



Integrating Energy, Equity, and Place in High School Physics **Positionality**

Day 2 | Tue Jul 25, 2023 | 9-11 PT / 11-1 PM Central/ 12-2 ET
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What's ahead

(Kara)

- This week - We'll discuss energy, equity, and integrating them in our classrooms. Past participants will share what they have been doing in their classrooms.
- Next week - We'll continue the discussions through optional and parallel sessions. You'll have time and support to develop an activity/lesson/project/unit to try out what you've learned.
- Going forward - during the academic year, you're invited to our bi-weekly PLC (more info to come).

Purpose of this session

(Rachel)

- **Consider how your identities shape your teaching practice.**

Prompted freewrites

For this activity, you will need to write privately. Please get a notebook, paper, blank electronic file, or whatever allows you to write the most freely.

Slide 6: Discuss freewrites

Instructions

In your breakout rooms (20 min):

1. (Only if you want to) Share the freewrite for which you wrote the most.
2. Different people may have had different ones.
 - a. What might happen when you encounter each other?
 - b. What might happen in a classroom?

3. In your education, which aspects of your identity were celebrated? What parts of yourself did you see reflected in the curriculum?
4. What makes race and gender special?

Group 1 Facilitator: Jim Participants: Jack, Erin, Diane Notes: • Easier to answer #4 (because can often be observed via appearance) (education as a identity) • rural/urban has become an aspect that in education and beyond has either been advertised if it helped socially and during other times we’ve said we are from somewhere other than where we were born when it was advantageous to do so • Aspects of our own being/identity that we don’t have to think about is is a • big part of our positionality on such issues (for example, if we’ve never had to consider our own gender or race, etc) • Education was accepted as highly important and was equated with wealth • Experiences of traveling has given us the sense that being “American” is seen as an race in and of itself is some instances • Some of us that are considered “majority” in most of our experiences have had times in our lives when we’ve had a small taste of what it is like to be “in the minority” • Gender stands out more when you do not fit the norms - even as simple as being a tomboy as a kid	Group 2 Facilitator: Jaime Participants: Daniel, Deborah, Mike Notes: • Having a lot of privilege leaves little to write about for some - others find that they were able to recognize incidences of bias in their past regarding certain identities. • Being one of an ethnic minority in a predominantly rural White community leads to an exaggerated understanding of race and its influences. Rural communities are difficult in that you can be more comfortable where you grew up even though it was uncomfortable in some ways. Experience improved teaching practices. • Being familiar with others and having spoken to them already would likely lead to comfortable interactions in the classroom. • •
Group 3 Facilitator: Nora/Rosemary Participants: Kevin, Megan, Golsin Notes: • • • • •	Group 4 Facilitator: Heena Participants: Sabrina, Ellen, Rebecca Notes: • When you don’t have to think about a specific identity - you are probably part of the dominant culture • Experiences from other cultures, can help us empathize with the experiences of our students • As a female physics teacher, she is disrupting the narrative • •

Debrief

Facilitator: Tali/Rachel
Format: Whole Group
Time: 10 minutes

Notes:

- What for you was disturbing, unsettling, disruptive?
 - Uncomfortable to open up and share about problematic views I held when I was younger. Vulnerability.
 - Even if you don’t put it out there, it’s not not there., Your brain is processing social identities whether you name them or not.
 - Places, memories, events, are the containers that hold these conversations. It’s going on in your brain in your “distributed cognition” (not only inside your head).
- Some had minority perspectives and found it interesting to connect those to student perspectives.
- If you grew up in a white small town, then have the opportunity to be educated and see the world, this shapes who you have become. Bigger view of the world. Where you started, and how your experiences shape you to who you are now.
- **When you don’t have to think about a specific identity, you are probably part of a dominant culture.**

- If you never had to think about gender, there was no contradictory information saying “you don't belong.” There was maybe nothing to bring it to the forefront for you.
- Students are managing their identities in the classroom before they manage the content they’re learning.
- Implicit messaging from the identities that are presented: if you are non-male and only ever see male physics professors and no one ever discusses it, you learn that you can’t be a physics professor.
- We identify with students who share our identities and we see them, we relate to them, we support them and give them a break when they mess up. When we don’t identify students, we tend to discipline them more harshly.
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Break

Return at 10:10 Pacific / 1:10 Eastern

Situations to consider

Introducing yourself

On the first day of class, you will introduce yourself.

In your breakout rooms, discuss (10 min):

1. What will you say?
2. Bring to mind one of the frames of identity and belonging that is important to you. Will you include this part of your identity in your introduction? Why or why not?
3. Keep notes below.

Group 1 Facilitator: Jim Participants: Jack, Erin, Diane Notes: ● We often bring up where we are from and frame it as a situation/area that is similar to the area the students live in. ● We were not aware of using this place of background as an identifier until now, and we use it to “get on the same side” as our students. ● We’ve also used where we went to college to bolster our credentials in the minds of students ● We are quick to point out things that would be considered a challenge in many circles as a way to show how resilient we are and/or show how we might be marginalized in ways that are different than the ways students are marginalized if we don’t share any outward signs of “sameness”. ● ●	Group 2 Facilitator: Jaime Participants: Daniel, Deborah, Mike Notes: ● Try to greet students in the hallway ● When introducing myself for the past few years I (at some point, maybe not first day) let students know that I didn’t graduate on time and that I was able to graduate from high school and college due to my privilege. Acknowledge that it’s different from my students - act of acknowledgement can help students to feel comfortable in the classroom. I want students to be successful because they may not have the opportunities I did, helps to balance the scales. I’m one of the most long-standing teachers at the school, so I feel a need to instill school culture because I teach freshmen. I try to focus on the SEL and let the students know how they are supposed to operate in the school environment and train them. Fun labs, activities, skills and behaviors I want students to show in my class and all their classes. ● I know research shows we should be doing SEL, but I also like that to happen organically because forcing it on students doesn’t usually go well, might be my fault. I only have so much time in the classroom, teaching an AP class time is important. Here’s who I am, here’s what my class is about, here are the expectations and we start learning. We do a lab the first day in one class and get into content in the other, friendships and relationships develop through the year - 90% of my AP 2 students have already had me, and I’m the department chair so everyone knows who I am - have a lot of history at the school. I don’t think it’s important
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	to talk about “fluffy” concepts. One time I put pictures of my kids up, a kid made a snarky comment so I don’t put up pictures anymore. Moving from mass. To VA made a comment about GW Bush, got a phone call from supervisor. • I provide students with expectations, start with hands on and labs - as students do labs I get to know them. Students see at football game and events - I’m at a very small school with juniors and seniors, so students know who I am and what to expect. •
Group 3 Facilitator: Nora/Rosemary Participants: Kevin, Megan, Golsin Notes: • Usually just share name, that she is a mom, doesn’t share race, gender, religion etc. because if I give my identities it makes it more divided. It allows for more connection. • It is about connection, share about children, living abroad. Sometimes it is hard to make connections. Doesnt think about frames of identity, maybe if I did it would easier. • Share less now, wants to get in there an meet individuals. Start with an activity and walk around and meet students as individuals. Don’t want to be center of attention. Want to think about these identities as you are walking around. • •	Group 4 Facilitator: Heena Participants: Sabrina, Ellen, Rebecca Notes: • Slideshow for class, includes an “about me” slide (name, pronouns, fun/silly stuff/hobbies); students fill out an “all about me” sheet which includes pronouns and when they are appropriate, primary language, and who they live with • Includes a website with places she’s been and education; gives survey to students and asks them about their languages spoken at home and preferred pronouns - helps her to understand how to adjust her teaching of physics • Bingo to meet you - talk to everyone in class (who speaks another language, who has an older sibling) - do an experiment, where there is no right answer; shares stories throughout the year • Don’t want to overwhelm them on the first day, the stories about themselves unfold over the year; Have artifacts in class (e.g., diplomas) that they can ask about; Tell stories about themselves; STEMTell - a story about science and how it relates to your life •

Debrief

Facilitator: Tali/Rachel
Format: Whole Group
Time: 5 minutes

Highlights:

- We point out things about ourselves that can be seen as negative, especially when that thing is different from what our students consider negative. We weave in something that helps show we are similar to them even though the specifics might be different. We try to have commonality, go from difference to connectedness. E.g., we share geography,, connect via place.
- We don’t have a bunch of pictures of ourselves and things we do over the summer, prefer to have that come up “organically” throughout the year. Is this because we don’t want to flaunt our privilege? Acknowledging our privileges is important. - Push from school to jump right into the physics, don’t spend time reading the syllabus.
- The first day is important. Preferred pronouns, languages spoken at home, shared artifacts such as teacher diplomas, students tell stories about how science relates to their lives.
- Start developing individual relationships, not a formal introduction, let other aspects come out “naturally.” - Noting how quickly they got into sharing their identities, can be super important to building classroom belonging.
- Caution about letting conversations happen “naturally” / “organically” – what feels natural/organic to you may not be the same for everyone else. And your brain is still dealing with the frames of identity and belonging whether you discuss it or not.
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Instructor authority

At some point in your class, you ask your students if anyone has a question. One raises their hand and asks, “Why are we learning about this? So far it doesn’t seem useful or relevant.”

In your breakout rooms, discuss (10 min):

1. What “gut reaction” do you have to this question? There’s no right answer here; this is about your personal response.
2. For some people, interactions like this raise the issue of instructor authority. What social and cultural messages have you received about what it means to have authority in the classroom? Do you agree or disagree with these messages?
3. Bring to mind one of the frames of identity and belonging that is important to you. How does this aspect of your identity shape your sense of instructor authority?
4. Keep notes below.

Group 1 Facilitator: Jim Participants: Jack, Erin, Diane Notes: • Gut reaction: it might imply the student has a negative attitude toward the subject/are not interested in it, so the impetus is to flip the script and instead of trying to defend the subject matter, open it up to other students and ask if they have reasons why it might be worthwhile learning the topic • Gut Reaction: have students answer a survey of what they consider themselves doing in the future • Authority in classroom: students equate knowledge and authority to where you went to school and/or played organized sports • For at least 2 of us, part of our authority stems from the fact that we are large and have loud voices, which is a shame it is this way because as part of our identity as a teacher, we didn’t choose it even though it may make our day to day easier • For 2 of us, the fact that some students don’t respect women puts us in a way that frustrates our sense of identity as a teacher. It is a shame that we felt less capable of helping these particular students grow/change their mindset.	Group 2 Facilitator: Jaime Participants: Daniel, Deborah, Mike Notes: • Knowledge is power - you are learning this to build skills, most of you will forget the content and won’t find it useful in life - the skills you build are tools you will use to learn other things and improve your own abilities. While it won’t necessarily have a direct impact on your life, you may never need to calculate momentum, but the skills will benefit throughout life. • I’ve never had a kid ask me this - maybe because of who I am, maybe it’s because I work hard to provide context for students. How do you know you don’t like something if you don’t try it? • Students who choose to take physics are far less likely to ask this question, when students are required the question comes up far more. • Eat your vegetables - it’s good for you. • At some point in the future you will find out this is important. • I do need to have classroom control, I don’t know that I would call it authority - 28 kids are sitting there, there has to be some control or there is a safety risk. I don’t think kids are being disrespectful with the question or questioning my authority, I think it’s legitimate curiosity. • Sometimes it can be a different thing with freshmen - may be hoping for a tangent to promote off-task behavior. Sometimes it is just a complaint to give themselves permission to stop thinking. I think sometimes they are trying to challenge authority, but as long as I don’t make it a battle it doesn’t become a battle. • Sometimes just walking away diffuses a situation - there can be arguments everyday but picking fights with students. • Gender can play a role - boys might create more arguments with a male teacher to show that they are more macho. • Male students who create problems for female students junior year tend to not have problems with a male teacher senior year - perhaps it’s just growing up. • With freshmen a lot of it is about identity and respect - either they feel they are not being respected, they can end up lashing out.
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Group 3 Facilitator: Nora/Rosemary Participants: Kevin, Megan, Golsin Notes: • Students generally can appreciate the application of the concepts. • Bring re life problems. Talk about why they need formulas. • When students ask that question, respond it depends on your goals., whether it is to get into a college, want to go to engineering, it fit into their scheldue etc. • The class will help you to think in a different way. Help with MCATs etc. • • • •	Group 4 Facilitator: Heena Participants: Sabrina, Ellen, Rebecca Notes: • I love this question now - has assignments where she connects science to their lived experiences - my job is not just to teach you physics, my job is to make sure that you are a problem solver and strong thinker • When am i gonna need this? You need to be able to think critically. • You are forming the neurons, to think more critically about whatever you want to do • Leverage current events - find an article about something physics realted • Identity - learning aspect, person who cares about their futures and wants them to have skills, • • • • •

Debrief

Facilitator: Tali/Rachel
Format: Whole Group
Time: 5 minutes

Highlights:

- Brainstormed ways to answer the student so that they are satisfied, learn the justification for the way you’re teaching.
- What is your internal response as a teacher, though, and why?
 - Not insulted by the question. They’re teenagers! Let’s talk about it.
 - Used to be distressed by the question, and defensive. But feeling more confident in the justification.
 - Helps if you’ve thought about this question before, maybe as a parent!
 - Love the curiosity.
 - Feeling that students aren’t intending to challenge authority - they struggle, and this question may be very genuine for them.
 - Feeling that sometimes it’s a genuine question and sometimes it’s meant as a challenge.
 - Sometimes it’s a horrible course and the students are frankly correct to challenge it!
 - Some of us are large males with loud voices, which conveys authority. Others of us have students that don’t respect women which can make it harder to hold authority in the classroom.
 - Could be that the “relevance” question has nothing to do with the material and everything to do with the student’s identity. E.g., female students may come to the classroom already socialized that math has “nothing to do with them” - what is the teacher’s role in that?
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- How are your gut reactions shaped by your frames of identity and belonging?
 - What social and cultural messages have you received about what it means to have authority in the classroom? Do you agree or disagree with these messages?
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Pants (won’t have time for this one)

A student compliments your pants.

In your breakout rooms, discuss (10 min):

1. What is your gut reaction?
2. Which of your frames of identity and belonging might be shaping your gut reaction?
3. Keep notes below.

Group 1 Facilitator: Jim	Group 2 Facilitator: Jaime
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Participants: Jack, Erin, Diane Notes:	Participants: Daniel, Deborah, Mike Notes:
Group 3 Facilitator: Nora/Rosemary Participants: Kevin, Megan, Golsin Notes:	Group 4 Facilitator: Heena Participants: Sabrina, Ellen, Rebecca Notes:

Debrief

Facilitator: Tali/Rachel
Format: Whole Group
Time: 5 minutes

Highlights:

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Parking lot

Great questions that we didn’t have time for immediately, but want to get back to!

- Diane: “So, what is the best practice for first-day introductions?”