THE K. PATRICIA CROSS ACADEMY

INSTRUCTOR'S GUIDE

Teaching Technique 37

Think-Pair-Share

ACTIVITY TYPE

- Group Work
- Discussion
- Active/Engaged Learning

TEACHING PROBLEM ADDRESSED

- Lack of Participation
- Surface Learning
- Low Motivation/Engagement

LEARNING TAXONOMIC LEVEL

- Application: Analysis & Critical Thinking
- Application: Problem Solving
- Integration and Synthesis
- Caring

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Think-Pair-Share

In a *Think-Pair-Share*, the instructor poses a question, gives students a few minutes to think about a response, and then asks students to share their ideas with a partner. Hence Think-Pair-Share.

1. Clarify your teaching purpose and learning goals for *Think-Pair-Share*
2. Craft a good question
3. Set assignment parameters (such as timing for each step)
4. If you choose to assess and grade, determine how
5. Communicate assignment instructions to students
6. Allow time for each of the three steps
7. Reflect upon the activity and evaluate its effectiveness

Step-By-Step Instructions

In this section we provide you with guidance on each of the seven steps involved as you consider this technique.

STEP 1: CLARIFY YOUR TEACHING PURPOSE AND LEARNING GOALS

Exchanging information, ideas, and opinions in open and provocative discussion lies at the heart of collaborative learning. McKeachie describes discussion as the prototypic teaching method for active learning and one of the most valuable tools in the teacher's repertoire (2002). Davis notes, "A good give-and-take discussion can produce unmatched learning experiences as students articulate their ideas, respond to their classmates' points, and develop skills in evaluating the evidence of their own and others' positions" (1993, p. 63).

Yet it is often difficult to get students to speak up and say what they truly think, believe, or feel. Students are afraid of being publicly embarrassed if their comments are viewed as incorrect or stupid. If a student's first language is not English, or alternately if a student is struggling to become acculturated to modes of appropriate college classroom behavior, speaking in class is even more threatening. Whatever the reasons for student reticence to speak, many instructors find that this makes it very challenging to generate stimulating classroom discussion.

Think-Pair-Share is a simple technique that offers an effective solution to these problems. The "Think" component requires students to stop and reflect before speaking, thus giving them an opportunity to collect and organize (and perhaps even jot down) their thoughts, actions that are very helpful to many types of students. 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. This technique is therefore particularly valuable as a warm-up to whole class discussions. *Think-Pair-Share* prompts also can help students practice different kinds of thinking, depending upon the question posed. We therefore provide guidance on how to craft prompts addressing a range of thinking levels in the **Support Materials** section of this document.

STEP 2: IDENTIFY THE LEARNING TASK'S UNDERLYING PROBLEM AND PROMPT

Students think about and then share with a partner their response to a question posed by the instructor.

Step-By-Step Instructions (CON'T)

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STEP 3: SET ASSIGNMENT PARAMETERS

Prior to coming to class, spend time developing an engaging question or problem that has many potential responses. Try responding to the question yourself. Also decide how you are going to present the question (such as worksheet, presentation slide, or whiteboard) and how you are going to have students report out.

Plan to 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. 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.

STEP 4: DEVELOP A PLAN FOR LEARNING ASSESSMENT OR GRADING

Think-Pair-Shares are typically used to promote effective discussion and are not usually graded. However, some professors have found success using *Think-Pair-Share* in conjunction with clickers, which can generate grading data.

STEP 5: COMMUNICATE ASSIGNMENT PARAMETERS TO STUDENTS

Although you may simply pose the question, it is often helpful to have it written (such as on a whiteboard, or presentation slide) so that students can refer to it.

STEP 6: IMPLEMENT THE TECHNIQUE

- Pose the question to the class, giving students a few minutes to think about the question and devise individual responses.
- Ask students to pair with another student nearby.
- 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 should 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.

Step-By-Step Instructions (CON'T)

STEP 7: REFLECT UPON THE ACTIVITY AND EVALUATE ITS EFFECTIVENESS

When reflecting on the activity and how effective it was, consider the following questions:

- Did the technique match the course learning goals and objectives?
- Did it meet my goals for this learning module?
- Was it appropriate for the students?
- Did the technique keep the students engaged?
- Did it promote student learning?
- Did it provide me with information about student understanding?

If you answer yes to all or most of these questions, next consider how you might improve the activity for the next use.

Support Materials

The materials in this section are intended to help you with the process of implementing this technique. For *Think-Pair-Share,* we provide tips on crafting good prompts.

TIPS FOR CRAFTING GOOD PROMPTS

Most learning tasks start with a question to be addressed or a problem to be solved. Modern research is confirming John Dewey's basic premise that meaningful learning starts with the learner's active engagement with a problem. The "problems" that are presented vary by discipline, of course, but Bean (1996, p. 152) advises that generally speaking, learning tasks should be open-ended, requiring critical thinking with supporting evidence or arguments. They should promote controversy, result in some type of group product, and be directed toward a learning goal of the course.

Consider the table on page 7 for a number of sample question or problem "stems" that will help craft task prompts that can be adapted to a variety of learning activities.

SAMPLE TASK PROMPT STEMS

For crafting compelling questions in a *Think-Pair-Share*

QUESTION TYPE	PURPOSE	EXAMPLE
Exploratory	Probe facts and basic knowledge	What research evidence supports ____?
Challenge	Examine assumptions, conclusions, and interpretations	How else might we account for ____?
Relational	Ask for comparison of themes, ideas, or issues	How does ____ compare to ____?
Diagnostic	Probe motives or causes	Why did ____?
Action	Call for a conclusion or action	In response to ____, what should ____ do?
Cause & Effect	Ask for causal relationships between ideas, actions, or events	If ____occurred, what would happen?
Extension	Expand the discussion	What are additional ways that ____?
Hypothetical	Pose a change in the facts or issues	Suppose ____ had been the case, would the outcome have been the same?
Priority	Seek to identify the most important issue	From all that we have discussed, what is the most important ____?
Summary	Elicit syntheses	What themes or lessons have emerged from ____?
Problem	Challenge students to find solutions to real or hypothetical situations	What if? (To be motivating, students should be able to make some progress on finding a solution, and there should be more than one solution.)
Interpretation	Help students to uncover the underlying meaning of things	From whose viewpoint or perspective are we seeing, hearing, reading? What does this mean? or, What may have been intended by . . . ?
Application	Probe for relationships and ask students to connect theory to practice	How does this apply to that? or, Knowing this, how would you . . . ?
Evaluative	Require students to assess and make judgments	Which of these are better? Why does it matter? and, So what?
Critical	Require students to examine the validity of statements, arguments, and conclusions and to analyze their thinking and challenge their own assumptions	How do we know? and, What's the evidence and how reliable is the evidence?

Technique Template

Following are two templates to assist you as you think through how you might implement this technique in your own class. The first is a completed template, providing an example of how Elizabeth Barkley adapted *Think-Pair-Share* in her course, *Music of Multicultural America*. The second is a blank template for you to fill out to tailor this technique for your course.

Technique Template

Sample *Think-Pair-Share* Completed Technique Template:

Content from Elizabeth Barkley

Music of Multicultural America

Course Name

COURSE CHARACTERISTICS

What are the situational factors that impact this course? For example, is it on campus or online? How many students? Is it lower division or graduate? Are there student attributes such as attitudes, prior knowledge, reasons for enrolling, and so forth that should be taken into account as you consider this technique?

My course is an on campus, Honors Institute section of a lower division General Education course. The course meets my institution's United States Cultures & Communities requirement and also the Humanities requirement. It enrolls about 25-30 students. A significant number are international students and we are also trying to recruit more first generation students. These students are often reluctant to speak up in class.

STEP 1: CLARIFY YOUR TEACHING PURPOSE AND LEARNING GOALS

Why are you choosing this technique? What do you hope to accomplish?

I am looking for an activity that will help generate more robust, thoughtful discussion in class. Many of the students in my class are non-Native English speakers, or still learning the ropes of being a college student, or they are simply shy. Whatever the reason, many are reluctant to speak up.

STEP 2: IDENTIFY THE LEARNING TASK'S UNDERLYING PROBLEM AND PROMPT

What is the question you want learners to address, or problem you want them to solve?

I will use this technique as a way of helping generate more responses to the prompts I am already using for in-class discussions.

STEP 3: SET ASSIGNMENT PARAMETERS

What are the assignment logistics? For example, will this be assigned individually or is it group work? How long will the assignment take? Will students be submitting a product? What materials, resources, or additional information do you anticipate needing?

I will follow the established 3-part process (think - pair - share), and then I will invite students to report out to the whole class. Other than taking the time to craft good discussion questions, I do not anticipate needing anything beyond what I already have.

STEP 4: DEVELOP A PLAN FOR LEARNING ASSESSMENT OR GRADING

If you decide to assess learning, how will you determine that learning has occurred? For example, will you use a simple +/check/- grading system? If you use a rubric, will you use an existing one or create one? What will be your criteria and standards?

I will use this primarily as a way of improving whole class discussion. Therefore, I will not assess/grade it.

STEP 5: COMMUNICATE ASSIGNMENT PARAMETERS TO STUDENTS

How will you communicate assignment parameters to students? For example, through a handout? A prompt on a presentation slide? Assignment instructions in your online course?

I will present each question on a presentation slide. I will also use a timer that is displayed so that students can see how much time they have for each of the technique's components.

STEP 6: IMPLEMENT THE TECHNIQUE

How will you adapt steps/procedures for your students? Are there any additional logistical aspects to consider?

I will follow the 3-steps and also be mindful of timing, but other than that, this seems to be pretty straight forward.

STEP 7: REFLECT UPON THE ACTIVITY AND EVALUATE ITS EFFECTIVENESS

Note: This step will be completed after you have implemented the technique.
Did this technique help you accomplish your goals? What worked well? What could have been improved? What might you change if you decide to implement the activity again?

After I implemented this technique I asked students how they liked it, and many said it was very helpful to have the "think time" to clarify their thoughts, and they also said they liked sharing with a partner as it was not as intimidating as speaking up in the whole class. I will continue to use it along with other discussion techniques.

Technique Template

This template is intended for use when planning to implement ***Think-Pair-Share*** in your class. Fill in the blanks below, and use the information provided elsewhere in the Instructor's Guide to assist you in your thinking.

Course Name

COURSE CHARACTERISTICS

What are the situational factors that impact this course? For example, is it on campus or online? How many students? Is it lower division or graduate? Are there student attributes such as attitudes, prior knowledge, reasons for enrolling, and so forth that should be taken into account as you consider this technique?

STEP 1: CLARIFY YOUR TEACHING PURPOSE AND LEARNING GOALS

Why are you choosing this technique? What do you hope to accomplish?

STEP 2: IDENTIFY THE LEARNING TASK'S UNDERLYING PROBLEM AND PROMPT

What is the question you want learners to address, or problem you want them to solve?

STEP 3: SET ASSIGNMENT PARAMETERS

What are the assignment logistics? For example, will this be assigned individually or is it group work? How long will the assignment take? Will students be submitting a product? What materials, resources, or additional information do you anticipate needing?

STEP 4: DEVELOP A PLAN FOR LEARNING ASSESSMENT OR GRADING

If you decide to assess learning, how will you determine that learning has occurred? For example, will you use a simple +/check/- grading system? If you use a rubric, will you use an existing one or create one? What will be your criteria and standards?

STEP 5: COMMUNICATE ASSIGNMENT PARAMETERS TO STUDENTS

How will you communicate assignment parameters to students? For example, through a handout? A prompt on a presentation slide? Assignment instructions in your online course?

STEP 6: IMPLEMENT THE TECHNIQUE

How will you adapt steps/procedures for your students? Are there any additional logistical aspects to consider?

STEP 7: REFLECT UPON THE ACTIVITY AND EVALUATE ITS EFFECTIVENESS

Note: This step will be completed after you have implemented the technique.
Did this technique help you accomplish your goals? What worked well? What could have been improved? What might you change if you decide to implement the activity again?

References and Resources

PRIMARY SOURCE

Content for this download was drawn primarily from "Collaborative Learning Technique 2: Think-Pair-Share." Barkley, E. F., Major, C. H., Cross, K.P., (2014). *Collaborative Learning Techniques: A Handbook for College Faculty.* San Francisco, CA: Jossey-Bass, pp. 153–158. It includes material that was adapted or reproduced with permission. For further information about this technique, including examples in online and on campus courses, see the primary source:

Barkley, E. F., Major, C. H., Cross, K.P., (2014). *Collaborative Learning Techniques: A Handbook for College Faculty.* 2nd Ed. San Francisco, CA: Jossey-Bass

CITATIONS AND ADDITIONAL SUGGESTIONS FOR FURTHER READING

- Lyman, F. (1981). The responsive classroom discussion. In Anderson, A. S. (Ed.), *Mainstreaming Digest.* College Park, MD: 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). NY: 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. P. 72-78; 115–116.

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