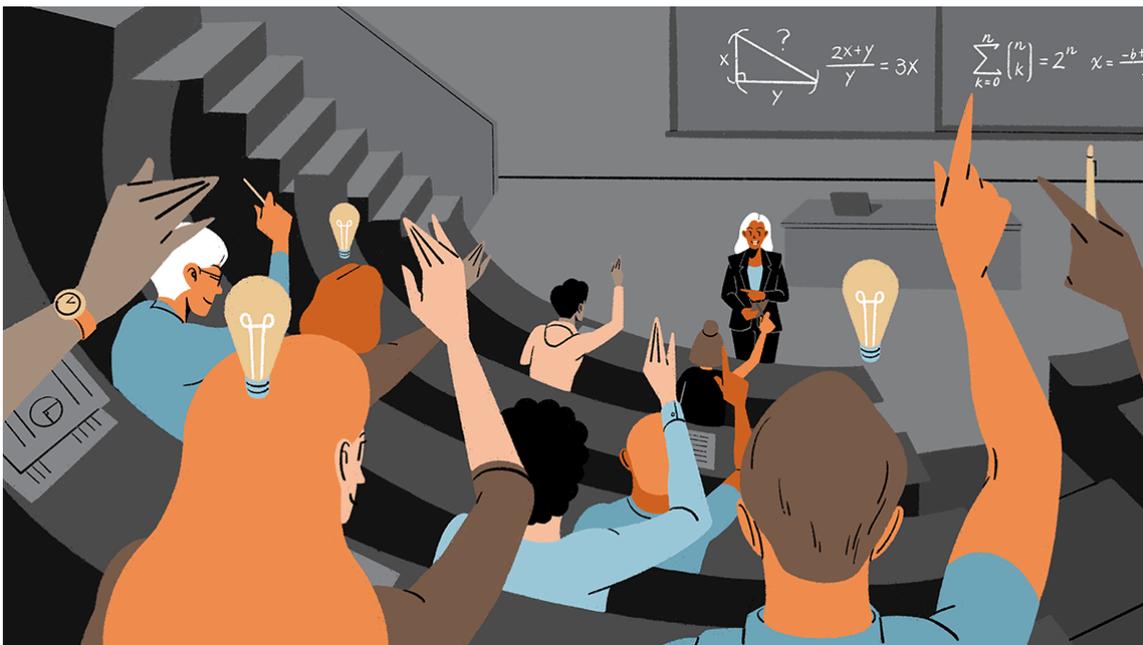


Want to Reach All of Your Students? Here's How to Make Your Teaching More Inclusive



Illustrations by Nien-Ken Alec Lu for The Chronicle

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By VIJI SATHY and KELLY A. HOGAN

In many courses, the days after the first exam can be stressful. Some students might feel worried about the results, or even doubt their abilities. So at the end of one challenging exam, a professor took a few minutes of class time to reassure her students.

Her brief remarks led to the kind of email that every faculty member should want to receive: *“The speech you gave post-exam was something I needed to hear. Thank you for reminding me that I belong here and have the potential to succeed.”* The student’s words tell you a lot about the instructor’s teaching style.

You may wonder: Is the role of a college instructor to help students feel included and ready to thrive? Is that something I should be doing? As [champions](#) of [inclusive teaching](#), we say — emphatically — yes.

Besides teaching content and skills in your discipline, your role is to help students learn. And not just some students. The changing demographics of higher education mean that undergraduates come to you with a wide variety of experiences, cultures, abilities, skills, and personalities. You have an opportunity to take that mix and produce a diverse set of thinkers and problem-solvers.

Teaching inclusively means [embracing student diversity](#) in all forms — race, ethnicity, gender, disability, socioeconomic background, ideology, even personality traits like introversion — as an asset. It means designing and teaching courses in ways that foster talent in all students, but especially those who come from groups traditionally underrepresented in higher education.

Traditional teaching methods [do not serve](#) all students well. This guide is for any faculty member who believes, as we do, that education can be an equalizer. We share tips here that any instructor can use to minimize inequities and help more students succeed. We're not suggesting a complete redesign of your courses, but more of an overlay to your current teaching practices.

Common Questions

If you're still skeptical at this point, you're not alone. Here are some quick answers to typical questions we hear about inclusive teaching.

I don't teach about diversity. What does diversity have to do with my course, and why should I care?

Some instructors make the mistake of equating inclusive teaching with introducing current events or “diversity issues” into, say, a math course. Of course you should offer diverse content, texts, guest speakers, and so on, where they're relevant, and there's been plenty of talk about that in academe. But when we talk about teaching inclusively, we choose to focus on the teaching methods that apply to all courses.

Are the tools of inclusive teaching just hand-holding? Shouldn't students be expected to learn on their own?

Instead of hand-holding, we prefer the word “structure.” Without structure in any situation, you leave it up to chance whether your goals are accomplished. For example, say you threw a party to bring together your single friends. They are far more likely to meet a variety of people if you plan icebreakers and activities (high structure) than if you simply provide space and time for the event (low structure). The same is true of learning: More structure means more students will engage and learn from you and their peers.

I understand these methods help certain students. But don't they harm the ones who don't need this kind of assistance?

Coming back to our party analogy, the extroverted party lover is going to mingle and meet people in either a low- or high-structure event. But the introverts (like us) who aren't comfortable with random mingling won't. Helping those who need the structure doesn't harm those who don't.

My course has a lot of content I need to get through. Can I really adapt these teaching methods to my discipline?

You're not alone in believing that your course is unique in having too much content to make any changes. We're not advocating a total redesign — just that you consider making some tweaks that can be the difference between retaining a more diverse population of students in your discipline, and not.

This all sounds good, but does it actually work?

Yes. We and [others](#) have seen positive changes on all kinds of metrics, including [narrowed achievement gaps](#), [increased interest](#) in our disciplines, fewer students off-task in our classrooms, and more students expressing their thanks at the end of a semester.

3 Key Principles of Inclusive Teaching



We'll get to the specific strategies shortly, but first the theory. All three principles convey the same message: You, as the instructor, have the control to create experiences that level the playing field in your classroom.

Principle No. 1: Inclusive teaching is a mind-set.

For every teaching decision you make, ask yourself, “Who is being left out as a result of this approach?” Consider: When you lecture, students vary in their ability to stay focused, pull out key ideas, and organize the information. Is it “hand-holding” to provide a skeletal outline of your lecture in advance? Critics might think so. But the result is that all students leave class with a set of minimal notes, a clearer idea of the main points, and an expert’s example of how ideas fit and flow together. And in the process, your students now have a good structure for how to take notes.

Principle No. 2: The more structure, the better for all students.

It’s worth repeating: More structure works for most undergraduates, without harming those who don’t need it. Students come to your classroom today with different cultural backgrounds, personalities, learning differences, and confidence levels. Their very diversity may seem overwhelming at times, but you can reach more of them by sharpening the structure of your syllabus, assignments, tests, and pedagogy. In our experience, all students appreciate and thrive from additional structure, and some benefit disproportionately.

Principle No. 3: Too little structure leaves too many students behind.

Some of the most traditional and common teaching methods — lecturing, cold-calling — aren’t very inclusive, at least as they are commonly done. Certain faculty members even take pride in using the classroom to cull the “weak” students from the “strong.” This is especially true in STEM fields, as we know from experience, since one of us teaches biology and the other statistics.

When we run [faculty workshops on inclusive teaching](#), we advise participants to envision the types of students who get left behind by low-structure teaching methods. To illustrate that here, let's think about two hypothetical students:

- Vanessa is a gifted student in a class with a Socratic approach — a low-structure method of class participation. But she's uncomfortable raising her hand or blurting out answers the way other students do. The result: Her discomfort might be distracting her from learning, and her ideas are not part of the conversation, so others aren't learning from her. Vanessa would benefit from varied opportunities for participation.
- Michael is an engaged student who is comfortable in class and in discussions, but he's feeling like a fraud because he received a failing grade on his first paper. Up to this point, he was able to do well by memorizing a lot of content. Now he's in a required course for his major that involves more analytical writing and expects him to apply concepts. It's a low-structure class in which his entire grade will be based on how he performs on two papers and one exam. Michael would benefit from more practice — that is, more low-stakes writing assignments and quizzes, and more-frequent feedback. The discipline might miss out on an engaged student because he may feel that he needs to change majors.

Both cases show how a lack of structure can inhibit student learning and development. Conveniently for our purposes here, Vanessa and Michael also illustrate the two main areas in which you can be more inclusive in your teaching — via classroom interactions and course design.

5 Ways to Interact Inclusively With Students



Here are some tips that work for us. We teach small-sized courses as well as large ones filled with hundreds of students seated before us in neat little rows. So don't even try pulling out excuses like *"My course is too large to do any of this"* or *"My classroom space is not ideal for these techniques."* We hear you, but we've seen these strategies pay off in all types of courses and [classrooms](#).

Get comfortable with periods of silence in your classroom.

Think-pair-share is a [gateway technique](#) to [active learning](#). It's the versatile little black dress of inclusive teaching. Yet we often shudder when we see it in practice, as faculty members tend to skip right over the thinking part.

There it is, prominently in the name of the technique: *think*-pair-share. The thinking time is crucial for students to form and own their individual thoughts before pairing off and sharing.

Otherwise, you risk seeing some students monopolize the discussion and others, like Vanessa, overwhelmed and left behind. That could cause quiet students to prematurely accept other people's ideas before considering their own, and lead those dominating the discussion to think their contributions are more valuable. As the instructor, you know that good ideas can come from any student.

Some instructors rush the “thinking” part of this exercise because they get nervous about too much extended silence. Even five seconds of silence in a classroom can feel like an eternity. Back when one of us (Kelly) was trying out new ways to break up a long lecture, a colleague observing the course said, “You use silence in the classroom so well. I never thought about this as a tool before.”

We urge you to get comfortable with the silence so that all students have the time they need to think. Tell the class, “*I’ll give you two minutes to think or write silently, and then I’ll prompt you to pair up with your classmates.*” Be prepared to repeat that every time you use this technique. If you know that you feel discomfort with silence (most of us do!), you may want to use a timer to regulate it.

Add structure to small-group discussions.

A classwide [discussion](#) has its benefits, but not all students have the desire, confidence, or chance to participate. Small groups give students a low-pressure way to vet their ideas with peers. Both of us use this time to walk around the classroom and eavesdrop, often with the goal of affirming the work of a few students who could use a confidence boost.

Yet this technique is not as inclusive as it could be, if you leave it to chance that the teams will function well (low structure). Here are some ways to add structure to small-group discussion:

- Assign and rotate roles. Students who are at ease in class discussion, like Michael, have a tendency to take over. By assigning and rotating roles (reporter, skeptic, facilitator), you increase the structure and level the playing field a bit.
- Take time to teach students how to participate in small groups. Be explicit about some of the “rules,” such as exchanging names before they get started and putting away their cellphones or laptops.
- Provide clear instructions on a screen or worksheet. We’ve observed many faculty members give a single oral prompt, but that leaves behind students who have hearing loss, who have learning differences, or who simply need to be reminded about the task at hand. Principle No. 2 about structure applies here, too: Some people need visual cues, but offering them certainly won’t harm the other students. For more advice on this front, read about “[universal design for learning.](#)”

Allow anonymous participation.

Not all participation and engagement in your course needs to be spoken. In a [recent essay](#) in *The Chronicle*, Sarah Rose Cavanagh reminds us that anxiety is a huge barrier to learning. Students who are introverts, who feel that they don’t belong in a college classroom, or who hold a minority opinion on some issue may need to engage with the class in other modes besides public speaking. For example, some students with conservative viewpoints may be reluctant to

participate in a class discussion if they perceive that nearly everyone else has a liberal viewpoint.

Here are two ways to use unspoken, anonymous participation in class:

- A low-tech approach: Offer a prompt and ask students to write an anonymous response on a notecard. Ask them to swap cards, and then swap again. Start a class discussion with a few students reading aloud the card in front of them.
- A high-tech solution: Choose a classroom-response system ([clickers](#), web-based polling) or a discussion board in which students are anonymous to one another but not to you as the instructor.

Note that both approaches would help Vanessa (our hypothetical student who is reluctant to participate in class), as well as a student with unpopular political views. We recognize that speaking up may be a skill you are trying to cultivate, and these techniques provide a way to build trust and help students gain confidence. Perhaps you are starting to see how the same strategy in an inclusive-teaching toolkit can work to reach a diverse mix of students.

Counteract self-perceptions that stunt student learning.

Two such self-perceptions that we frequently encounter are a fixed mind-set (versus [growth mind-set](#)) and [impostor syndrome](#).

A fixed mind-set reveals itself in comments like “I’m not a math person” (uttered more than a few times in the history of higher education). To counter it, one of the simplest things you can do is talk about a growth mind-set in class. Your goal: Help students to see that intelligence is not a fixed, predetermined quality but something that can be developed via learning. Students may be particularly receptive after a challenging assignment or a midterm exam. Share in class a task that you found difficult — maybe learning how to speak a foreign language or play the guitar. Convey that learning is hard yet not impossible. One of our favorite words to use on this front is “yet,” as in: *“I haven’t learned how to do X well yet, but I’ll get there!”*

One of us (Viji) recalls the first time she heard about “impostor syndrome” — the feeling that you don’t belong on a college campus and might be found out as a fraud despite your accomplishments. How reassuring it was to find out that the feeling [was common](#), and even had a name. You don’t have to experience it to sympathize with it. You don’t even need to understand it. You simply need to remind students: “You belong here.” If it [feels comfortable](#) to do so, share a time when you felt like a fraud. It might help students like Michael who are struggling with the rigors of college, and it won’t hurt those who aren’t. If you’re uneasy discussing your personal experiences in class, consider other ways to communicate that message, such as through your syllabus, emails, or study guides. The key is to be explicit about it.

Connect with students personally.

This is a skill you may need to practice. Even if making personal connections with students comes naturally to you, it can be tricky to find the time, identify the appropriate words, and establish boundaries. But it’s worth the risk. Here are some things that work for us:

Use their names. It's an easy yet powerful way to connect. A few years ago, when we led a campus discussion on how to create an inclusive learning environment, we were struck by the simplicity of the requests from students. Many described how meaningful it was when an instructor made eye contact or called them by name. You can try simple hacks like having students use name tents or hang folders over desks with their names in large print. Don't assume that, just because you won't learn the names of *all* of them, you don't need to learn *any* of them. Having trouble pronouncing some names? Ask for a phonetic spelling or a recording — a request that is deeply appreciated by those of us with difficult names to pronounce (“How is Viji [pronounced?](#)”).

Model sharing pronouns. On the first day of class and on your syllabus, share your pronouns and invite students to share theirs with you and with peers if they feel comfortable doing so. Students who identify as [LGBTQIA](#) will appreciate this welcoming gesture, and all students will see you modeling inclusive methods to avoid assumptions about students' gender identities.

Fire off a quick note. We use this technique early and often throughout the semester. Send a note congratulating students who were successful on an early exam or paper or who substantially improved. Reach out to those who didn't do so well and express your willingness to help them. Check in with students who have missed a class or two. Whether through a mass email (now's a great time to learn how to do a mail merge incorporating a preferred name from your pre-course survey) or individual notes, reach out. The same principle behind learning their names applies here: Just because your notes won't reach every student doesn't mean you should abandon sending any.

Share some of who you are as a person. In his essay on “How to Teach a Good First Day of Class,” [James M. Lang reminds us](#), “We do not teach brains on sticks.” Similarly, students are not taught by brains on sticks. When you talk content, and only content, you run the risk of losing a human connection with them. Be careful not to overshare or sidetrack your class sessions, but it's OK to strategically place a photo of your pet somewhere that students can see, or to offer an insight about yourself that is relevant to a class topic. Such small gestures help students see you as a whole person. Both of us have found that students devour anything we share about our home lives, favorite TV-show binges, and the like.

Acknowledge hard times. Viji started one recent class by saying how grateful she was for her time with students that day because she was experiencing something personally challenging and appreciated the respite. Surprisingly, several students contacted her afterward to express concern. Even more poignantly, they thanked her for not feeling that she had to mask being sad — it provided a model, they said, for how to do the same with their peers. Likewise (and unfortunately), there are events during the academic year that touch our students' lives. Some are personal and some are societal, and you may feel uncertain how to express concern without taking a side that may alienate some students. Here's a useful phrase you might keep in your back pocket: “I know this can be a tough time, and I want you to know I'm thinking about you.”

By adding structure to your teaching and by taking steps to connect with your students personally and emotionally, you confirm for apprehensive students like Vanessa and academically struggling students like Michael that they are not invisible. They belong in your classroom, and you care about them.

Ideas for Inclusive Course Design

Unfortunately, taking steps to interact with students more inclusively in your classroom might not be enough to reach students like Michael who are at risk because of the way a course is organized — too much emphasis on lecture, too few assignments, too much of the grade based on a single paper, midterm, or final exam. So the second major question to ask yourself is: *Who is being left behind by my course design?*

Here are some ideas to bring more structure to your course design, and we hope, more success to all students, including Michael.

Design courses in which you speak less.

A mistake that many rookie instructors make (and plenty of experienced ones, too) is to talk through an entire class meeting. As a result, whenever they pose a question to students, it seems like an afterthought rather than something intentionally baked into the course design. But you may object, “*How will they understand if I don’t explain it to them?*” Our response: “*How will you know they understand if all they’ve done is listen?*” These strategies have worked in our courses and align with best practices in pedagogy:

Give lots of low-stakes quizzes and assessments.

Your goal here is to evaluate the learning of every student in every class — preferably multiple times. Students like Michael might not realize that they are struggling to retain the material until they fail the first exam. With multiple assessments in class, students practice asking themselves metacognitive questions such as, “How do I know I understand something?” As the instructor, you also benefit by learning immediately how many students are having trouble with a particular concept or skill. For example, how will you change your approach if you learn that only 60 percent understand a concept? By speaking less and asking more of *all* students, you avoid allowing your impression of the course’s progress to be set by a few students who appear to understand the material. Rather, you are obtaining evidence about the learning of all students, equally. If you teach a class with a large enrollment, don’t feel overwhelmed by the idea of multiple assessments. Many technologies can assist you with grading, and you very likely can find help from your institution’s teaching-and-learning center.

Incorporate TTQs — typical test questions.

This simple technique came from one of our high-school calculus teachers. Since then we’ve shared the idea with many instructors who found the tip useful. TTQs help students identify the caliber of questions they are likely to encounter in a forthcoming assessment, and give you an opportunity to assess the learning of every student. When a student like Michael has difficulty with the course TTQs, he has evidence that he doesn’t yet understand the material and needs extra support. You can identify the Michaels earlier in the semester, and reach out to them before the first exam.

Assess them before and after class, not just during.

The assessments should be low-stakes, yet required. For example, a vocabulary quiz before class will acquaint students with terminology, while a short essay after class might emphasize deeper work with a concept. Pre- and post-class assessments distribute learning over time and help all

students build study habits that avoid cramming. The most important aspect here is that the work is *not optional*. Why? Simply put: How often do you do optional work in your job? When assignments are optional, compliance will vary and you risk exacerbating differences in study skills, background knowledge, and the like. For example, if Michael has a false sense of confidence about his understanding or is not managing his time well, he may decide not to participate in an optional study guide. Some students have been trained to seize every attempt to practice, while others haven't — and that, in turn, can contribute to achievement gaps.

Reduce the stakes of major papers and tests.

When a single exam or a paper carries a lot of weight, you risk letting that one experience or day wreak havoc on a student's grade. You can downplay high-stakes work by: (1) allowing students to drop one or two of their worst scores on exams, assignments, or quizzes; (2) letting students replace an earlier score with a cumulative final grade; and (3) replacing some of the weight of high-stakes work with smaller, more frequent assessments. Unfortunately, we've seen many students like Michael, who experience an early setback in a pivotal course and feel their only option is to drop the class and change majors. Ask yourself: *Is my grading scheme allowing students to grow?*

By relying less on lectures and more on activities that you can assess, you increase the validity of your grading while helping students cultivate a sense of hope in the face of a single setback. As faculty members we often emphasize the importance of resilience in the face of failure (learning requires making mistakes, right?). It's important that, in course design, we practice what we preach.

Set clear expectations.

Imagine you were asked to be part of a grant-writing team in which you had only a vague idea about how much time it would take and what a successful proposal would look like. Fitting that task into your already busy life would stress you out, right?

Similarly, a lack of clear expectations in course design can induce stress among your students. They need dependable structure around due dates. They need to know what success looks like in your class. If those things are lacking, that will be a source of anxiety and tension for some students (for example, those who work, are parents, or have learning differences) more than others. You as the instructor can remedy their stress, while at the same time getting kudos for being “organized” from the students who need less structure.

Here's a checklist of ways to set clear expectations — and avoid unnecessary stress and miscommunication — around what it takes to be successful in your course:

- Write a syllabus that sets both semester goals and provide daily objectives. Those daily objectives become a study guide for your students.
- Set deadlines for major assignments and exams at the beginning of the semester and try to stick to them.
- Provide clear instructions for each assignment. Be transparent about how students will be graded (i.e., use a rubric) and what mastery looks like.
- Write exam questions that align with your daily objectives. If you come up with a good question that doesn't match one of your stated objectives, you have misalignment. Skip

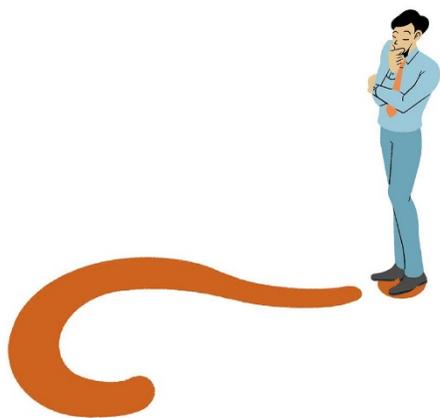
that question this semester and use it next semester, after you have revised your objectives.

- Follow those “rules” and you might have students actually thank you, as ours have, often along the lines of, *“I never wondered what I would be tested on or how to write a good paper, because it was clearly laid out. I just had to put the work in.”*

Connect with students through course content.

Of course, not all students will have an immediate passion for your discipline, and you will have trouble attracting and/or retaining some groups of students more than others. Consider how Harvey Mudd College [reached gender parity](#) in its [computer-science and engineering majors](#) within just a few years. One way was to focus on content. For example, many women had an interest in biology, so the computer-science department added a section of its introductory course related entirely to applications in biology.

As you introduce content in your course, constantly ask yourself: “Why should a student care about this?” Consider your own material and the diversity of students in the class. Choose a few student personae and come up with links to content, readings, and skills that might be compelling to them. For example, in a biology course, a student from a farming town might be interested in how research in the discipline transformed pest control in crops. In a statistics course, a military veteran might be interested in how data can be analyzed to compare civilian and military life. Putting yourself in students’ shoes and asking, “Why should I care?” can lead to deeper learning in your course and your discipline.



How Will You Know If Your Efforts Are Working?

Just as you assess students on their learning, you should assess your teaching practices and course design for inclusiveness. How?

Survey your students.

This one is the easiest. And we always learn something when we survey our own students. At the beginning of the semester, ask students what makes them feel included in a course. Check in again [midsemester](#) to find out what they think could be improved, so that you can make a few meaningful changes for the second half of the course. At the end of the semester, both of us have

an added question on our student evaluations of teaching that reads: “In what ways did I (the instructor) convey that I cared for all students’ learning?”

Ask a peer to observe your class.

Because there is only so much a peer can focus on in a single class session, ask your colleague to comment specifically on whether you offer students a diversity of ways to participate, and whether your “[instructor talk](#)” is as inclusive as it could be. If you have an instructional team (co-instructors, teaching assistants, or undergraduate assistants), your teammates may have insights on the inclusivity front.

Collect data.

Given that one of us is a statistician, we hope you aren’t surprised by the suggestion that you collect and analyze some data. Talk with folks in your campus teaching-and-learning center about data you might want to track and how to analyze it. Start small by seeking to answer a particular question you care about.

The Universal Benefits of Inclusive Teaching

If you need any further motivation, consider a comment one of us received from a first-generation college student: *“Believe it or not, when I walked into the start of this class, I was defeated and didn’t believe in myself. With your help, I started believing that I could achieve the things I wanted to achieve.”*

Or this one from an international student and person of color: *“In one class, you presented one of my answers (anonymously) to the whole class, and it was such a huge encouragement for me. I am proud to let you know that because of your inspiration, I switched my major.”*

You will have your share of Vanessas, Michaels, and plenty of other types of students. They are different students with different needs, yet many of the solutions are universal. Again, inclusive-teaching methods won’t harm students who don’t need the additional structure, but will help level the playing field for those who do.

We hope the concrete steps we’ve outlined here provide a road map to make sure your classroom interactions and course design reach all students. When we as faculty members include more students in the learning, we empower them to achieve and show that we care about them and their sense of belonging. If we’re really fortunate, they’ll make a home in our disciplines and help tackle the biggest challenges. Who knows? They may come to love our disciplines as much, maybe even more, than we do and to pay it forward.

Resources

Books

- *Reach Everyone, Teach Everyone: Universal Design for Learning in Higher Education*, by [Thomas J. Tobin and Kirsten T. Behling](#).

- *How Humans Learn: The Science and Stories Behind Effective College Teaching*, by [Joshua R. Eyster](#).

Journal Articles

- “Inclusive Teaching,” [published](#) in April 2019, by Bryan Dewsbury and Cynthia J. Brame, as part of the *CBE—Life Sciences Education* series of “Evidence-Based Teaching Guides.”
- “Structure Matters: Twenty-One Teaching Strategies to Promote Student Engagement and Cultivate Classroom Equity,” [published](#) in *CBE—Life Sciences Education*, by Kimberly D. Tanner.
- “Getting Under the Hood: How and for Whom Does Increasing Course Structure Work?,” by Sarah L. Eddy and Kelly A. Hogan, [published online](#) in 2017 in *CBE—Life Sciences Education*.

Podcasts and Websites

- On the [Teaching in Higher Ed](#) podcast, a 2018 episode featured [the two of us](#) discussing how “interactivity and inclusivity can help close the achievement gap.”
- The University of Michigan’s Center for Research on Learning and Teaching [has a web page](#) on “inclusive teaching resources and strategies.”
- Brown University’s Center for Teaching and Learning [offers a helpful web page](#) on inclusive teaching.
- For information on introverts and introversion, try Susan Cain’s website, [The Quiet Revolution](#). She is the author of *Quiet: The Power of Introverts in a World That Can’t Stop Talking*.

Training Opportunities

- Summer Institutes on Scientific Teaching, [offered regionally](#).
- “Mental Health First Aid,” [an eight-hour course](#) on how to help someone who is “developing a mental health problem or experiencing a mental health crisis.”
- The Safe Zone Project, a [free online source](#) of curricula and other activities related to LGBTQ identities, gender, and sexuality.

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