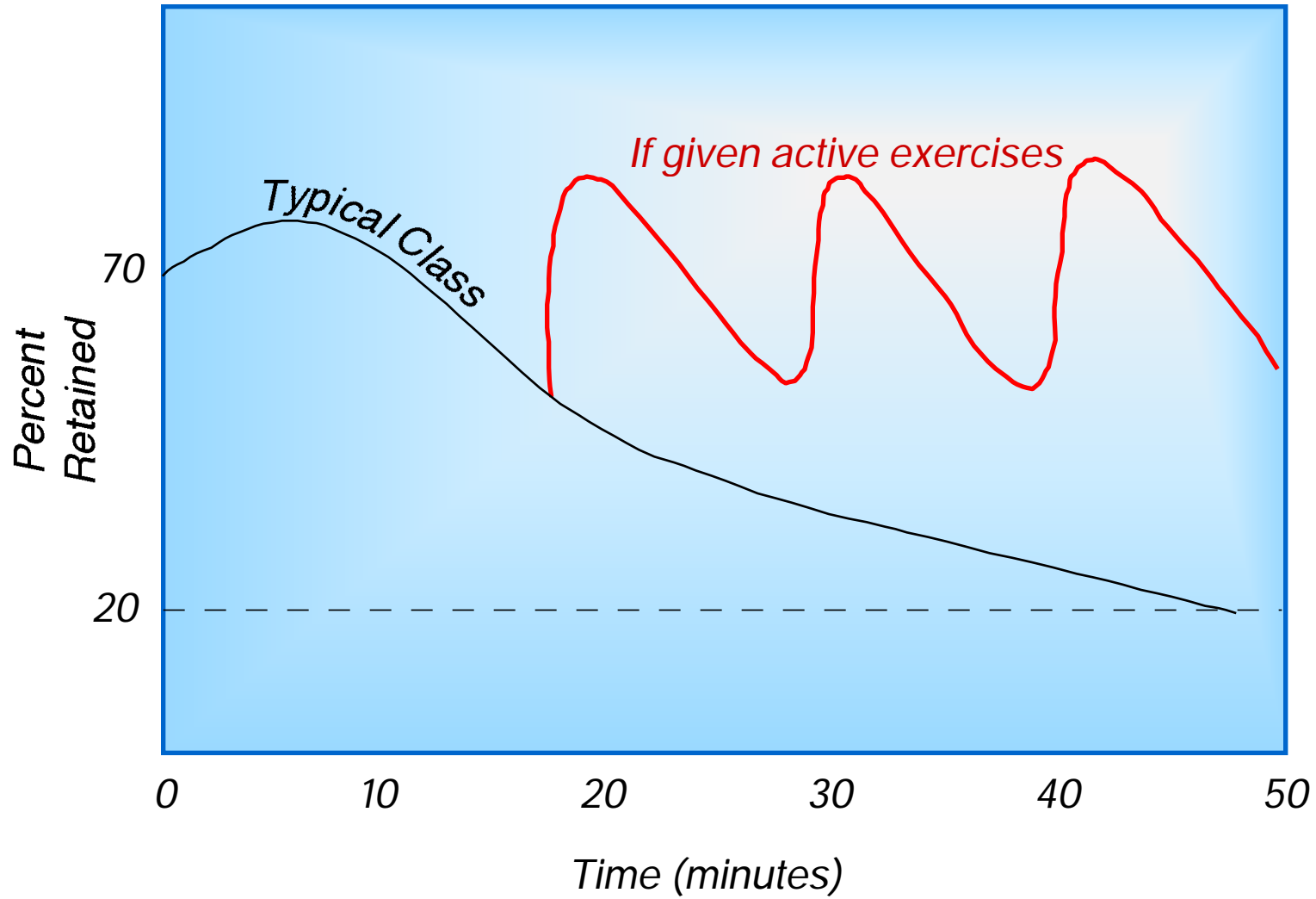
Peer Tutoring

Annis (1983) compared learning under five scenarios:

1. Students read a textbook passage.
2. Students read the passage and were taught by a peer.
3. Students did not read the passage but were taught by a peer.
4. Students read the passage and prepared to teach it to other students.
5. **Students read the passage and taught it to another student.**

**Teaching results in
better learning
than does being taught.**

The Student Attention Span



In- Class Exercises

Note-taking Pairs: Periodically, pause for 1-2 minutes and allow paired teams to compare notes and highlight important points.

Team Troubleshooting: Ask the students to form teams of 3-4. Pose a problem and ask the teams to troubleshoot the problem for five minutes, limiting them to simply listing possible reasons for the problem and specifically warn them not to analyze the ideas. Stop them, collect and list reasons from the teams - especially the funny ones. Now lead them through an analysis of selected, more serious, ideas proposed. Let them take an active part by giving their own analyses first.

Name Your Own Poison: At the beginning of class, announce that there will be a pop quiz during the final ten minutes. Fifteen minutes before the end of class, form teams of 3-4. Each team makes up a pop quiz question - give them 3-4 minutes to do so. Collect the questions and give them your own first question. While they work on that, read and select 1-2 more from their responses.

What's Fuzzy? Ten minutes before the end of class, stop and ask "What's fuzzy?"

1. Solicit verbal responses and address them immediately.
2. Collect written responses and pick one as a starting point for the next class.

Your Turn:

Please work in groups of 2-3.

1. Invent an active learning, in-class exercise.
2. List all the reasons you can think of why your exercise might be a total FLOP.
3. Generate some ideas to deal with each of the "flop" reasons to "deactivate" them.

Tips for Successful Active Teaching

Do what you are comfortable doing.

Coach them, don't just teach them. This is especially important in large classes!

Work problems on the marker board interactively.

Give them clear instructional objectives for each section of the course, develop content to teach to those objectives, and test fairly according to those objectives.

Don't be afraid to experiment.

Don't be afraid of silence. When you ask them a question, give them time to think about it.

Break up lectures with ACTIVE exercises. Do at least one during or near the end of EVERY lecture. Start on the FIRST day and establish the routine.