Rapid #: -20007537

Centering the Student Experience: What Faculty and Institutions Can Do to Advance Equity

Kathryn Boucher, Mary Murphy, Denise Bartell, John Smail, Christine Logel & Jennifer Danek

Centering the Student Experience:

What Faculty and Institutions Can Do to Advance Equity

By Kathryn Boucher, Mary Murphy, Denise Bartell, John Smail, Christine Logel, and Jennifer Danek

Kathryn Boucher, PhD, is an Associate Professor of Psychology at the University of Indianapolis, where her research focuses on the factors that contribute to more supportive and inclusive classrooms and campuses. She is also a Principal Investigator at the College Transition Collaborative, where she works to scale and disseminate insights from this research to other educators and institutions.

Mary Murphy, PhD, is the Herman B. Wells Endowed Professor of Psychological and Brain Sciences at Indiana University, Bloomington, where her research illuminates the structures and situational cues that influence people's motivation and achievement. She is a cofounder of the College Transition Collaborative, a research–practice partnership aimed to increase student success through social–psychological interventions.

Denise Bartell, PhD, is currently Associate Vice Provost for Student Success at the University of Toledo, where she leads strategic initiatives related to retention, completion, and student success with a focus on improving equitable outcomes for historically underserved students. Her scholarly work takes a holistic and systemic approach, most recently exploring a reconceptualization of faculty development to utilize principles of high impact, applied learning, and authentic engagement in support of equitable student outcomes.

Christine Logel, PhD, is an Associate Professor of Social Development Studies at Renison University College at the University of Waterloo in Ontario, Canada. As a cofounder and Principal Investigator with the College Transition Collaborative based at Stanford University, she develops and tests psychological interventions that seek to close achievement and retention gaps between disadvantaged and advantaged students.

John Smail, PhD, is the Associate Provost for Undergraduate Education and Professor of History at the University of North Carolina (UNC) Charlotte. He has worked to develop UNC Charlotte's student success enterprise by implementing a comprehensive proactive advising system, developing graduation metrics to drive curriculum and policy improvements in colleges and departments, creating a risk model and intervention that combines academic and financial elements, and, most recently, leading the Student Experience Project implementation.

Jennifer Danek, MD, is Senior Strategic Advisor at the Coalition of Urban Serving Universities (USU). In this role, she works with university presidents and campus leaders to identify and scale solutions that increase student success and equity in science, technology, engineering, and mathematics and health disciplines and prepare graduates to meet the needs of urban communities. She currently serves as USU's Director for the Student Experience Project.

In Short

- Equity gaps in students' experiences and academic outcomes often exist in science, technology, engineering, and mathematics (STEM) college courses, particularly early prerequisite courses.

- The Student Experience Project (SEP) is a collaboration between college instructors, university leaders, and national education and improvement organizations to implement classroom interventions to eliminate these gaps.

- In courses taught by SEP instructors, we narrowed student experience gaps between groups who have been historically underserved in STEM and those who have not.

- These improvements in students' experiences predicted better academic performance.

Five students sit in the front row of an introductory chemistry college course; it is the first day of a new term. Samantha is the first in her family to attend college; she is excited for this day, but is uncertain of what it will entail. Cari is a nontraditional student with two young children; this class meets while the kids are in school, but she is concerned about how much time this course will require outside of lecture. Mike is trying to pay attention to the discussion of the syllabus, but is also worrying about working enough to afford this month's rent and groceries. Outside of class, Jayden has already found a friend group in the Black Student Association, but he notices only a couple other Black peers in this large course. Sofia is taking this class as a prerequisite for her engineering major, a major some people are surprised that she is interested in.

These are experiences that we commonly hear about from students in our research, teaching, and administrative roles, and they can prompt core questions for students. Do I belong here? Do my peers and instructors think I do? Can I handle this work? Do my peers and instructors think I can? How students answer these questions can determine how they respond to challenges and, ultimately, how they perform and persist in college (Quay, 2017).

To answer these questions, students look for cues in the classroom. The meaning that students draw from these cues often differs between groups based on negative stereotypes tied to their group memberships, numerical underrepresentation, and historical or continuing disadvantage in higher education. Students like Samantha, Cari, Mike, Jayden, and Sofia are likely to pay more attention to cues that signal whether their instructors, peers, and their institutions see them, or people like them, as belonging on campus and having the potential to succeed there.

The Student Experience Project (SEP; https://studentexperienceproject.org/) aims to disrupt this process by taking an institutional and structural approach. Rather than locating the problem within students, we look to the learning environment that surrounds them. In this project, we equip college instructors—the primary culture creators of their courses—with strategies to foster belonging and convey their beliefs in students' potential to succeed. This work helps students engage and persist through challenges by changing the cues in the local learning environment to be explicitly supportive of college students' experiences and concerns. By improving students' experiences, we can create more equitable learning environments where all students can fulfill their potential.

What Is the SEP?

The SEP is a national network of university leaders, faculty, researchers, and national education and improvement organizations collaborating to test and scale research-supported practices to improve equity in students' classroom experiences and achievement. This network, supported by the Raikes Foundation, consists of a cohort of six university partners from the Coalition of Urban

Serving Universities and the Association of Public and Land-Grant Universities:

- Colorado State University
- The University of North Carolina at Charlotte (UNC Charlotte)
- The University of Toledo
- The University of New Mexico
- Portland State University
- University of Colorado, Denver

SEP launched in November 2018 with a focus on science, technology, engineering, and mathematics (STEM) disciplines and, more specifically, prerequisite or "gateway" STEM courses. We selected this focus because of the critical role gateway STEM courses play in students' successful progression within their majors and the equity gaps often seen in these courses' grades (Michaels & Milner, 2021). Additionally, students in STEM fields may face unique challenges to their sense of belonging and feeling supported in their academic efforts (Hill et al., 2010).

In fall 2019, we conducted analyses of campus historical data and surveys and focus groups of students, faculty, and staff. Our goal was to understand the challenges that students from diverse racial/ethnic, gender, and socioeconomic backgrounds face on campus and in their STEM courses to pinpoint actionable places and practices for intervention. From this research, the classroom emerged as a crucial intervention point with students, where instructors and peers have a profound impact on students' psychological experiences, performance, and persistence.

Evidence Base Behind the SEP

Research confirms the importance of focusing on the classroom. Instructors create and communicate the "mindset culture" of their classes (Murphy & Reeves, 2019). If instructors make statements implying that some students do not have what it takes to pass the course (i.e., communicating their fixed mindset beliefs about students' abilities), it raises questions in students' minds like those in the opening scenario with the five students. However, if instructors communicate their growth mindset beliefs about ability—that all students can improve their knowledge and skills with effort, learning, and

effective strategies—and provide the strategies and resources to do so, students believe that they can succeed in the course.

Importantly, faculty's mindset beliefs and practices relate to student performance in their classes: on average, all students tend to perform worse in STEM classes taught by instructors who self-report more fixed than growth mindset beliefs (Canning et al., 2019). This was especially the case for Black, Latinx, and Native students: in classes taught by faculty who self-reported more fixed mindset beliefs, the racialized achievement gap in those faculty members' courses was 50 percent larger than those in courses taught by growth mindset faculty. Moreover, when students perceive their STEM instructor to have more of a fixed mindset, it reduces their sense of belonging and increases their evaluative concerns and negative emotions in class. These psychological experiences, in turn, predict lower course engagement, interest in STEM, and course performance (Muenks et al., 2020). Thus, creating and communicating an *inclusive growth mindset culture* is a key theme in SEP classroom practices.

Another theme is helping faculty directly address students' concerns about belonging. Feeling welcomed and valued in class and in college are necessary ingredients for persistence and achievement. While many college students worry about belonging, students from backgrounds like Samantha, Cari, Mike, Jayden, and Sofia tend to experience greater belonging concerns and more uncertainty of their belonging than other student groups (Gopalan & Brady, 2020). Therefore, engaging in practices and policies that foster and sustain students' sense of belonging is imperative for improving students' experiences and achieving more equitable learning environments.

Inspired by inclusive design thinking and a continuous improvement approach, the SEP iteratively tests and assesses classroom practices. This approach, in partnership with faculty across the United States, is novel relative to how classroom interventions have been previously tested. Instead of running a lab experiment or more standardized, controlled tests in classrooms, we drew on existing, published evidence for pedagogical teaching practices, policies, and messages that support equity, growth, and belonging among students.

In summer 2020, the College Transition Collaborative developed the SEP Practices Library (https://collegetransitioncollaborative.org/sep-practices-library/) with professional development modules to help instructors adopt evidence-based practices and adapt them in authentic ways that fit with their teaching style and courses. The first full cohort of instructors engaged with these materials for the fall 2020 term.

Instead of exclusively relying on end of term assessments, instructors regularly survey their students throughout the term. De-identified, automated reports with responses disaggregated by student background provide faculty the ability to observe for themselves whether there are any identity-based gaps in students' experiences and whether the practices in which they engage seem to have an impact over the term. For example, an instructor might see a 10 percent overall increase in trust and perceived fairness after giving feedback on the first big course assessment, with comparable increases across student demographic groups.

An added benefit of a continuous improvement approach is the ability of these interventions to complement existing student success efforts. Many higher education institutions have advancing equity as a central goal in their strategic planning and thus are supporting various efforts across campus to work toward this goal. SEP interventions not only complement campus efforts around advising, early alerts, and so on; they also provide a framing of this work as building a growth-minded institutional culture and a place of belonging.

How This Past Research Is Applied in the SEP

Faculty are implementing evidence-informed changes in key pedagogical moments during each term.

First-Week Practices

We start the term with belonging and growth at the forefront to establish the inclusive, growth mindset culture of the class. Faculty are led through revising their syllabi and reviewing their course policies to ensure that they signal that all students are welcomed and that instructors believe that all

students have the potential to succeed in the course. Additionally, instructors incorporate activities to encourage connection between students and with the instructor. One particularly powerful activity is sharing *faculty's* "belonging story," a story about a time when the course instructor questioned their belonging in college or in their field and how they resolved this concern. Sharing (with permission) past successful students' belonging stories is another effective approach SEP faculty have taken.

Providing Impactful Feedback

The next collection of practices includes strategies for providing feedback to students in ways that keep them engaged in learning, even after initial poor performance. These change practices involve giving "wise feedback," communicating that you have high expectations for student work and you believe that students can meet them (Cohen et al., 1999). Pairing this message with resources students can use for improvement can help students bounce back from low scores early on. For courses with exams, SEP faculty craft "exam wrappers," reflection activities that help students learn from past mistakes and commit to new study strategies.

Cultivating a Supportive and Inclusive Classroom Environment

Instructors consider how to best compose groups for student work and facilitate equitable contributions in class discussions. To further inspire students' sense of belonging, instructors highlight the achievements of scholars from underrepresented or marginalized groups in their disciplines. Since belonging concerns from outside of the classroom can impact students' experiences within it, instructors are guided in how to address events like campus bias incidents. By acknowledging such events, faculty can maintain a classroom space where students feel a strong sense of belonging and can best learn.

Early Learning From our Data

To assess the impact of our classroom practices on students' experiences, instructors utilize Ascend, an assessment tool developed for this project by the Project for Education Research That Scales (https://www.perts.net/orientation/ascend). This tool invites students to respond to questions tapping key aspects of the student experience that have been shown to contribute to more or less equitable outcomes.

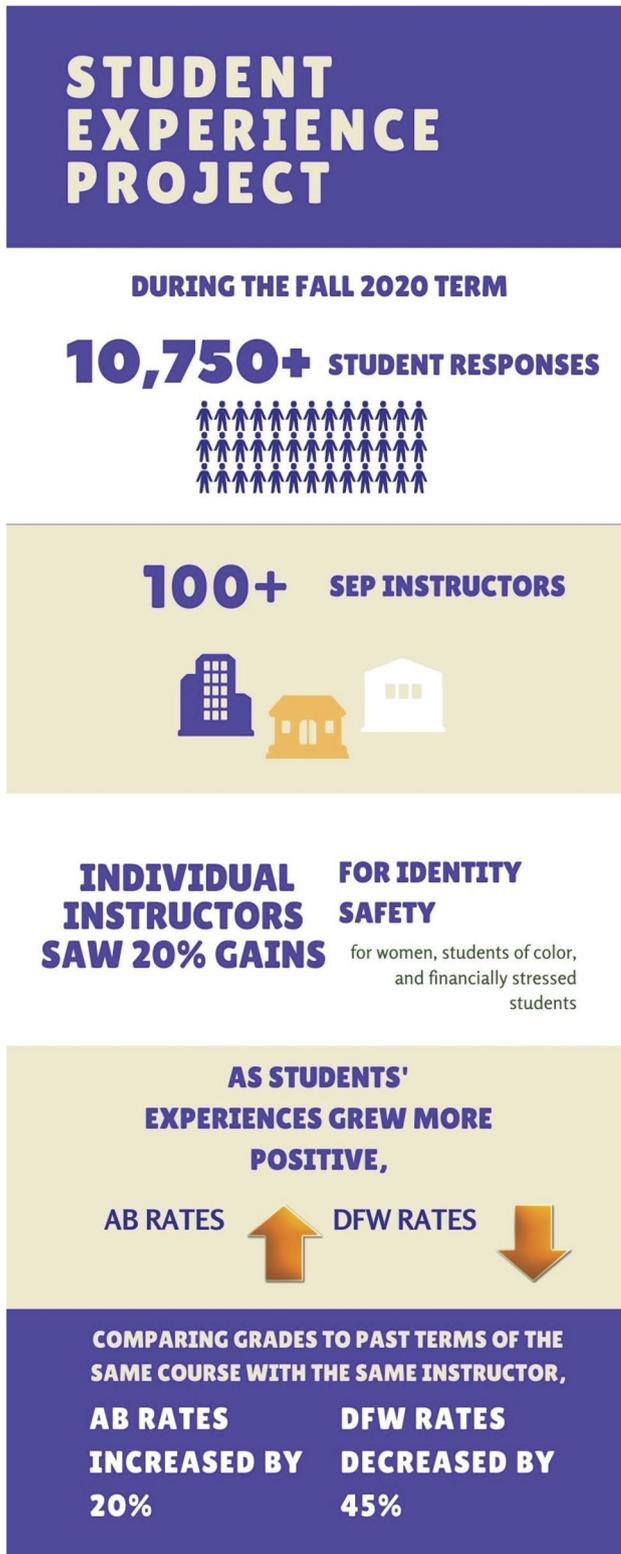Our Student Experience Index includes items asking the extent to which students:

- feel like they belong in the course (sense of belonging and belonging uncertainty),
- see their diverse backgrounds as valued and respected in it (identity safety),
- have trust in the instructor (trust and fairness),
- feel a sense of efficacy for the coursework (self-efficacy), and
- perceive that the instructor believes that they can be successful in the course (instructors' growth mindset).

Across the term, the aim is to have students in the positive range of experience for each measure (e.g., scores on the top end of the response scale).

In fall 2020, our first full term of implementation, more than 100 STEM faculty from our six partner schools participated, with over 10,750 student responses (see Figure 1). Across all campuses, we saw improvements over the term in students' experiences in their STEM classes.

- We narrowed student experience gaps that existed at the beginning of the term between groups who have been historically underserved in higher education and STEM and those who have not. The largest gains were seen for Black, Latina, and Native women with lower financial stress, who by the end of the term reported experiences comparable to their White male peers, who had the most overall positive experiences.
- Students with food and housing insecurity reported more positive experiences in their courses over the term, but gaps remained when comparing these students' experiences to less financially stressed students.
- There was meaningful variability between STEM instructors. As an example, individual instructors saw over 20 percent gains in the number of women, Black, Latinx, and Native students, and

FIGURE 1. SEP RESULTS INFOGRAPHIC

STUDENT EXPERIENCE PROJECT

DURING THE FALL 2020 TERM

10,750+ STUDENT RESPONSES

100+ SEP INSTRUCTORS

INDIVIDUAL INSTRUCTORS SAW 20% GAINS **FOR IDENTITY SAFETY** for women, students of color, and financially stressed students

AS STUDENTS' EXPERIENCES GREW MORE POSITIVE,

AB RATES ⬆   DFW RATES ⬇

COMPARING GRADES TO PAST TERMS OF THE SAME COURSE WITH THE SAME INSTRUCTOR,

AB RATES INCREASED BY 20%   **DFW RATES DECREASED BY 45%**

financially stressed students feeling identity safety in class over the term.

These improvements in students' experiences predicted better academic performance at the end of the fall term.

- As students' experiences became more positive over the term, the likelihood of them earning an A or B increased, and the likelihood of them receiving D, F, or Ws decreased.
- When comparing academic outcomes to student performance in past terms of the same courses with the same instructors, we see D, F, W rates reduced by 45 percent and A, B rates increased by 20 percent.
- Although equity gaps in academic outcomes persisted, students from marginalized backgrounds who had more positive experiences in the classroom were more likely to earn higher grades.

This is promising evidence that instructors can effectively implement SEP practices and that students' classroom psychological experiences are crucially tied to academic outcomes. Through end-of-term surveys and focus groups, faculty reported that the SEP practices helped them create a better classroom experience and were perceived positively by students in anonymous Ascend open-ended responses and end-of-term student evaluations.

> Participation in SEP has allowed my students and I to grow simultaneously. Despite the challenges of teaching virtually, I feel connected to my students on a deeper level because I better understand some of their struggles and how I can mitigate them. (SEP instructor)

Even more importantly, these benefits were observed during the COVID-19 pandemic when most college teaching was conducted online. During a time of great stress, uncertainty, change, and loss, students showed growth. The SEP instructors leaned into this work, incorporating new practices while navigating new technology and ways of teaching despite feeling the everyday life stressors more acutely themselves. By centering students' experiences during this time, instructors constructed the learning environments students needed to succeed.

IMPLEMENTATION INSIGHTS

The early successes of the SEP depended heavily on the work of school partners and their faculty.

> "This intensive learning community model, with the substantive interaction, reflection, and feedback it provides, also supports the creation of an environment of trust, vulnerability, and courage—ideally creating a space for empowered learning and building a grassroots community of campus leaders.

How did campuses get faculty involved in this work and support them in doing it?

At UNC Charlotte, implementation of SEP learning began by building urgency and an imperative for action. This was accomplished by sharing data with STEM faculty on the telling equity gaps in gateway courses for different demographic groups. Faculty champions were then introduced to the social–psychological research and the set of strategies for improving mindset culture and a sense of belonging. Working collaboratively, these faculty agreed on a suite of required practices, and some optional extras, that was codified as the "SEP intervention."

This SEP intervention suite was introduced for a group of early faculty adopters in spring 2020, and the faculty champions met throughout the semester to share successes, address challenges, and review their Ascend reports. The SEP intervention suite has developed and evolved with faculty ownership as new faculty were recruited. This led to its adoption by a large number of faculty in fall 2020 as part of the university's effort to mitigate the pandemic's impact through the development of an LMS-based set of learning resources to facilitate the onboarding of new faculty and a "whole course" implementation of these SEP practices in all sections of the critical gateway calculus sequence in spring 2021. Central to the expansion and improvement of faculty's implementation of the SEP insights at UNC Charlotte has been an emphasis on retaining faculty ownership and agency of these changes as part of a collaborative team.

At the University of Toledo, the Equity Champions community of practice was designed with key features that maximize faculty development for institutional change (Bartell & Boswell, 2019). Beginning with the frame of equity-minded practice as a tool to address the structural and systemic forces that create inequitable outcomes, the Equity Champions community met weekly with SEP campus leaders to discuss change ideas relevant for course inclusion at critical points during the semester. Meetings began each week with a space for instructors to share the small wins and challenges they had experienced in their classes and pose questions to the group on issues with which they were grappling.

This problem-focus with direct "real world" application supports enhanced implementation and transfer of learning beyond the specific courses addressed in instructors' SEP work. This intensive learning community model, with the substantive

> **The focus on creating a grassroots community of campus leaders has helped spark significant interest in participation, with over 50 instructors of all ranks from eight different colleges applying to participate for fall 2021.**

interaction, reflection, and feedback it provides, also supports the creation of an environment of trust, vulnerability, and courage—ideally creating a space for empowered learning and building a grassroots community of campus leaders.

The community of practice there has particular utility when attempting to address issues of equity. It allows us to model grappling with difficult conversations: by actively confronting deficit mindsets and critically interrogating our implicit assumptions about students and the reasons for their success or failure. We also normalize the feelings of discomfort associated with conversations about race, power, and privilege.

WHAT IS NEXT FOR SEP?

For the 2021–2022 academic year, all SEP campuses are extending their reach to include more students and are working toward institutionalizing what has been learned to sustain the work in the future. Specifically, UNC Charlotte is expanding the SEP by working with departments and colleges on implementation of the suite of mindset culture and belonging practices across all sections of gateway courses in STEM and more broadly. In addition, building on ideas developed at other SEP campuses, the university is exploring options for integrating SEP participation into promotion and tenure and program review processes.

At the University of Toledo, the Equity Champions community of practice expanded beyond

STEM in spring 2021. Preliminary results, including instructor evaluations of the experience, indicate the value of this kind of cross-disciplinary community of practice. The focus on creating a grassroots community of campus leaders has helped spark significant interest in participation, with over 50 instructors of all ranks from eight different colleges applying to participate for fall 2021.

Although the classroom is one driver of students' college experiences, campus teams are currently extending the learning and practices from the classroom into other campus spaces and services. At UNC Charlotte, a parallel effort has been undertaken at the institutional level to revise messaging and policy to reflect a growth mindset culture and promote a sense of belonging. For example, students were asked to respond to different versions of boilerplate language they might receive if faculty have raised a fourth-week academic concern flag. The resulting version of these early alert communications was revised with students' experiences in mind and has been implemented campus-wide. SEP faculty have incorporated the early alert process and the revised language in their SEP work. Going forward, UNC Charlotte plans to adopt the same approach with other key communications including those from the Office of the Registrar and Student Financial Aid.

At the University of Toledo, a rubric has been developed to evaluate departmental websites for the kinds of student-attuned language

encouraged by the SEP classroom-focused change ideas. This rubric will be provided to academic departments for self-evaluation with guided support by the SEP campus team for those seeking to enhance their website's messaging of belonging, social connection, identity safety, and diverse representation.

Every college campus has students like Samantha, Cari, Mike, Jayden, and Sofia. They are motivated and eager to learn. It is imperative for all higher education institutions to provide the learning environments, mindset culture, and resources like in our SEP efforts for students to feel welcomed and excel through to graduation. C

References

■ Bartell, D., & Boswell, C. (2019). Developing the whole teacher: Collaborative engagement as faculty development within a first-year experience program. *Faculty Development*, *33*(3), 25–32.

■ Canning, E. A., Muenks, K., Green, D. J., & Murphy, M. C. (2019). STEM faculty who believe ability is fixed have larger racial achievement gaps and inspire less student motivation in their classes. *Science Advances*, *5*(2). https://advances.sciencemag.org/content/5/2/eaau4734 https://doi.org/10.1126/sciadv.aau4734

■ Cohen, G. L., Steele, C. M., & Ross, L. D. (1999). The mentor's dilemma: Providing critical feedback across the racial divide. *Personality and Social Psychology Bulletin*, *25*(10), 1302–1318.

■ Gopalan, M., & Brady, S. T. (2020). College students' sense of belonging: A national perspective. *Educational Researcher*, *49*(2), 134–137.

■ Hill, C., Corbett, C., & St. Rose, A. (2010). *Why so few?* Women in Science, Technology, Engineering, and Mathematics. https://ww3.aauw.org/research/why-so-few/

■ Michaels, K., & Milner, J. (2021). *Powered by Publics learning memo: The Big Ten Academic Alliance Cluster exploring foundation course DFW rates, equity gaps, and progress to degree.* Association of Public and Land-Grant Universities, https://www.aplu.org/library/powered-by-publics-learning-memo-the-big-ten-academic-alliance-cluster/file

■ Muenks, K., Canning, E. A., LaCosse, J., Green, D. J., Zirkel, S., Garcia, J. A., & Murphy, M. C. (2020). Does my professor think my ability can change? Students' perceptions of their STEM professors' mindset beliefs predict their psychological vulnerability, engagement, and performance in class. *Journal of Experimental Psychology: General*, *149*(11), 2119–2144.

■ Murphy, M. C., & Reeves, S. L. (2019). Personal and organizational mindsets at work. *Research in Organizational Behavior*, *39*, 1–18. https://doi.org/10.1016/j.riob.2020.100121 0191-3085/© 2020 Elsevier Ltd. All rights rese.

■ Quay, L. (2017). *Leveraging mindset science to design educational environments that nurture people's natural drive to learn*. Student Experience Network. http://studentexperiencenetwork.org/wp-content/uploads/2018/01/Learning-Enviros-Research-Brief.pdf