



Using Think-Pair-Share

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Asking a question during a lecture is a great way to get students actively engaged, to check for understanding, or to get students to apply new knowledge, isn't it? Isn't it? Anybody have a thought on that? Hmm... guess I'll have to answer that question myself. The answer to the question is "potentially." There are a number of problems with the way that we typically pose questions within a lecture; two particularly concern me.

The first is that when a question is posed to the class as a whole, usually a limited number of students, and sometimes no students, volunteer to answer. Research on participation in college classrooms has shown that, in classes of fewer than 40 students, four to five students do about 75 percent of the talking that isn't done by the instructor. In large classes, participation levels drop even further. The students who typically volunteer to answer questions in my classes are those I think of as members of "my fan club" or at least, members of the psychology fan club. These are the students who sit up front, who like to drop by my office and talk about course content, and whose performance is in the top ten percent of the class. They're also fairly extroverted. While my fan club and I are having brilliant Socratic dialogues, the shy, the unprepared, and the uninterested are doing anything they possibly can to avoid eye contact with me.

The second problem is that, after asking a question, the average instructor waits **less than one second** before calling on a student. As soon as the first student is called upon, many of the others stop processing their answers. Getting more students to process the answer isn't that difficult. A wait of as little as three seconds has been shown to improve both the quantity and quality of student responses.

A simple solution to help overcome these two problems is to use *Think-Pair-Share*, developed by Frank Lyman. *Think-Pair-Share* is a low-risk strategy to get **many** students actively involved in classes of any size. The procedure is simple: after asking a question, tell students to think silently about their answers. As a variation, you might have them write their individual answers. (Depending on the complexity of the question and the amount of time I think is appropriate for the activity, I give them anywhere from 10 seconds to five minutes to work individually.) Then ask them to pair up with a partner to compare or discuss their responses. Finally, call randomly on a few students to summarize their discussion or give their answer. The random calls are important to ensure that students are individually accountable for participating.

When you are satisfied that students understood the concept, or that most could solve a similar problem on their own, continue with your lecture until the next question. That's it!

When I first introduce *Think-Pair-Share* or one of its variations, I put up an overhead outlining the procedure (see below). After using it a few times, students get used to the process and I don't need the overheads anymore.

Think-Pair-Share

1. **Think** about your answer individually.
2. **Pair** with a partner and discuss your answers.
3. **Share** your answer (or your partner's answer) when called upon.

Write-Pair-Share

1. **Write** your answer individually.
2. **Pair** with a partner and discuss your answers.
3. **Share** your answer (or your partner's answer) when called upon.

A further variation on *Think-Pair-Share* was developed by Johnson, Johnson, and Smith (1991). It's called *Formulate-Share-Listen-Create*, and it's a good strategy for use with problems or questions that could be addressed in a variety of ways. The "create" step gets students to synthesize their ideas and come up with the best solution to a problem. I often use this strategy to have students write short essays in class.

Formulate-Share-Listen-Create

1. **Formulate** your answer to the question individually.
2. **Share** your answer with your partner.
3. **Listen** carefully to your partner's answer. Note similarities and differences in your answers.
4. **Create** a new answer that incorporates the best of the ideas. Be prepared to present your answer if called upon.

If you are already using teams in your classroom, you can have students work with partners within their teams. If you don't have ongoing teams, you might ask students at the beginning of class to form pairs and to introduce themselves before the lecture begins.

Sounds easy, doesn't it? Doesn't it? Anybody?

References

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