

BOARD # 39: A 52-Week, Scaffolded Faculty Journey into Engineering Culture and Climate

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Introduction

Engineering culture and climate play a crucial role in shaping the academic environment and experiences of students, staff, and faculty in engineering educational institutions. Research has shown that organizations with a strong, positive engineering culture have higher group satisfaction, retention, engagement, and productivity. They also tend to generate more innovation and are simply more enjoyable to be a part of. Essentially, a positive culture can lead to higher success for students, staff, and faculty. But universally-recognized cultural features of engineering education – heavy workload, challenging curriculum, prescriptive structure, suffering and shared hardship, meritocracy of difficulty, simultaneous competition and collaboration – are a particular challenge because they get internalized by those in the engineering community and persist without anyone directly communicating them. These messages can have both positive and negative impacts on students. Students often express a strong sense of pride in becoming an engineer and believe that their hard work, perseverance, and ability to overcome rigorous challenges are a testament to their capability and worthiness in the field.[1] However, the intense, high-pressure culture within engineering programs often takes a serious toll on students' mental health. Engineering students, even before the COVID pandemic hit, were reporting higher levels of stress, anxiety, and depression than the general student population, but are less likely to seek help.[2-4] Their well-being is connected to whether they feel like the academic environment is supportive, hostile, or something in between.

Culture change is a gradual process, requiring time, commitment, and sustained effort. While understanding the deeper culture of a department is essential for long-term transformation, the climate - the immediate perceptions and environment - offers opportunities for more immediate impact. Climate reflects how individuals perceive the culture and influences how they feel about being part of the community. Research shows that climate is a primary driver for why students leave engineering.[5-7] People begin forming opinions about a department's culture even before joining, based on how they are welcomed and the tone of everyday interactions. Each of these moments represents an opportunity to positively influence the climate and, by extension, perceptions of the culture. Faculty are uniquely positioned to influence this climate, as they set the tone for the classroom and model the values of the department.[8, 9] Through intentional actions, they can create a supportive and inclusive environment that fosters a sense of belonging and community.

In the summer of 2022, I began a year-long journey leading my department, a chemical engineering department in a predominantly white R1 institution, in examining how engineering culture and climate shape our community and in promoting meaningful, positive change. My goals were to spark discussions among faculty and inspire actionable steps to strengthen our department's ongoing efforts to build and nurture a culture where everyone is welcomed, valued, respected, included, and supported. This initiative was supported through a Dean's Fellowship from the college, which provided me the time and space to explore this work. Faculty member in the department were invited to join me on this journey, but were not required to participate. In this paper, I present an overview of the scaffolded approach I used, including examples of each

element, and share the goals, implementation strategies, and my personal experiences, insights, and reflections as the faculty lead.

Development of the Scaffolded Approach

After several conversations with the dean about my interests and observations, we identified two key goals for my Dean's Fellowship: first, to participate in the ASEE Engineering Culture Roundtable at the annual conference and bring those insights back to our college; and second, to organize a workshop and reflections on engineering culture and climate that engaged all faculty in my department. As the fellowship approached, I had a brief moment of panic—realizing I had only 52 weeks to create meaningful change in a notoriously complex area, with faculty who had varying levels of knowledge and engagement with these topics. So, I committed to doing something every single week to move this effort forward and to establish a shared foundational level of understanding among the faculty. Hence was born weekly challenge emails, a series of 52 concise opportunities for individual learning and reflection on topics related to engineering culture and climate. Designed to be short and accessible, these emails encouraged faculty to engage consistently, fostering incremental growth and reflection over time.[10]

While the weekly challenge emails became the foundation for the scaffolded approach (Figure 1), as stories and feedback from faculty emerged, it became clear we needed collective dialogue. I organized a series of guided workshops to address persistent challenges in engineering education. Using the World Café method or roundtable discussions, these hour-long sessions facilitated conversations that enabled the group to share collective knowledge, question assumptions, and use their wisdom and creativity to confront difficult academic challenges.[11] Topics included case studies on student teamwork, engineering norms, and the future of engineering practice and culture.



Figure 1. Scaffolded approach to facilitate faculty dialogue and inspire action.

Later, the focus shifted toward action, culminating in sessions designed to translate the knowledge and reflections from the semester into tangible plans for positive change. These sessions were scheduled after a semester of weekly challenges and guided workshops, ensuring that participants arrived with a shared framework, an understanding of key concepts, and

preliminary ideas for improvement. We used tools such as rubrics to assess current efforts and identify areas for growth, and held a half-day retreat which included a visioning board exercise to collaboratively imagine the future of engineering education. This scaffolded approach evolved over time and provided a deliberate progression from individual reflection to collective action, laying the foundation for meaningful and lasting change.

Weekly Challenge Emails: Individual Learning and Reflection

The 52 weekly challenge emails provided space for individual learning and reflection on a wide range of topics related to engineering culture and climate and their intersection primarily with engineering education. Emails were crafted to be short and manageable learning opportunities to encourage faculty to read them every week and for them to have time to reflect on the content. Each email included a brief explanation of a relevant topic, a specific challenge (e.g., write a reflection, consider a new perspective, read about another's experience, watch a video, try a new classroom strategy), and additional resources for further exploration. On the low end, content could be read and the challenge completed within ten minutes each week. If faculty chose to dig deeper into the resources, this could take anywhere from a half-hour to an evening to an entire semester or longer depending on what a faculty member chose to act upon. The expectation was not to have every idea be acted upon by every faculty member, but rather to plant many different idea seeds and allow faculty autonomy in choosing which ideas to nurture.

The most challenging aspect of facilitating the weekly challenges was selecting topics and crafting a concise email each week. The topics largely stemmed from years of reading and research I had conducted before the fellowship, driven by my curiosity and interest in how higher education functions and how our culture and climate impact an individual's ability to thrive on campus. This included information from research publications, books, conference papers, *Chronicle of Higher Education* articles, educational websites, YouTube videos, TED talks, personal stories, and experiences in the classroom, to name a few. While this abundance of information was inspiring, it was also at times overwhelming. Some weeks I spent hours drafting multiple versions of a weekly challenge, only to find that none of them felt right. Other weeks, I would start with one idea, only to realize it needed to be refined or expanded into multiple challenges. There were amazing weeks when the ideas flowed effortlessly. Throughout the process, I aimed to curate resources and insights that would be valuable to my faculty colleagues, while ensuring the content remained manageable. Early on, I focused on topics supported by data and established literature, making it easier for faculty to dive deeper if they wished.

The first topics focused on culture and climate (e.g., defining our departmental culture; normalizing a culture of wellness; fostering a "weave in" culture; climate in the classroom), and laying the groundwork by addressing basic terminology. Next, topics were chosen to follow the natural rhythm of the semester and what might be helpful as the faculty were preparing for and teaching classes (e.g., transparency in teaching; the power of words and stories; incorporating social responsibility into the classroom; responding to students in distress; embracing active learning; fixed versus growth mindsets; metacognition (thinking about one's own learning); first attempt in learning (F.A.I.L.); novice versus expert learners). Some topics were timed to coincide with campus initiatives, critical events or discussions happening in the state or country, or conversations the faculty were having in faculty meetings or World Café workshops (e.g., the danger of a single story; allegories on race and racism; LGBTQ+ civil rights; follow-ups to the

workshop). Other topics grew organically through conversations I was having with other faculty, students, and staff (e.g., I tried a new teaching or learning approach and it failed – now what?). Finally, there were topics to encourage faculty to take action based on what they were learning (e.g., take action projects; being an agent for positive change). A full topic list is provided in the Appendix.

As the effort got underway, the first month was marked by silence. I worried that the weekly challenges were getting lost in the email overwhelm most faculty experience or that the summer break meant emails from the university were being deleted without being read. Given the start date of the initiative, July 1, this lack of response was somewhat expected. However, as the semester drew closer, stories began to surface. Faculty members started emailing back, stopping by my office, or catching me in the hallways to share their thoughts. They reflected on how the challenges resonated with their own experiences, discussed the content in-depth, and even shared personal stories. The stories continued throughout the year - sometimes told to me in confidence, other times openly in group settings or faculty meetings. The personal anecdotes I heard were powerful. Faculty recounted their own trials and triumph, shared innovative approaches they were using to foster supportive environments in their classrooms, research groups, and broader communities, and began shifting the way they spoke about their impact on climate. Faculty engagement took many forms – some delved deeply into the topics, sought out additional resources, or used the weekly challenges as a springboard for broader conversations.

Over time, I became more comfortable weaving my own experience into the challenges. One, titled “Sticks and stones may break my bones, but words will never hurt me,” sparked significant discussion. While this familiar adage might serve as a childhood defense against verbal bullying, it overlooks the profound and lasting power of words. In the email (see text box for the full examples, I shared two personal stories from my undergraduate days that have stayed with me and challenged the faculty to consider how their words or actions create small but impactful moments - whether positive, negative, or neutral - for others in academia. Several faculty shared their own formative experiences as students, revealing the profound influence these moments had on their own trajectories. This idea of the power of small moments is one that continues to stick with me and is something I think about often. I try to intentionally work it into my daily interactions, recognizing how small gestures—like a word of encouragement or taking a moment to listen—can make a meaningful difference for those in my community.

Several transformative ideas have resonated with the broader faculty. These ideas continue to crop up in faculty meeting discussions and influence our approach to education. One example is a shift away from a familiar framing of the “leaky pipeline”, which has given way to a new metaphor: cultivating a garden where we alter the environment as needed to allow every member of the community grow and thrive.[12, 13] This shift moves responsibility from merely plugging leaks to recognizing the role of both the individual and the broader educational environment. Another influential idea came from ASEE President Jenna Carpenter, who advocated for fostering a “weave in” culture in engineering education, as opposed to the traditional “weed out” approach.[14] The “weave in” culture emphasizes creating an inclusive environment that supports and encourages all students to succeed and contribute diverse perspectives to the field. This framing forces us to consider how engineering’s rigorous and sometimes exclusionary practices may inadvertently limit opportunities for diverse students and hinder the creation of a truly inclusive and collaborative educational environment. Both of these frameworks encourage

us to rethink our roles in education and the impact we can have on fostering a more supportive and inclusive engineering community.

Weekly Challenge: Sticks and stones may break my bones, but words will never hurt me

You may recognize this old adage, first recorded in the 1800's, and possibly even used it as a child as a defense against name-calling and verbal bullying. While there are days I wish this was true, this adage doesn't acknowledge the very real power of words. The past few weeks, I've been thinking a lot about the verbal messages we send in academia – both the intentional and unintentional ones - and reflected on some of the messages that I received as a student that have stuck with me to this day.

I remember when my thermodynamics professor stated during the first week of class, "If you don't know how an engine works, I don't know how you'll become a chemical engineer." In that instant, I went from excited engineering student to someone who seriously doubted whether they had the necessary background to continue. I had translated that statement to mean, "If you don't already know how an engine works, maybe you don't belong here." That comment served as an anchor for my anxiety about engineering. As a first-generation student, I didn't know what was needed to succeed in college, but I sure knew that engineering was difficult. Now I had this authority figure suggesting that I was already behind. I probably spent way too much time worrying about this off-hand comment, but it left a mark.

Move forward to later that year, to a single comment written by a graduate student on one of my organic chemistry lab reports: "This is a well-written report. Have you considered graduate school?" Up to that point, I had not considered graduate school. In fact, I had no idea what graduate school was. But from that point forward, graduate school was on my radar. Again, such a simple comment, but someone took the time to let me know that they thought I could succeed in ways I was completely unaware of!

There are many small moments like this that I can weave together to tell a story about my academic life from high school through today. Things that made me pause or change direction, and others that boosted me up or gave me new directions to pursue. So, this week I challenge you to consider how YOU create small moments, good or bad or indifferent, for others in academia. How might the things you say in the classroom, in meetings or offices, or even passing in the hallway impact someone's perception of belonging or sense of identity? How are you acting as a positive influence? How are you helping to create a supportive environment?



Then, read about someone else's experience, preferably someone who has had quite a different experience than you (see the attached articles which include excerpts from various individuals in their own words). What can we learn from their experience and how could we act as a positive influence for others in a similar situation?

Image from amazon.com

World Café Workshops: The Power of Conversation

Guided workshops created a collaborative space for faculty to discuss persistent and complex challenges in engineering education. Faculty were invited to attend the workshops, and the majority chose to participate in each session. The workshops employed the World Café method, which leverages the power of conversation to enable groups to share collective knowledge, question assumptions, and use their wisdom and creativity to confront difficult challenges. In a setting reminiscent of a café, small tables allowed faculty to engage in intimate, focused discussions, while the workshop structure encouraged the exchange and cross-fertilization of ideas across groups. The workshops focused on real-world educational scenarios, entrenched norms, and practices that shape engineering education and its culture. For instance, participants examined case studies on challenging student teamwork dynamics and reflected on commonly internalized norms, such as attributing unmet expectations solely to students' motivation, time management, or personal choices. Discussions centered on how these assumptions might perpetuate existing cultural dynamics, the potential harm they could cause, and strategies to adopt more supportive approaches. Throughout the sessions, faculty rotated among tables to incorporate diverse perspectives before reconvening as a whole group for broader discussion and synthesis. This process encouraged faculty to critically evaluate their role in shaping the current culture and fostered a supportive environment for exploring difficult topics, challenging assumptions, and envisioning actionable steps toward positive change.

These conversations consistently extended beyond allotted time, reflecting the faculty's deep engagement with the topics and their commitment to addressing them. The discussions were lively and dynamic, with participants eagerly sharing perspectives, experiences, and ideas. However, differences in opinion quickly became evident—not all faculty agreed on the issues or the best ways to address them. While some leaned toward maintaining traditional norms and practices, others were more open to exploring change. Despite these differing viewpoints, the workshops highlighted the faculty's ability to engage in civil discourse. Participants expressed their views respectfully and listened to opposing perspectives, demonstrating the constructive dialogue necessary to tackle complex challenges. This willingness to engage in sometimes uncomfortable conversations was a significant success of the initiative. It underscored the faculty's commitment to improving the culture and climate of engineering education, showing a collective readiness to navigate differences and collaborate toward meaningful change.

Based on my observations, several key elements contributed to the successful implementation of the World Café workshops. First, holding the workshops in a different setting than regular faculty meetings helped create a fresh and inviting atmosphere. Establishing an environment that encourages free movement and fosters a sense of safety was essential. Maintaining a dynamic flow by having participants move around and change groups introduced participants to diverse perspectives, keeping the conversations lively and engaging while enhancing the richness of the dialogue. Crafting open-ended questions was another critical element, as these allow for a broad range of viewpoints and inspire deep reflection and dialogue. Clear guidelines for discussion were also important; participants should be encouraged to listen actively, ensure everyone has a chance to contribute, and seek patterns and deeper connections among ideas. Finally, capturing the ideas and insights generated during the sessions was crucial for follow-up and future actions (we used markers and large rolls of paper).

In our final workshop, an outside facilitator guided the session, drawing inspiration from the ASEE Culture Roundtable workshops and institutional change resources from the ASPIRE Alliance. The workshop invited faculty to reflect on their aspirations for the future of engineering practice and consider how we can adapt engineering culture to address the challenges of a rapidly changing world. The discussion was guided by key questions addressing individual and collective motivations for change, aspirations for the future of engineering practice, and steps needed to overcome current challenges. Faculty groups collaborated to create vision boards that captured their collective ideas for the future of engineering (see Figure 2 for an example). They could either draw their vision or use magazine cutouts to represent their ideas visually.

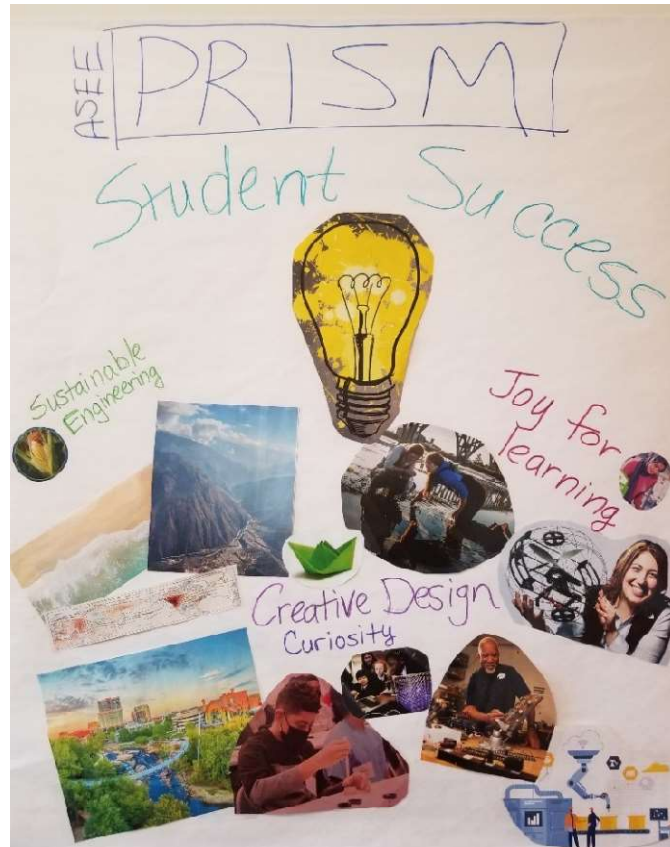


Figure 2. Sample poster created by faculty envisioning the future of engineering education.

The visioning posters reflected a shared commitment to transforming engineering education to better prepare students for the challenges of the future while fostering creativity, curiosity, and engagement. One major theme was the integration of sustainability, innovative problem-solving, and joyful learning into the curriculum, emphasizing the need to inspire and motivate students through meaningful and forward-thinking approaches. Another recurring idea was the importance of hands-on, real-world experiences, as illustrated by a vision of students actively working in multidisciplinary teams to address complex challenges, such as environmental stewardship throughout the entire lifecycle of products. A third key theme highlighted the value of tailoring education to individual students, empowering them to make informed decisions about their learning while staying rooted in the fundamentals of the discipline. Overall, the posters underscored the need for a more sustainable, innovative, and student-centered approach to engineering education. In a final keynote address, the facilitator underscored that anyone can

be a catalyst for change, encouraging participants to engage all stakeholders, develop actionable plans, experiment with innovative approaches, collect data, and iterate based on results. The workshop aimed to empower faculty to lead and sustain positive transformation in engineering culture. Whether we were successful in achieving this vision remains to be seen.

Individual and Collective Action Plans

Throughout this journey, faculty were encouraged to develop their own individual action plans, specifically focused on putting learning into practice by identifying an area for change. Faculty were asked to select one area to focus on and implement a change. The take-action projects varied widely, reflecting the diverse interests and strengths of the faculty. Examples of the projects identified by faculty included:

- Altering the **language and tone of their assignments and course materials** to consider how students might perceive them and reworking the materials to foster a “weave in” and inclusive climate.
- **Creating a more welcoming environment for our incoming CBE students** by sending personalized emails to all new advisees.
- **Introducing students to bias in clinical data**, highlighting how few studies provide disaggregated data (even when the study, for example, included sex as a variable in the original study design), encouraging students to ask critical questions about the broad applicability of the data.
- **Incorporating the 3Ms (mindset, metacognition, and memory) into the classroom** (two faculty mentioned this), focusing on a growth mindset, development of a student-centered syllabi, more reflection, and more focus on students following authentic processes of investigation, questioning, and discovery and less memorizing techniques.
- **Focusing on ways to minimize stress and overwork of students** by limiting end-of-semester projects and coordinating the dates of exams and big assignments with other faculty teaching the same cohort.
- Helping the Graduate Service and Social Committee secure funding for a **new event called “It Takes a Day to Celebrate a Year”** – a day dedicated to exchanging culture, learning about holidays and festivals celebrated by students worldwide, embracing differences, and learning from each other. This is now annual tradition in our department.

These individual projects demonstrated that many faculty are committed to making tangible changes in their teaching and mentoring practices and contributing to a more inclusive and supportive engineering culture.

Along the journey, we recognized that it would be useful to baseline our departmental efforts in engineering education. This was conducted after a semester of weekly challenges and guided workshops, with the idea that everyone could come into the retreats with a common framework, knowledge of key concepts, and ideas for change. Prior to or after the meetings, weekly challenges were used to address key concepts or to define key terminology that was unknown the

faculty. We wanted an approach that had been vetted by others. During several faculty meetings, we baselined our current efforts in undergraduate education using a rubric developed by the PULSE network, whose goal is to the adoption of evidence-based teaching and learning practices to promote excellence in teaching and student learning.[15] In addition, the rubrics provide many examples and resources that can help departments better understand the context of the criteria and learn more as they want. While the rubrics were originally developed for life sciences education, they have been adopted and adapted across STEM disciplines. While the PULSE rubrics focus on criteria for undergraduate education, it was natural for discussions of graduate education to occur simultaneously.

The specific topics covered in the rubrics themselves were not, in my view, the most critical element. Instead, it was the discussion that ensued from the process of collective consensus scoring and justifying our scores. This process sparked discussion we had never had as a faculty, leading to a better understanding of departmental efforts already underway and the realization that many faculty members were unknowingly working on similar initiatives within their individual courses. It was interesting to discover what faculty were already doing to support an inclusive educational experience, to identify strategies being used across different classes – often with slight variations – that could be applied more broadly, and to learn about innovative approaches some faculty had recently implemented. We also began considering how to use data to pinpoint areas for improvement, such as enhancing teamwork experiences throughout the curriculum, connecting course material to students' everyday lives, and addressing gaps like tracking who utilizes TA help sessions. By examining practices across the curriculum, we identified high-impact and inclusive pedagogical strategies being employed in core undergraduate chemical engineering courses. Overall, the discussions were highly productive, offering valuable insights and actionable ideas for fostering inclusivity and collaboration.

Discussions among the faculty were engaging, lively, and sometimes a bit uncomfortable. But these were also some of the most thoughtful and motivating discussions I've heard in faculty meetings. Through this effort, the group identified areas of commonality where the group had already put in a lot of effort (the wins), areas where we need to collect data to support our observations or gain more information (questions or missing information), and key areas that we as a whole faculty would like to dedicate time to (areas of improvement).

Final Facilitator Reflections

Fifty-two weeks of ideas and conversations is a lot to process. Breaking down ideas into small pieces was crucial for making the content manageable for faculty. This incremental approach allowed faculty to gradually build their understanding and confidence in addressing complex issues related to engineering culture and climate. Given that faculty have competing demands on their time, it was important to encourage them to identify one specific area they could focus on and implement a change. Further, empowering faculty to take ownership of their individual learning and projects can foster a sense of autonomy and motivation. I believe in the concept that if you plant seeds and empower autonomy, you can inspire action. This philosophy underpinned the entire initiative, driving the creation of a supportive environment where faculty felt encouraged to experiment, reflect, and grow. The cumulative effect of these small, individual actions contributed to a larger, collective transformation within the department, which I believe will ultimately lead to a more inclusive and supportive engineering culture.

The scaffolded approach led to engaging and sometimes uncomfortable discussions among faculty, but these were also some of the most thoughtful and motivating discussions. I found it inspiring to see faculty come into conversations from very different places in their personal journeys, but for everyone to come together to talk about how we can collectively and individually make progress in changing the educational environment. These conversations often delved into deeply ingrained norms and practices within the department, challenging faculty to reflect on their own teaching methods and assumptions. The effort helped faculty recognize strategies being used across different classes, such as incorporating active learning techniques, fostering a growth mindset, and promoting inclusivity through diverse course materials. Faculty members shared their successes and challenges, providing a rich exchange of ideas and experiences. Additionally, the discussions highlighted the importance of using data to inform decision-making and identify areas for improvement. This collaborative and reflective process not only enhanced individual teaching practices but also contributed to a collective effort to create a more supportive and effective learning environment for all students.

This approach could be adapted by other departments to evaluate and identify ways they want to alter their own unique culture and climate. For others wanting to undertake similar work, here are some practical points to consider:

- **Be intentional about the topics you tackle:** Align topics with the rhythm of the semester or events happening in your department, college, university, state, or even more broadly in society to make them more likely to resonate.
- **Share personal stories:** Give a bit of yourself, but only what you are comfortable sharing. People connect with personal stories. It took me a while to become comfortable with sharing my personal stories, but when I did, it tended to prompt more responses and discussion.
- **Be intentional about creating the right environment for dialogue:** Create clear guidelines for engagement that you expect all participants to follow. Building a safe environment where faculty can consider and discuss challenging and thought-provoking content, have open dialogue, and build relational bonds is critical to the success of an initiative like this.
- **Listen intently and watch body language:** Unspoken cues can speak volumes where words may fail.

Throughout this effort, several faculty members emerged as clear champions and early adopters, actively engaging in the initiative and taking steps to promote change. Their enthusiasm and commitment were instrumental in advancing our goals. In contrast, there were others who remained more neutral – these faculty engaged in conversations and were open to learning about best practices and ways they could contribute to change. However, they either weren't ready to take action yet or not ready to talk about any actions they may have already taken. I did not encounter direct resistance to the initiative, which allowed for productive dialogue. As we continue to move forward with this work, the neutral faculty have the potential to shift into what is known in change theory as the early or late majority,[16] depending on their comfort level and

the continued momentum of the initiative. With further support, they could become more actively involved, helping to broaden the collective impact of our efforts.

Positionality Statement

Writing this paper has been one of the most challenging yet rewarding tasks of my career. For nearly three years, I struggled to craft a narrative, frequently questioning my expertise and whether my voice belonged in the conversation. My breakthrough came when I participated in Tara Mohr's *Playing Big* Facilitators Training, where I gained insight into how people often prioritize established narratives over their own perspectives. That realization helped me shift my approach – I had been trying to write a data-driven science story when what I truly wanted was to share my own experiences. Once I embraced the value of my perspective, I found my voice. Therefore, this paper takes a more reflective approach than is typical in engineering, blending personal experience with analysis to explore my year as a Dean's Fellow and the insights gained from that experience.

As I reflect on my year as a Dean's Fellow, I feel deep gratitude for the opportunity to engage deeply with work I am passionate about. This experience has brought me immense joy, allowing me to reflect, learn, read extensively, listen, question, and share knowledge. It has also reinforced my commitment to cultivating a more welcoming and supportive engineering culture. While engineering education has much to celebrate, there are also challenges that shape the experiences of students and faculty. Throughout my career, I have encountered moments where expectations and assumptions have influenced my path. While these challenges shaped my journey, I know they pale in comparison to what many others in our community endure. I cannot fully understand the experiences of those who face these additional barriers, but I can listen, learn, empathize, and work for change. I believe in the transformative power of education and community and am committed to helping create spaces where everyone can thrive.

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Appendix. Topic List of 52 Weekly Challenge Emails

1. 5 min brainstorm on engineering culture
2. Defining our departmental culture
3. Student mental health and normalizing a culture of wellness in engineering
4. Fostering a "weave in" culture in engineering education
5. Departmental climate and the syllabus
6. The importance of being an empathetic professor and leader
7. Incorporating social responsibility into the classroom and classroom assignments
8. Enhancing transparency in teaching and learning (TILT assignments)
9. Building community (communities of practice, reading groups, conversation groups)
10. No model is perfect, but when the model isn't generating the results we need, maybe it's time to change it
11. University diversity catalyst seed grants
12. Take Action Project – learn new skills, then take one action based on what was learned
13. Sharing Take Action Projects
14. Let's talk about Gen Z students
15. Reaching out and responding to students in distress
16. Caring as a powerful teaching tool
17. Sticks and stones may break my bones, but words will never hurt me
18. A scaffolded approach to engineering culture and climate
19. Follow-up on World Café workshop - Teamwork case study
20. Undergraduate Student Retention and Persistence in CBE
21. Undergraduate Student Attrition from Engineering – The evidence for why students leave
22. Follow-up on World Café workshop - Discussion of engineering norms
23. It's time to embrace active learning in the classroom
24. College-Wide Challenge – Cultivating Inclusive Communities online training
25. PULSE Rubrics – First faculty discussion of criteria
26. How fixed and growth mindsets impact students
27. The Three M's for Effective Learning: Mindset, Metacognition, and Memory
28. Engaging Students in the Classroom
29. The Common Core and Its Impact on Higher Ed
30. The Three M's for Effective Learning – Part 2
31. Defining terminology from the PULSE rubric
32. Allegories on race and racism
33. LGBTQ+ Civil Rights
34. What's the difference between an advisor and a mentor?
35. How do you set expectations for mentoring relationships?
36. Review draft PULSE Rubric analysis
37. Pay attention early to perturbations in the system
38. Follow-up on CBE Engineering Culture Roundtable workshop
39. The pressure to stay up late – the link between sleep quality/duration and academic performance
40. Content mastery – what are our expectations of students?
41. I tried a new teaching or learning approach and it failed – now what?
42. First attempt in learning (F.A.I.L.)
43. Assessment of course learning goals

44. Assessment of student outcomes – performance indicators
45. Academic advising – professional and faculty advising
46. LGBTQ pride and resources
47. The danger of a single story
48. Considering new ideas for senior design and unit operations from ASEE
49. Novice versus expert learners
50. Equipping students with skills and understanding necessary to positively impact communities, the environment, and culture
51. Summer learning
52. Where do we go from here? – Be a critical agent for positive change