



# Teaching for Diversity and Equity

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# Teaching for Diversity and Equity

## *Workshop Timeline*

### **Materials:**

- Pens
- Post it notes (large)
- Notepads
- Coffee and snacks
- Tool Kit

**Workshop Timeline** 1:30- 4pm 2.5 hours 150 minutes

**1:30-1:35pm** Welcome and introductions to the team, verbal connection to TIDES project, goals for the workshop ... (PPT Slide 1&2)

**1:35-1:50pm** Reflecting on Values and Intentions (15 minutes, Think Pair Share on 4 questions, some reporting back from the big group) (PPT Slide 3)

**1:50-2:15pm** How Do Issues of Diversity and Inclusion Affect Learning and Academic Success? (PPT Slide 4-20)

**2:15-2:20pm** Discovering Strategies: Intro exercise and Assign groups (PPT Slide 21)

**2:20-2:30pm** 10 minute break and time to form groups

**2:30-3:10pm** Discovering Strategies that Can Enable All Students to Succeed (**Breakout Session**) (40 min)

- 15 min for each case study (30 min total)
- 10 min for debrief questions

**3:10-3:30pm** Intentions Moving Forward (20 min) with a course in mind strategize which approaches you plan to try. Formulate a commitment and a question and write each on a post it note, Place them on the white board at the front of the room. (PPT Slide 22)

**3:30-3:40pm** Come up and read the postings of others in the group (10 minutes)

**3:40-3:50pm** Wrap up. Observations, sharing, and last thoughts (10 min) (PPT Slide 23)



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# Teaching for Diversity and Equity

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## *Facilitator Instructions for **Breakout Session***

### **Before the workshop**

Be sure to read over the 14 recommendations

Make sure you have an idea of **how** to implement recommendations and **why** the recommendations are important in terms of diversity and equity.

### **Group/Room Assignments**

Decide how to split up the large group into smaller groups before the workshop. We suggest no more than 14 people in a group so that each person can receive 1 recommendation.

It may also be easier to assign room assignments for each group before the workshop.

### **Tool Kit Materials**

- Facilitator Instructions
- Yellow cards with 14 recommendations
- Purple cards with 2 different Case Studies
- Packet of recommendations from two articles and 4 case studies (Please give out at the end of the breakout session)

### **Case Study Assignments**

We suggest focusing on only one or two case studies during the breakout time.

Assign different groups to different case studies below.

- **Case Study 1 + 2 –**
- **Case Study 3 + 4 –**

### **Breakout Session Schedule**

#### **Introduce yourselves**

Go around the circle and share your name and field.

#### **Guidelines**

Go over a few guidelines in order to establish a space where people feel comfortable stepping outside their comfort zone.



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For example:

- Confidentiality – whatever is said in the space, stays in the space
- Intent versus Impact – Someone’s intentions might be good but the impact of their statement may be hurtful
- Critique the idea not the person – If someone says something that is offensive or hurtful, try to separate the comment/idea from the person who said it.
- “I” statements – When speaking, try to use sentences with “I” instead of “you” and speak from your own experience in order to be clear.

As a facilitator, make sure everyone has a turn to speak, be mindful of the time, and help out group members if they are having trouble by guiding them with questions or asking the group.

### **Explain the activity**

Pass out copies of the case studies and use the instructions below to explain the activity.

#### **Instructions:**

- On the purple cards I am passing around are two different case studies. On one side of the purple card is a faculty perspective and on the other side of the purple card is the student perspective of the same event.
- As the facilitator, read the case study to the group and have the participants follow along.
- Ask the participants to refrain from reading the yellow card before passing them out. If it is helpful, they can place their card underneath their chair. Each person gets at least one card.

#### **Ask:**

What is the problem in this case study?

Discuss this question.

Afterwards, have one person read their yellow card to the group. Then ask the following question.

#### **Ask:**

If you were the professor in the case study we just read, **how** would you use this recommendation and **why** it is important to use this recommendation?

Go around the circle one by one having a person read the card and answer this question. Repeat for second Case Study if you have time.

#### **Debrief Questions** (after the activity, synthesize observations with these prompts)

- How might the various recommendations apply across different contexts?  
Campus culture, diverse populations, different class sizes, different room environments, others...
- How might the recommendations work together? In what scenarios?
- What are the challenges of visible versus hidden identities?
- What other observations do you have about the scenarios and recommendations discussed?

***Pass out copies of participant packets and evaluations.***



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# Teaching for Diversity and Equity

## **Case Study #1**

### **Faculty Perspective**

My college recently started a community college bridge program that allows high-achieving students to transfer credits here and complete a bachelor's degree. I worry that these students are underprepared to succeed here. I'm only one person – how can I teach the same material to students with radically different levels of preparation? One of my colleagues suggested I use an online homework system to give additional assignments to students who need more review so maybe I will try that.

### **Student Perspective**

My professor wants everyone to buy this \$120 online homework system subscription on top of the textbook. He said “if you're paying \$60,000 a year to come here surely another \$100 can't hurt.” What he doesn't understand is that I don't have \$120 right now, and that's like two weeks of work-study to earn it. Not everybody is paying \$60,000, I couldn't be here without scholarships and loans and they're not nearly enough to cover everything. What if my car breaks down or I have to go to the doctor?



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## **Case Study #2**

### **Faculty Perspective**

Last week we were talking about addressing white privilege inside an inner city classroom and only two students spoke. I am not really sure why students didn't speak. Maybe it was discomfort, fear, or lack of interest. How does a professor or teacher deal with silence and differentiate between the silences? If it was discomfort, will this discomfort stop, once they begin writing their journals for one another? Or will the journals just make people feel more uncomfortable or silenced?

### **Student Perspective**

The inner-city environment is completely different from campus, because whether you are wealthy or non-wealthy there is a code that everyone has to abide by. For the most part this code is not understood by students who live outside of inner-city areas or outside of the United States. A lot of students and faculty don't understand the transition that inner-city students of color face when they return back home and when they come to campus. They have to change a huge aspect of their identity, and during the transition they find themselves questioning who they are, in relation to both spaces. Some come to the conclusion that they are living to the expectations of the Other. This of course causes conflict between students of color, and division within students of color. This division is silenced by the white space that we are part of when we come to campus. It is silenced, because the one thing that as students of color we all understand is, no matter what our socioeconomic class is and where we are from, there is a greater outside force that we have to deal with and that's the white space.



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### **Case Study #3**

#### **Faculty Perspective**

Today I handed back the first graded exams of the semester. To me, this exam is a great way for students to begin to understand how to apply the information they learned in class and show me their thinking process and problem solving skills. Most students receive grades lower than 80% because it's a difficult exam, but I give many opportunities to improve their grades throughout the semester. I know that many students are overly concerned with their grades, so I'm always surprised that no one comes to my office hours. Maybe I should change the time or something?

#### **Student Perspective**

I'm a Latina student from a public high school. I did really well in high school; I graduated in the 10% of my class. I took lots of science in high school -- biology, chemistry and physics, and pre-calc math. I really liked my physics class and like reading about the latest discoveries of dark energy and the new telescopes being built to study the cosmos. I applied to Bryn Mawr College in part because of its reputation in the sciences, and because I want to be a research scientist. I was so happy when the final aid package came through to make it possible. My parents were less excited, I think. They were first in their families to go to college, and they've always pushed us to work hard in school and get a degree. But they didn't understand the whole scientist thing and were nervous about me going so far away and having to take out loans. They wanted me to stay home and pursue something practical like business or pharmacy school, and maybe they were right.

This first semester has been amazing in some ways, but also scary. My first physics exam wasn't at all what I was expecting; it was nothing like tests in high school. And I got a C! I've never gotten a grade below a B, but I'm starting to think maybe my high school was just really easy, and that's why I did well. We certainly didn't cover anywhere near as much as in college physics. My hall-mates are also freaking out about exams, but I think they're just saying it to make me feel better. I'm the only Latina on the floor and probably the only public-school student, too, so they are all probably better prepared than me. We're not supposed to talk about grades anyway because of the honor code, and this doesn't seem like the kind of thing I should ask my



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professor about. I don't want him to think I'm grade-grubbing or something, I wouldn't want a good grade if I didn't deserve it.

### **Case Study #4**

#### **Faculty Perspective**

In my physics class this semester, I have started to share more about how I became a scientist and what experiences inspired me, in the hopes of inspiring my students. Most of my students seem to enjoy this, and some have even said so and shared experiences of their own. However, when I look around the room, I feel like I'm not reaching the students of color specifically. They don't make eye contact with me; they look out the window, or at friends, or stare down at their notebooks. I've also noticed that these students are less likely to show up at my office hours, and they always seem to sit with each other. Am I just being paranoid? I really want to connect with all of my students, and I worry that I am saying or doing something that offends some of them without realizing it. On the other hand, I don't want to offend anyone by singling them out and asking them what's going on. What if I am just imagining all of this?

#### **Student Perspective**

I'm so glad I didn't drop my physics class earlier this semester. Yes it's hard, but once I started to get to know people in class I realized it was hard for everybody, and now that we've started working on problem sets and studying together it's getting better. Sarah has been a big help – her dad is a professor and had great advice on how to study for exams. And working with Elizabeth's been fun too, she doesn't care at all about grades, but she's great to talk about cool physics ideas for hours with. Still I don't feel like I really fit in or anyone really understands what it is like here for me. Professor Hans is always telling stories about things that got him interested in physics. For example, the time on vacation in Italy when they went to see Foucault's pendulum, the time at space camp in Florida where he got to experience simulated free-fall, or building his first computer with his Dad. I saw other students nodding, but I had no idea what he was talking about. I mean, it's not like I grew up in "the barrio" or anything, but still, do normal kids really do all of these things? My high school was mostly Latino, but we weren't poor – our parents had good, middle-class jobs. But no one I went high school with went to space camp or to Europe or anything like that.



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# Teaching for Diversity and Equity

## Towards Culturally Responsive Classrooms

Cook-Sather, A., Cohen, J., & Shumate. (2011). Embracing productive disruptions: Excerpts from an ongoing story of developing more culturally responsive classrooms. *Teaching and Learning Together in Higher Education*, 4. Retrieved on 10 January 2013 from: <http://teachingandlearningtogether.blogs.brynmawr.edu/archived-issues/current-issue/embracing-productive-disruptions-excerpts-from-an-ongoing-story-of-developing-more-culturally-responsive-classrooms>

### (1) Recommendations for Being Explicit about Stance and Pedagogical Rationale

- State explicitly and repeatedly the reason why you are doing something or asking students to do something.
- Be clear about but not impositional with your own biases and commitments. They inform your practice regardless of whether you name them or not, so naming them makes for a more genuine dialogue.

### (2) Recommendation for Making Expectations Explicit

- ☐ **Regarding the class:** At the beginning of the semester, ideally the first or second class meeting, distribute index cards to students and ask them to take a few minutes and write down why they are taking the class and what they hope to get out of it. Tell them you will collect these. Have a conversation with students after they have written on their cards. Also, take the cards away and read them and, if it seems appropriate, share the student statements in generic form (i.e., not with names or any other identifying information) so that everyone knows the range of reasons why people are in the class.
- **Regarding Disciplinary Approaches:** Find occasions (in class) and forums (e.g., syllabus, in framing assignments) to make explicit (a) general expectations regarding discipline-specific ways of thinking and writing and (b) your own particular expectations regarding these in a particular course. Ask students for their experiences of and feedback on these.
- **Regarding Assignments:** With any forum for participation in the class, graded or ungraded but particularly graded, be explicit up front (in syllabus, in introducing the class or an assignment) about what your goals and expectations are for the assignment and check in with students regularly about how they are experiencing the assignment, what they are getting out of it, and what their frustrations with it are. This kind of ongoing



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dialogue takes time, but it is worth it so that students feel clear about and engaged in the assignments.

- **Professors' Expectations:**

When asking students to write down why they are taking the class and what they hope to get out of it, answer those questions yourself and share them with the class.

Clarify and articulate for yourself (a) general expectations regarding discipline-specific ways of thinking and writing and (b) your own particular expectations regarding these in a particular course and find occasions (in class) and forums (e.g., syllabus, in framing assignments) to make those explicit.

With any forum for participation in the class, be explicit up front (in syllabus, in introducing the class or an assignment) about what your goals and expectations for the assignment are and check in with students regularly about how they are experiencing the assignment, what they are getting out of it, and what their frustrations with it are. Then make choices about how to clarify or modify your expectations.

### **(3) Recommendations for Getting to Know Students**

- Find ways early in the semester to get to know your students, such a questionnaire or an interest or experience survey.

Sources for ideas:

What Kids Can Do. (2003). "First Ask, Then Listen."

MacBeath et al. (2003). *Consulting Pupils: A Toolkit for Teachers*

### **(4) Recommendations for Sharing Your Own Experiences**

Consider your own 'social location' in your thinking about what and how to share aspects of your life.

Think ahead of time—before you begin teaching a particular class—about the kinds of things you feel are comfortable and appropriate to share with students within the context of exploring the subject matter of any given course, and be aware as you move through the course of opportunities to share your own personal angles on or experiences of the subject.

### **(5) Recommendations for Providing Various Forums for Participation**

- Think about the nature of participation you want from students—listening and taking notes, engaging in discussion, etc.—and think about what different learning styles, cultural and otherwise, students bring to your classroom, then configure the room in various ways at different times so that it is most conducive to each of those modes and styles.
- For active student participation, create smaller, structured forums—talking briefly with one other student; writing for a minute, then sharing with a partner, then sharing with the larger group; etc.—within which students can clarify and deepen their own ideas, gain confidence, and prepare to contribute to larger class discussion.

### **(6) Recommendations for Using Multiple, Inclusive Examples and Illustrations**



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- Analyze the examples you use to illustrate concepts or points and consider whether you are making assumptions about background knowledge and experiences.
- Building on what you learn from getting to know students and what you are comfortable sharing from your own experiences, generate a range of examples that illustrate different concepts or points, and include more than one example or illustration in your discussions.

#### **(7) Recommendations for Considering the Role of Silence**

- During the course of a class, be conscious of allowing for student silence—and remaining silent yourself—while students have the chance to think and formulate their thoughts.
- Create regular opportunities—short writing times, memos, Blackboard forums, etc.—for students to have silent times during and outside of class to process what they are learning.
- Consider ways to bring a variety of student voices into dialogue within the class without making students too vulnerable, such as reading aloud anonymous journal excerpts and framing/facilitating discussion around them.

#### **(8) Recommendations for Being Allies and Advocates**

- Make conscious with whom you align yourself and why and try to complicate, question, and perhaps expand that positioning.
- Find ways to be clear about how you position yourself in relation to students and speak with students whose voices are often marginalized or silenced but without silencing other voices.
- Find ways to bring various students' voices into dialogue.
- Consider ways you can make yourself vulnerable and take risks comparable to—not necessarily the same as—the ones you ask students to take.

#### **(9) Becoming More Conscious and Deliberate**

- Identify the choices we make for particular pedagogical reasons and then analyze them for how they might also address other pedagogical issues, particularly, how they might be responsive to diverse students; Take a step back from the choices we make regarding how we construct and facilitate a course and ask ourselves if there are other choices we could make that would be more responsive to diverse students.
- Step back and try to look at the content of our courses with the eye of someone unfamiliar with it and think about what might need to be flagged or highlighted; and
- Find and develop a relationship with a long-term consultant, ideally someone in a cognitive place that is very different than your own.



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## Teaching for Diversity and Equity

### Structure Matters: Twenty-One Teaching Strategies to Promote Student Engagement and Cultivate Classroom Equity

Kimberly D. Tanner, *CBE Life Sciences Education*, **12**, 322 (2013).

#### (1) Giving students opportunities to think and talk about the course subject

- Wait time
  - Thinking biologically about increasing wait time to promote student engagement and participation, it seems likely that this increase in time allows critical neural processing time for students, and perhaps also allows more introverted students' time to rally the courage to volunteer an answer.
- Allow students time to write
  - One simple way to scaffold wait time is to explicitly require students to write out one idea, two ideas, three ideas that would capture their initial thoughts on how to answer the question posed. This act of writing itself may even lead students to discover points of confusion or key insights.
- Think–pair–share
  - The mechanics of a think–pair–share generally involve giving all students a minute or so to think (or usually write) about their ideas on a question. Then, students are charged to turn and talk with a neighboring student, compare ideas, and identify points of agreement and misalignment. These pair discussions may or may not be followed by a whole-group conversation in which individual students are asked to share the results of their pair discussion aloud with the whole class.
- Do not try to do too much
  - One strategy for prioritizing how to spend precious class time is to decide on which biological ideas in a course are most difficult to learn, are rooted in common misconceptions, and/or represent fundamental biological principles

#### (2) Encouraging, demanding, and actively managing the participation of *all* students

- Hand raising
  - As such, providing structure through something as simple as hand raising can establish a culture that the instructor expects all students to be participating. With hand raising, the instructor can also be explicit about asking for “hands from those of us who haven’t had a chance yet to share” and strive to cultivate a classroom conversation that goes beyond a few students in the front row.
- Multiple hands, multiple voices



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- One simple strategy for broadening participation and increasing the breadth of ideas flowing from students to instructors is to generally ask for multiple hands and multiple voices to respond to any question posed during class time (Allen and Tanner, 2002). Instructors can set the stage for this by asserting, “I’m going to pose a question, and I’d like to see at least three hands of colleagues here who would share their ideas. I won’t hear from anyone until I’ve got those three volunteers.”
- Random calling using popsicle sticks/index cards
  - If the spirit of calling on students feels like a penalty, it may do more harm than good. However, if the instructor is explicit that all students in the course have great ideas and perspectives to share, then random calling on students in courses that range in size from 10 to 700 can be a useful strategy for broadening student participation.
- Assign reporters for small groups
  - Assigning a “reporter”—an individual who will report back on their small-group discussion—is a simple strategy to provide access to verbal participation for students who would not otherwise volunteer. The assignment of reporters need not be complex. It can be random and publicly verifiable, such as assigning that the reporter will be the person wearing the darkest shirt.
- Whip (around)
  - The mechanics of the whip are that the instructor poses a question to which each individual student will respond, with each response usually being <30 s in length. On the first day of class, this could be something as simple as asking students what their favorite memory of learning biology has been.
- Monitor student participation
  - During each class session, instructors can keep a running list—in smaller classes mentally and in larger classes on a piece of paper—of those students who have contributed to the discussion that day, such as by answering or asking a question. When the same students attempt to volunteer for the second, third, or subsequent times, instructors can explicitly invite participation from other students, using language such as “I know that there are lots of good ideas on this in here, and I’d like to hear from some members of our community who I haven’t heard from yet today.”

### **(3) Building an inclusive and fair classroom community for *all* students**

- Learn or have access to students’ names
  - Some instructors may plead an inability to remember names; however, there are many simple ways to scaffold the use of individual student names in a classroom without memorizing all of them. Having students submit index cards with their names and personal information, as described above, is an easy first step to learning names.
- Integrate culturally diverse and relevant examples
  - Although it is not possible to represent aspects of all students’ lives or the cultural background of each student in your course, careful attention to integrating culturally diverse and personally relevant connections to the course subject can



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demonstrate for students that diverse perspectives are valued in your classroom (Ladson-Billings, 1995).

- Work in stations or small groups
  - For some students, participation in a whole-group conversation may be a persistently daunting experience. However, instructors can structure opportunities for such students to practice thinking and talking about the course subject by regularly engaging students in tasks that require students to work together in small groups. Care must be taken to be explicit with students about the goal of the group work and, whenever possible, to assign roles so that no student in a small group is left out (Johnson *et al.*, 1991, 1993, 1998; Tanner *et al.*, 2003).
- Use varied active-learning strategies
  - The “best” way to teach equitably—providing access to the course subject for the largest number of students—may be to consistently provide multiple entry points into the conceptual material for students. If an instructor chooses a singular teaching approach—always lecturing or always concept mapping, regardless of the nature of the approach—it seems likely that the lack of variation could result in the alienation and exclusion from learning of a subpopulation of students.
- Be explicit about promoting access and equity for *all* students
  - There need not be substantial time spent on conveying this stance, but explicit statements by the instructor about the importance of diverse perspectives in science can make issues of fairness and equity explicit rather than an implicit. Instructors can share with students why they use the teaching strategies they do, for example, sharing the reasoning behind having students write to allow thinking and processing time for everyone

#### **(4) Monitoring (your own and students’) behavior to cultivate divergent critical thinking**

- Ask open-ended questions
  - One critical tool for instructors aspiring to cultivate divergent biological thinking in their classrooms is the use of open-ended questions, which are those questions that cannot be answered with a simple “yes” or “no” or even easily answered with a single word or phrase. Open-ended questions are by definition those which have multiple possible responses, such that inviting answers from a large group can yield more than an expected set of responses (Bloom *et al.*, 1956; Allen and Tanner, 2002; Crowe *et al.*, 2008).
- Do not judge responses
  - To create a safe environment that encourages students to share all of their ideas, instructors may be best served in acknowledging student responses as neutrally as possible. This does not require inadvertently supporting a scientifically inaccurate idea. Clearly stating “I’d like to hear from a number of us about our thinking on this, and then we can sort out what we are sure of and what we are confused about,” sets the stage that all the responses may not be correct.
- Use praise with caution
  - With very few syllables spent, instructors may inadvertently convey to the rest of the students who are not participating that the response given was so wonderful that it is impossible to build on or exceed. It suggests using praise with caution is



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essential, so other students feel that they still have something to add and can be successful in sharing.

- Establish classroom community and norms
  - In this case, “norms” refers to a set of accepted usual, typical, standard acceptable behaviors in the classroom. Common group norms established by experienced instructors include the following: “Everyone here has something to learn.” For many instructors, these classroom norms are simply verbally asserted from the first few days of a class and then regularly reiterated as the term progresses.

#### **(5) Teaching *all* of the students in your classroom**

- Teach them from the moment they arrive
  - As such, instructors are best served by considering what students are learning, not just about the subject matter, but also about culture of the classroom from the moment they enter the room. If the course is about learning biology, then instructors can implicitly and explicitly teach this by engaging students in exciting, intellectually challenging, and rewarding experiences about biology on the first day of a course.
- Collect assessment evidence from every student, every class
  - Frequent collection of assessment evidence—about students’ biological ideas, about their reflections on their learning, about their struggles in the course—is essential for instructors to know the learners they are trying to teach. While the nature of the assessment evidence may vary from class session to class session, the evidence collected from each and every student in a course can aid instructors in continuously re-evaluating student ideas and iteratively changing the arc of the course to best support the learning of that course’s student population.

