

[Being Human in STEM by Sarah Bunnell, Sheila Jaswal and Megan Lyster](#)  
Reading Guide for 2023 ACS Summer Reading Group

*Note from co-facilitators (Kristen Cecala & Kate Cammack):*

*This text was rich, and there was a great deal of content that could be covered within our hour meetings. Prior to each meeting, we asked participants to consider/think about the authors' Guiding Questions (pasted and/or paraphrased below) associated with that week's assigned chapters. During our meetings, we tried to let the conversation flow organically. Our Discussion Questions helped fill gaps and redirect the conversation as needed; they are a combination of pre-written prompts and questions that emerged during the conversation.*

[Instructions & information for our participants](#)

**Chapter 1: The Amherst Uprising**

Guiding Questions

- Q1: As you reflect on your institution's diversity, equity, and inclusion mission, where do you see opportunities for better alignment between efforts of diversification and efforts of inclusion?
- Q2: What lessons can be learned from this case study [the Amherst Uprising] to apply to your own educational setting?
- Q3: In what ways do your disciplinary assumptions about how arguments are engaged and what evidence "counts", influence your reactions to student protests or bottom-up demands for change?

Discussion Questions:

- Q1: What brought you to this reading group? What are your individual goals? What do you see as your departmental/programmatic goals related to DEIB?
- Q2: To what extent might STEM faculty think about DEIB-related data and outcomes via their disciplinary lens or framework? For instance, are there ways that quantitative data and qualitative data are perceived and/or used differently?

**Chapter 2: The HSTEM Course**

Guiding Questions

- Q1: Where are the opportunities in your own institutional setting to incorporate aspects of the HSTEM course structure?
- Q2: How can you incorporate students' lived experiences, and the lived experiences of others, into your classroom context? How might the climate of STEM teaching and learning at your institution shift as a result?

Discussion Questions:

- Q1: To what extent is there consensus and/or a "critical mass" related to DEIB-related goals on your campus? In your department?
- Q2: Has anyone already taught a HSTEM course? If so, what have you learned over iterations of the course? If you're preparing a course, what questions or curiosities do you have, related to content and to logistics?

**Chapter 3: A Process for Partnership**

Guiding Questions

- Q1: How might you apply this framework [listening, validating, reflecting & partnering] to your work of institutional change? In particular, how might we adopt this model at our institutions in proactive ways, such that change need not be predicated on protests or other large points of conflict?

- Q2: What are some key recommendations and challenges, from the literature and our lived experiences, for sustaining partnership efforts in higher education? What features of partnership seem most important to emphasize in your own work?

Discussion Questions:

- Q1: What experiences have you had with student-led projects? Discuss the scope of the project(s). Were they completed within a semester, or did they continue afterward in some form?
- Q2: What are the opportunities and challenges of identifying HSTEM-related projects? To what extent are those issues impacted by characteristics of your university (e.g., four-year residential SLAC; state university with non-traditional/commuting students)?
- Q3: What resources and/or training is needed in order to create “vulnerable, brave spaces” (pg 45)? Where can we find these things?

#### **Chapter 4: Teaching with and for Empathy**

Guiding Questions

- Q1: What is empathy, and why do you think that empathy may provide a helpful pathway forward towards more inclusive classroom and institutional dynamics?
- Q2: How might you teach to enhance empathy, and how might you teach from a position of empathy?

Discussion Questions:

- Q1: How have we all practiced empathy as a part of our current role(s) on campus? To what extent is empathic work distributed inequitably within STEM and/or your own department? In what ways is empathic work influenced by our identities, particularly as women in male-dominated fields?
- Q2: A compelling example of the impact of empathy training was provided on pg 58-59. What was your response to this example? To what extent do you think it (or something like it) could apply to your department/program?
- Q3: The authors describe an active-listening exercise (pg 60). When might an activity like this be incorporated into your classroom? What purpose(s) might it serve?

#### **Chapter 5: Practices for Building Community in STEM Classrooms and Labs**

Guiding Questions

- Q1: Which inclusive practices cultivate an environment that models and practices shared responsibility for a learning community in ways that align with your values of equity and inclusion?
- Q2: Which inclusive practices support students in ways that you wish them to see themselves and diverse others as capable of succeeding in STEM?
- Q3: Which inclusive practices embody an individual practice of being human in STEM that models the centrality of inclusion and equity to your mission as an educator and scholar?

Discussion Questions:

- Q1: The authors present an activity called “Humanize the professor.” What were your reactions to this activity? To what extent do you have concerns about sharing any challenges you’ve encountered STEM with your students? Are there certain venues/times where this activity seems more comfortable? More important?
- Q2: Have you ever discussed and/or co-created a community agreement (pg 79-80) in one of your STEM courses? Tell us about that experience. If not, what questions or curiosities do you have about this process?

#### **Chapter 6: Telling Your HSTEM Story**

### Guiding Questions

- Q1: What are the stories you tell about who does science in your discipline? Who is missing?
- Q2: Where do you see opportunities for bringing your own story in STEM into the classroom? How might sharing your HSTEM story alter the dynamics of your teaching and learning spaces?
- Q3: How can you invite students to share their own stories in STEM, with you and with each other? What might that sharing do in altering the nature of inclusive learning in your classroom?

### Discussion Questions:

- Q1: How do you tell your authentic story while maintaining personal-professional boundaries?
- Q2: What story arcs are effective to humanize the professor and make students feel seen? When and where in a course could it be incorporated?

## **Chapter 7: Bringing About Change**

### Guiding Questions

- Q1: How have you already seen the change process play out on your campus, at the individual and collective level? What are the preexisting conditions and precipitating events that led to change?
- Q2: As you reflect on each of the change mechanisms described in the following, which of them feels most applicable to your own context? How can you chart a way forward that draws on some of these frameworks?
- Q3: Alternatively, where have attempts at inclusive institutional change been stymied, and why? What lessons can be learned from those moments of stagnation?

### Discussion Questions:

- Q1: Quote on pg. 112 by Maya Angelou - "Do the best you can until you know better. Then when you know better, do better." We know that more knowledge doesn't guarantee behavior change - how do we share information with our colleagues in a way that inspires behavior change?
- Q2: What change barriers do you feel are the biggest obstacles at your institutions - (a) lack of shared value or direction; (b) lack of shared consensus about the need for change; or (c) lack of resources to enact change.

## **Chapter 8: Measuring the Impact of Inclusive Efforts**

### Guiding Questions

- Q1: What does a more equitable, inclusive STEM community look like for you, and how will you know when it has been achieved?
- Q2: How can you tell if your institution is truly ready for, and open to, change?
- Q3: Where can you look for evidence that inclusive change is happening? How can you celebrate those markers of change or change readiness to maintain momentum and energy?

### Discussion Questions:

- Q1: Montgomery (2020) is highlighted on page 134 discussing the need to switch from gatekeeping to groundskeeping [tend to our environment to actively support access and progress and remove barriers to individual success]. What might that mean at your institution?
- Q2: How do we foster success to institutionalize the efforts and minimize the demand on any single faculty member or group?
- Q3: Are we surviving or thriving in this work (pg. 136)? How can we adopt this approach to science identity to get a read on a department or class?

## **Chapter 9: Growing the HSTEM Network**

### Guiding Questions

- Q1: What are the ongoing or emergent initiatives at your institution that you may leverage to start an HSTEM course at your home institution?
- Q2: Which inter- and intradepartmental colleagues may be excited to partner with you in this work?
- Q3: What are the pressing issues around inclusion for students at your campus right now? How might you incorporate these themes into your course design? How might you start to build bridges with campus offices that could support students in their change efforts?

### Discussion Questions:

- Q1: Which institutions implementing HSTEM are most similar to your own? Do you anticipate having similar challenges and outcomes?

## **Chapter 10: Conclusions**

### Discussion Questions:

- Q1: What of the lessons learned by the HSTEM founders can we learn from and do better or work faster?
- Q2: What are some ways that STEM departments/programs at different institutions can collaborate and idea-share? In what ways might this help everyone broaden the scope of their DEIB work and/or make more progress toward their goals?
- Q3: What is one actionable item or idea that you hope to implement, after reading this book? What resources or support do you need to make this happen?