Collaborative Learning Technique 1

Think-Pair-Share

Characteristics

Group Size	PAIRS
Time on Task	5–15 MINUTES
Duration of Groups	SINGLE SESSION

Description and Purpose

In this simple and quick technique, the instructor develops and poses a question, gives students a few minutes to think about a response, and then asks students to share their ideas with a partner. Think-Pair-Share is particularly effective as a warm-up for whole-class discussion. The Think component requires students to stop and reflect before speaking, thus giving them an opportunity to collect and organize their thoughts. The Pair and Share components encourage learners to compare and contrast their understandings with those of another and to rehearse their response first in a low-risk situation before going public with the whole class. This opportunity to practice comments first with a peer tends to improve the quality of student contributions and generally increases willingness and readiness to speak in a larger group.

Preparation

Prior to coming to class, spend time developing an engaging question or problem that has many potential responses. Try responding to the question yourself. Decide how you are going to present the question (e.g., worksheet, presentation slide, or whiteboard) and how you are going to have students report out. (See Chapter Six for reporting-out suggestions.)

Procedure

1. Pose the question to the class, giving students a few minutes to think about the question and devise individual responses.
2. Ask students to pair with another student nearby.
3. Ask Student A to share his or her responses with Student B and then Student B to share ideas with Student A. Suggest that if the two students disagree, they clarify their positions so that they are ready to explain

how and why they disagree. If useful, request that pairs create a joint response by building on each other's ideas.

Online Implementation: Think-Pair-Share

Timing: Synchronous and asynchronous

Tools: Texting, instant messaging (IM), or telecommunication and discussion

Implementing this CoLT online provides students with the opportunity to practice online communication skills and allows two students to make a direct connection with each other, which can improve their experiences in online courses. Two advantages to online implementation are that students have a greater opportunity for reflective thought before responding to each other and that archived written transcripts of students' responses to each other are readily available. However, in the absence of the synchronous, physical proximity that makes this CoLT such an easy impromptu strategy in an onsite class, effective implementation in an online class requires preassigned peers who work together frequently and over an extended period of time.

Ask students to share their ideas in response to the prompt first with their work partners by way of IM, texting, or a telecommunications tool such as Skype, and then one student posts the joint response to a discussion board used by the full class or a student blog.

Examples

African Art and the Diaspora (Traditional Onsite)

In this class for art majors, the professor lectured on themes such as abundance, status, royalty, and prestige. To provide an active learning exercise as a break to her lectures, she often used a modified form of Think-Pair-Share. She projected an image on screen, such as a pottery bowl, and asked student to think about what the object conveys about the themes. She thus used the object as a tool to help students think about larger social and political issues. She then asked students to partner with another student sitting nearby to share their ideas, after which pairs shared their thoughts with the full class. She ended the exercise with a brief discussion before returning to a closing lecture.

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Introduction to Chemistry (Large Lecture)

In this Introduction to Chemistry, the professor regularly lectured to a large audience of students. He noticed, however, that about halfway through his lectures student attention started to wander. The students diverted eye contact and started shuffling, and he could see them check the clock. He decided he wanted to use a collaborative learning technique to help them refocus their attention on the lecture.

He chose Think-Pair-Share in combination with a quick poll. He found an application in which students could use their smartphones to call in their votes. He delivered a twenty-minute lecture, asked students a question about the content, and then allowed students to pair to discuss a joint answer to the question. He asked students with phones to access the number of the poll and call in their votes. He was able to integrate a link into his presentation software and thus could give students real-time results, which he discussed before giving another twenty-minute lecture.

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Introduction to Physical Anthropology (Flipped Course)

In this flipped course, students attended some onsite classes on campus, but they also did a considerable amount of work online. In this adaptation of Think-Pair-Share, Professor Sara McShards organized students into pairs and then quads at the beginning of the semester. On Thursday of each week, she posted four questions online that required students to understand and apply concepts from online readings and videos that would prepare them for the next week's in-class activities. Before the class met on Monday, partners must have worked together to create, whether through IM or telecommunications (the decision is theirs), and have documented joint responses to the questions. They then shared their responses in an online discussion forum, and the two sets of partners discussed, compared, and contrasted their responses in the forum; other students were encouraged to comment as well.

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English Composition (Online Course)

An instructor of English Composition to freshmen planned to have students write argument essays throughout the semester. He wanted students to work together both in pairs and in larger teams, so he first formed base pairs and then combined the base pairs into base teams.

At the beginning of the term, the professor shared several passages from arguments for students to read, and he used Think-Pair-Share in conjunction with the writings to help students examine features of a compelling written argument. The professor began by posting the following question to the class discussion forum: *What makes a written argument effective?* He asked students to think about the assigned passages individually and to consider the features that made those arguments effective. He then asked individuals to communicate their answers with their partner in the base pair and develop a consensus answer. Base pairs were then asked to share their answers with their base teams.

The instructor called on each team to post their responses to the discussion forum. He then posted his own list of features of effective arguments against which students compared their lists. Overall, the lists were similar, and the instructor commended the students for their ability to identify qualities of a good argument. The students and the instructor then worked together to combine and refine a set of criteria, with the instructor guiding the discussion by asking questions on the forum. Together, they developed a strong set of argument evaluation criteria used both by students in peer assessment of each other's writing and by the instructor in grading.

Variations and Extensions

- Export the Think step by posing a question for students to consider outside of class. When they return to class, ask students to pair and share their homework responses.

- Give students time to write their responses down before pairing; this variation is called Write-Pair-Share (Johnson, Johnson, & Smith, 1991; Lyman, 1981).

- Ask each pair to share and compare their paired ideas with those of another pair before, or instead of, the whole-class discussion; this variation is called Think-Pair-Square (Lyman, 1981).

- Think-Tweet-Share: Students think of response and then generate a Tweet or a 140-character representation of a Tweet (Perret, 2012).

- Think-Text-Share: If students are allowed to use cell phones in class, rather than verbally pairing their ideas they could text each other and then share with the full group (Perret, 2012).

- Think-Pair-Wordle-Share: Wordles are images that display words (word clouds) generated from source text. The images use font size to give greater prominence to words that appear more frequently in the source text. This variation requires the Wordle application. The instructor poses a question such as, "What are all the words you can think of to describe _____ [e.g., a character in book, a historical figure]?" Students think individually and then share ideas with partner to develop one Wordle between the two of them that will demonstrate the words they had in common through greater prominence. Students then share with group (Perret, 2012).

Observations and Advice

- See Chapter Three for ideas on developing and presenting good prompts.

- Give students sufficient time to think before pairing and responding; the time required will depend on the nature, scope, and complexity of the question as well as on the students' level of familiarity with the topic. For a conceptual question, allow at least a minute for individual responses. Doing so provides students time to formulate and rehearse ideas before sharing them. In addition to think time, plan enough time for both students to express and compare their responses. This share time will give students the opportunity to discuss well-thought-out answers with peers and to refine their answers before speaking to the whole class.

- Announce a time limit, but gauge time needed by decibel levels as well. If the pairs are all still actively engaged, consider extending that limit by a minute or two.

- If one student seems to be dominating the other in the pair, set time limits for each student response.

- The simplest reporting out strategy is to have each pair share its most important point with the whole class. Limit the number of responses, repetition, and time required in the report out by asking each pair after the first to share only ideas not yet mentioned. Following the reports, conclude with a synthesis to validate student responses by highlighting the good points that students brought out. Gently correct any responses that are incorrect, and add any points that weren't covered. If appropriate, provide learners with an expert response, allowing them to check and revise their individual and pair responses. If time is limited or the class is large, randomly call on student pairs or collect a written version of the pair responses and review them outside of class.

- To promote active listening during the report-out phase, randomly call on students and ask them to summarize what the reporting student just said.

- The reporting out usually provides instructors with sufficient feedback to assess student understanding. However, in cases where student pairs have exhibited a great deal of difficulty or confusion in their responses, it may be useful to do additional assessment. Consider using Minute Paper (CAT 6, Angelo & Cross, 1993, pp. 148–153), and ask students to write a half-sheet response to a question such as, "What aspect of the prompt question was most difficult for you to answer?" or "On what points did you and your partner agree, or disagree?"

- Think-Pair-Share is typically used as an informal strategy to stimulate discussion and is not generally used for grading purposes.

Primary Resources

Lyman, F. (1981). The responsive classroom discussion. In A. S. Anderson (Ed.), *Mainstreaming digest*. College Park: University of Maryland College of Education.

Lyman, F. T. (1992). Think-Pair-Share, Thinktrix, Thinklinks, and weird facts: An interactive system for cooperative learning. In N. Davidson & T. Worsham (Eds.), *Enhancing thinking through cooperative learning* (pp. 169–181). New York: Teachers College Press.

Millis, B. J., & Cottell, P. (1998). *Cooperative learning for higher education faculty*. American Council on Education, Series on Higher Education. Phoenix, AZ: Oryx Press, pp. 72–78, 115–116.