

Tip of the Month - Asking Questions and Engaging Students in Thinking

Key Questions: When asking questions, consider how many students are engaged in thinking, and what are they thinking? What can you do to ensure that most students are engaged in thinking after you pose the question? What can you do to find out more about student's thinking?

Common Scenario: The typical questioning scenario has the teacher asking a question, students raise their hand, and the teacher calls on a student who then responds with an answer. If the response is correct, the teacher affirms the response. If the response is wrong, the teacher calls on another student.

False Assumptions That Drive the Common Scenario: 1) When teachers ask a question, it is assumed that most students are thinking about a response. 2) When a student provides a correct response, an assumption is often made that either all the students are thinking the same thing, or if they are not, they will immediately correct their wrong thinking and adopt the correct response.

What We Know About Students: When teachers ask questions, few students may really be engaged in thinking about the question? Recall when you were a young adolescent and how many other things were going on in your mind while in school. And even when students are mentally engaged, some will be thinking correctly while others are not? In the common scenario, teachers can only know the thoughts of 1-2 students.

From research and practical experience we know that student's ideas vary widely and often differ from the expected response. If we don't know students' thoughts, we have little chance of altering their ideas. Furthermore, it often takes more than hearing the correct answer in order for students to change their thinking.

How might you achieve the goal of getting the most students engaged in thinking and know their ideas?

Solution: Think-Pair-Share Strategy - Ask a question, tell students to think of an answer, then partner up with a classmate and exchange their answer and why they think so. Circulate to observe and hear students' ideas. This also ensures students feel accountable for being on task.

Advantages: 1) All students are engaged in thinking of an answer and a justifiable reason for their answer - you know that because each student is now forced to think to a level where they have to vocalize a response and a justification to another person. 2) Each person hears how another person thinks and the reasoning for that idea. Oftentimes, responses vary so students get to hear a different answer and compare it to their own idea. When vocalizing their ideas out loud, students listen to their own idea and reasoning, and in doing so sometimes realize the shortcomings of their idea. When they listen, compare and defend their ideas, they either feel more uncertain about their idea, which then might leave them open to another possibility. Or they feel more certain about their idea because they have a good defense for their idea and perhaps their partner has the same logical and defensible notion. 3) When teachers circulate and capture this dialogue, the process is almost as good as the teacher asking the question and getting a response from each student.

Solution #2: Whiteboards - Give each student a whiteboard and a marker. Pose the question, ask all students to write an answer. Now you can use the pair-share strategy and students can compare ideas and reasons. Or you can ask students to hold up the whiteboards and a quick scan reveals what students are thinking. Now you can call on various students who have different ideas and find out what reasons they have for their ideas. Doing so reveals students' thinking that then helps you understand the origin or source of their ideas. This kind of information is essential for effectively determining where to begin when trying to help students modify their ideas.