How do I get my students to pay attention?

Attention is such a fundamental part of learning and teaching that we naturally want to ensure that students attend to us rather than stare at their phones or into space. The most frequently touted approaches to getting student attention include things like using examples that are relevant to students, using humor, demonstrating personal passion for the discipline, keeping students on their toes, or changing things up every 15 minutes or so. While some versions of these approaches can appear to be effective, they may actually be misdirected efforts. Why? Because these approaches tend to conflate attention with alertness. When students hear us refer to a popular TV show, laugh at our jokes, note the emotion in our voices, or perk up because we ask them to take out a sheet of paper, what we are really doing is alerting them to their surroundings. Unfortunately, these tactics don't direct students' attention toward what really matters for the learning: meaningful disciplinary work and their own thinking about that work. If we don't require students to use their attention to guide them into and through meaningful work, our efforts simply bring about transient sensory alertness, which quickly diminishes.

So how can we ensure that students' attention is sustained and productive?

Principles to focus student attention and harness it for deep, lasting learning

- **Student attention is sustained when *students* work on concrete problems.** When *we,* the instructors, give lectures or provide demonstrations, *we* are alert, attentive, and actively involved. But our students are passive and struggle to stay alert or attentive because they aren't the ones having an experience. The best way to focus and sustain students' attention is to require *them* to tackle concrete problems. Research suggests that when students are actively engaged with concrete problem solving, the brain guides and stimulates attention, especially when that problem solving involves peers.

- **Student attention is sustained when their prior knowledge is challenged in ways that make them curious.** Students will focus and work intently when they are confronted by problems that draw on their prior knowledge but also call that knowledge into question (in ways that don't pose a big threat to students' identity or values). Research suggests that such problems create a state of puzzlement that students feel a strong need to resolve, so they will sustain attention on the problem until they are satisfied that their prior thinking is sufficient or until they have in some way added to or altered their thinking.

- **Student attention is sustained when students focus on their own learning.** Students' attention can easily become scattered when they don't see how the different activities they do in class are connected or how the work we give them is related to work they've completed outside of class. More concerning, they may not pay much attention to their own thinking across time, so the work we assign and the feedback we give them adds up to very little learning. Research shows that when students are

required to make and track connections between the work they do and their changing thinking, they have cognitive space in which they can actively attend to and learn from the experiences they have in our classes.

Putting these principles into action

One way to ensure that we use these principles effectively in our teaching is to give our students an experience that is more like the ones we have when we do the work that is required in our own disciplinary fields.

- **Start class meetings and structure class meetings around problem solving in small groups.** Nothing tells the brain that it has serious work to do like a meaningful problem to solve. This effect is amplified when students work in groups because we can give them greater challenges to respond to. When we ask students to huddle together to make a group decision that can't be solved by just one person, everyone gets and stays involved mentally. If we require students to solve these problems first, we can continue to hold their attention during our lectures because they will have a reason to listen. Students who have attempted to do complex disciplinary thinking are much more likely to pay focused attention and actively integrate the ideas you present.
- **Structure problem solving so that students' prior knowledge is both necessary and potentially inadequate to resolve the problem**. Problem solving is more likely to sustain students' attention when they are asked to work just a bit beyond their current abilities or respond to challenges that contradict their current thinking. If these problems are realistic and don't have one simple answer, students are likely to hear ideas from their peers that differ from their own. In addition to requiring them to attend to their peers, this process requires them to attend to their own thinking because they must acknowledge the inadequacy of their prior knowledge. The more concrete these problems are, the better, because even students who are struggling to master conceptual thinking can get a toe-hold in the problem and stick with it until they've gained some new mastery of the concept.
- **Build student reflection on learning into every class meeting and throughout the course.** You should require students to attend to their thinking and learning in class and outside of class. After you have debriefed an activity and students have worked with (or struggled with) a particular concept, require them to write a short reflection about how their thinking has changed. After students have received an assignment with your feedback, you may require them to track where they are still struggling and reflect on the preparatory steps that they need to take to improve their performance. After students have done assigned reading outside of class, you may ask them to make reflective notes about what concept in the reading will help them prepare an upcoming assignment. These notes may be required in class when students share ideas and concerns about that assignment. These self-regulatory reflective activities sustain meaningful attention to learning throughout the course.

Example

Students in an environmental science course enter the course with little prior knowledge as well as misconceptions about the relation between watersheds and rivers and between point source pollution and nonpoint source pollution. If students listen to a lecture on these topics, they are likely to struggle to make connections to the concepts and their attention will easily drift. This activity is designed to surface and activate students' prior knowledge and interest by engaging them in a meaningful and concrete task. When students have engaged in this task, they will be motivated to gather and integrate more information from the subsequent mini-lectures and assigned readings.

1. Students are placed in groups of 5-7, and each group takes on the role of a citizen advisory board whose charge it is to decide where to focus an environmental study to determine the source of pollution. Groups each get a satellite map of the community in which the university is located. Five areas are marked on the map (the river that runs through the county, a garbage dump located near the river, an industry located far from the river, and two townships at different distances from the river).
2. Students are asked to individually choose which area should be the primary focus of the environmental study.
3. Students are then asked to share their individual choices with their group and must come to consensus. Groups must prepare a defense of their choice for the primary focus of the environmental study. After they reach a group decision, groups must simultaneously share their map area.
4. Disagreements and different ways of thinking surface; the instructor makes notes regarding the differing rationales and asks questions to probe students' thinking. After some time, the instructor reveals the best places to focus the environmental study (if these more scientific perspectives have not emerged). The instructor has the opportunity now to point out big misconceptions that many people hold about the relation between watersheds and rivers and between point source pollution and nonpoint source pollution.
5. Students are asked to write in response to these reflective prompts:
    a. What surprised you about the scientific starting point for the study (as opposed to your own or your group's thinking about the best starting point)?
    b. What question or questions do you have about watersheds and nonpoint source pollution sources based on the activity you just did?
6. The instructor gives a short lecture on the concepts targeted by the activity. After about 7 minutes, the instructor pauses and takes one or two of the questions that students had generated in their reflective responses.
7. The instructor gives students a second activity in which they can apply their new understanding of nonpoint source pollution sources. Students are again asked to write down responses to reflective prompts.
8. At the end of class, students are reminded that their assigned reading for the week will answer some of the big questions that have arisen from the class activities and have been articulated in responses to reflective prompts. Students are asked to

locate answers to questions they've written in class while they are doing the reading and to prepare to share those answers in the next class meeting. Student attention is sustained from the class meeting into the assigned readings that are done out of class.

Resources

Kolb, D. (2015) *Experiential learning: Experience as the source of learning and development.* Upper Saddle River, NJ: Pearson.

Nilson, L. (2013). *Creating self-regulated learners: Strategies to strengthen students' self-awareness and learning skills*. Sterling, VA: Stylus Publishing.

Zull, J. E. (2002). *The art of changing the brain: Enriching the practice of teaching by exploring the biology of learning*. Sterling, VA: Stylus Publishing.

If you'd like to learn more about how to harness student attention to ensure deep learning, please feel free to request a consultation.