

21 TEACHING STRATEGIES THAT STRUCTURE LEARNING ENVIRONMENTS AND PROMOTE FAIRNESS IN UNDERGRADUATE CLASSROOMS

- 1. Think-Pair-Share:** providing an opportunity for students to first think quietly and then share their ideas with a partner can help students rehearse and build confidence to share with the whole class, increasing participation.
- 2. Ask Open-ended Questions:** instead of asking verbal questions with only one possible answer (closed-ended questions), ask questions with multiple possible answers (open-ended questions).
- 3. Allow Students Time to Write:** an opportunity to write down their ideas on paper helps many students revisit what they know, formulate question, and rehearse what they may want to share, increasing participation.
- 4. Multiple Hands, Multiple Voices:** after you ask a question, say that you'll wait for at least 5 students to raise their hands before you call on anyone, and then really wait for 5 hands. Promote more participation this way.
- 5. Wait Time:** pause for 3 to 5 seconds (longer than you think!) after you ask a question before you call on anyone to speak or answer the question yourself. Longer wait times will allow more students thinking time.
- 6. Hand Raising:** in large group discussions, have students raise their hands. Avoid unstructured speaking situations where a subset of students can dominate. Work to call on all students who haven't yet spoken.
- 7. Use Popsicle Sticks/Index Cards:** write the name of every student in your class on an individual popsicle stick/index card and put in a cup. When asking a question, pull out 2-5 sticks to randomly call on students.
- 8. Assign Reporters for Small Groups:** assign who will speak on behalf of a small group. Randomly determine this by assigning the reporter as the person who has the longest hair, darkest shirt, upcoming birthday, etc.
- 9. Whip:** ask a question that has many possible answers and have every student share a brief answer.
- 10. Don't Judge Responses:** encourage students to honestly share their ideas. Avoid immediately correcting wrong answers or incorrect ideas. Student misconceptions can be addressed at a later point in time.
- 11. Use Praise with Caution:** "excellent job" and "great answer" can inadvertently discourage other students from participating if they think they can't do better than the previous student's response.
- 12. Learn Students' Names:** know your students' names and use them. Only knowing some students' names can make others feel like they don't belong. Avoid calling on groups by one person's name (e.g. Billy's group).
- 13. Use Varied Active Learning Strategies:** hands-on activities, think-pair-shares, jigsaw discussions, group presentations, & case studies provide more points of access for students than a teacher-centered lectures.
- 14. Collect Assessment Evidence from Every Student, Every Class:** increase the flow of information from students to instructor by collecting an index card question or an online reflection every class to gauge student learning, student confusions, and student perspectives on their experiences. Grade for participation only!
- 15. Work in Stations/Small Groups:** to decrease effective class size and provide more opportunity for interaction and discussion, consider organizing multiple activities as stations that small groups rotate through.
- 16. Monitor Student Participation:** pay attention to which students are or are not participating. Actively encourage student participation and ask to hear from students you haven't yet heard from
- 17. Integrate Culturally Diverse and Relevant Examples:** connect the concepts you are teaching to real-world examples that span diverse communities and cultures. Show images of culturally diverse people in your class.
- 18. Establish Classroom Community and Norms:** explicitly state that students should work together, help each other, share resources, support one another's learning, and be open to divergent points of view.
- 19. Don't Plan Too Much:** Students need TIME to think, do, and talk about what they are learning.
- 20. Be Explicit About Promoting Access and Equity for All Students:** Share with students why you use the teaching strategies that you use. Let them know that you want and expect everyone to learn.
- 21. Teach Students from the Moment They Arrive:** remember that students are learning about classroom culture in addition to biological concepts as soon as they enter the classroom.

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<i>I have used this...</i> <i>N=never</i> <i>O=occasionally</i> <i>R=regularly</i> <i>W=would like to try!</i>	<i>Teaching Strategy</i>
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