PUBLIC RESEARCH UNIVERSITIES FUTURES' PROJECT

The Academic Profession in Public Research Universities: Challenges, Changes, and Opportunities

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Introduction—Ann E. Austin & Brendan Cantwell

Faculty work expressed through research, teaching, and engagement is essential to advance the missions of public research universities. Who serves in the professoriate, what work faculty do, and how careers develop are issues highly relevant to the future and quality of public research universities. On April 30, 2025, the Center for Higher and Adult Education hosted a webinar to recognize changes and opportunities confronting the academic profession in public research universities (PRUs) and to elevate key questions about academic careers, work, and workplaces. We invited four national leaders and scholars each to identify a key issue or question about the academic profession meriting institutional consideration and attention in the current context of change. The leaders included the following:

- **Emily Miller,** Vice President for Research and Institutional Policy at the Association of American Universities. In partnership with AAU member research universities, she is responsible for initiatives to advance transformational organizational change initiatives in undergraduate and graduate education and in the research enterprise.
- **Noah Finkelstein,** Professor and Vice Chair of the Physics Department at the University of Colorado Boulder. His research focuses on physics education and educational transformation in higher education. He is very engaged in work pertaining to higher education policy and serves as a member of the National Academies of Sciences, Engineering, and Medicine's Board on Science Education, and he is also a Trustee of the Higher Learning Commission.
- **Kimberly Griffin,** Professor of Higher Education, Student Affairs, and International Education Policy, and Dean of the College of Education at the University of Maryland. Her research focuses on diversity and equity in graduate education and the professoriate, diversity in the Black higher education community, and mentoring and career development.
- **Leslie Gonzales,** Professor of Higher Education and Department Head of Education Policy Studies and Practice at the University of Arizona, and Director of the Center for the Study of Higher Education at Arizona. She studies faculty evaluation processes, the contexts in which academics work, and the experiences of historically minoritized and marginalized academics.

While the academic profession has roots going back centuries, many of the key processes and structures that are familiar in universities today - and that we often associate with the academic career in research universities - were firmed up in the Post-World War II period. During that period, significant federal monies came into higher education and shaped the organization of

scholarly work and the structures within research universities that came to support that work. For example, some of the features that we associate with university work and that were firmly instantiated over the past eight decades include the department as the academic home for faculty members; the influence of disciplinary cultures played out in professional societies and journals; movement through the academic ranks, and, for many, achievement of tenure, as touchpoints of the traditional academic career; and the importance of reputation, publication achievements, and grant success as defining features of career excellence.

However, while these features have been defining characteristics of the academic career in PRUs for a number of decades, in actuality, the academic career and workplace today have changed in significant ways from the nature of faculty work in higher education even a few decades ago. For example, technological advances, and especially Generative AI, are changing how research and teaching are carried out, bringing exciting new possibilities for discovery and learning, as well as questions and uncertainties. For example, while disciplinary depth remains critically important, the daunting problems facing society today require academics to work across disciplinary boundaries, and engage in highly collaborative team-based work with colleagues from a wide array of backgrounds, ways of work for which they are not always prepared. Additionally, the expectations faculty members have for their work lives reflect shifting preferences within the broader society for incorporating flexibility and balance into work. Furthermore, the pandemic experience has been a strong force in changing faculty expectations about when and where work can happen and how the individual relates to the workplace.

As important as the changes in the work are the shifts in the composition of the faculty and the positions they hold. Over recent decades, the identities of faculty members have become much more diverse, enriching the ideas and interactions within the academy. Yet, higher education institutions have not always fully welcomed and supported faculty with a wide array of backgrounds, interests, and approaches to scholarly work. Furthermore, the faculty at universities today hold a wide range of appointment types, including fixed-term and part-time positions as well as tenure-system positions—and systems within the academy, such as how promotion patterns work and how rewards are allocated, do not always recognize or honor the diversity of appointment types.

Such changes in who the faculty are, the work they do, and the context in which they do it raise questions about whether norms and traditions shaping the academic profession will need to change. While such changes as new technologies, shifts toward multidisciplinary work, and increases in fixed-term and other non-tenure appointment types raise questions about traditional understandings of academic work and careers, the reality of academic life in recent years has become even more challenging as the national context has created much less stability and predictability for higher education. Universities are off-balance as they face challenges to the fiscal stability of higher education, the usual research processes, and the autonomy of faculty to determine the curriculum and issues deemed worthy of their study.

In the face of change and challenge, the academic profession may offer a less attractive, less coherent, and more disparate experience to prospective and current faculty members than in the past. Envisioning the key elements of a vibrant academic profession in today's context invites serious and creative thought. Nurturing an academic profession that welcomes a wide array of

talented scholars and provides more support, connections, cohesion, and trust may strengthen the university's ability to attract academic talent to meet the significant challenges impacting higher education. As today's faculty grapple with the challenges and changes that are the hallmark of the current context for higher education, they can potentially create new norms, expectations, and models for impactful academic careers, workplaces, and work. This imperative to consider key elements of an academic profession relevant and responsive to today's needs and the current demands facing the academy is a key factor motivating the topic and thinking represented in this White Paper.

The four essays in this volume can be understood as each constituting a call to re-energize and perhaps to reconceptualize the academic profession by fostering more cohesion and connection, offering more support, and deepening the sense of what it means to be an academic in the public research university. Taken together, these essays consider and advance some potential elements that could be part of a new compact to frame the academic profession.

Emily Miller's opening essay for this White Paper directly poses the intriguing question: How can we reimagine the academic workplace to meet the challenges confronting higher education? After overviewing the contextual factors affecting faculty work and highlighting significant changes in expectations and circumstances impacting research, teaching, and engagement, Dr. Miller urges academic leaders and faculty to create a framework that reimagines the academic workforce and workplace in American public research universities. She asserts that three principles should guide a new framework: (1) academic work is essential to institutional excellence; (2) excellence requires a team comprised of diverse talent; and (3) departments, the home base for faculty, are the key location in which to focus a reorganization of academic work. Dr. Miller also offers a call for action that she asserts should be associated with a new framework, and she nominates several specific action steps: establishing flexible faculty career paths; providing more equitable work allocation; exploring new approaches to evaluation; and changing institutional cultures to recognize and reward the full range of faculty work. The essay extends an invitation and charge to administrators and faculty members to recognize that the changing context for higher education requires a fresh vision about what may constitute academic work, careers, and workplaces.

In his essay, Noah Finkelstein takes up the call for fresh visions and frameworks in academic work by conceptualizing and elevating the concept of belonging. He asks: "How do we foster belonging (of individual students, staff, and faculty) and for higher education within society?" Dr. Finkelstein's argument is that a sense of belonging is key to the educational success of students as well as higher education institutions. His definition of belonging involves connection, being included, and being able to bring one's authentic self to a situation, and he explains a four-square conceptualization that defines different circumstances or contexts for belonging as shaped by heterogeneity versus homogeneity, and exclusion versus inclusion of identities. Dr. Finkelstein's reflections on how belonging needs to be a central feature in faculty members' lives and work is innovative and thoughtful. He gives examples of ways to enhance faculty members' sense of belonging, including creating more developmental, transparent approaches to faculty evaluation, and designing more innovative and accountable efforts to connect the work of the academy with broader communities.

In her reflections on challenge, change, and opportunity confronting the academic profession, Kimberly Griffin focuses on mentoring. Dr. Griffin's underlying assumption emphasizes the potential of mentorship to help universities fulfill their missions and to support and advance all members of the academy, especially those who are marginalized and underrepresented. However, while commending the benefits of mentoring, she acknowledges that, unfortunately, many students and faculty do not receive high-quality, impactful mentoring. She asks: "What would need to change to leverage the power of mentorship and for it to become a more central part of faculty work?" Her response emphasizes the need for institutions to nurture a culture of mentorship as a core aspect of faculty work and workplaces. Specific suggestions include clearer definitions of mentoring, professional development to guide faculty to learn good mentorship practice, and institutional policy changes that help incentivize, assess, recognize, and reward mentorship.

Leslie Gonzales' essay looks forward even beyond today's faculty. Her reflections on the changing factors affecting academic work result in her call for "preparing future scholars for the work that they will do." In the face of declining public trust in higher education, growing skepticism about the relevance and benefits of a college degree, and diminishing financial support for traditional types of research, Dr. Gonzales argues for the importance of translational work that links basic research to application in the broader public environment. She asks how to elevate translational research so that the public sees it as legitimate and useful, and she challenges the academy to prepare future scholars (current graduate students) with skills in linking their research with practice through translational research, communicating with the broader public, and connecting with the broader community.

As a set, this group of essays recognizes the significant change occurring in higher education and specifically in the nature of who the faculty are, faculty careers, faculty work, and the academic workplace. A theme throughout the essays is the need to reimagine what academic careers, work, and workplaces can look like. Miller responds to this shift by asking institutional leaders and faculty to consider what a new vision of academic work would include, and she offers her own inclination toward a framework that offers more flexibility in work and more connection with needs in the broader context. Finkelstein's response elevates belonging as a core concept to guide the creation of a vision for more effective and supported faculty work, while Griffin advances the importance of faculty attention to mentoring (which is also a key strategy to foster belonging). Finally, Gonzales asks how to prepare the next generation of scholars with the inclinations, skills, and abilities to serve a changing world whose needs would benefit from closer connection between academic work and societal problems.

These essays highlight provocative questions about academic work in response to a shifting context and offer possible new visions for shaping academic work and careers. The suggestions woven through the essays highlight flexibility, belonging, mentorship, and preparing future scholars in new ways. We hope the ideas in these essays will prompt you and your colleagues to consider whether we in the public research university need a new understanding, a new compact, to frame and define the academic profession—and, if so, to envision key elements within that framework that would enable faculty members to meet the challenges and do the innovative and impactful work that society deeply needs.

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Reimagining Academic Work and the Academic Workplace

Emily R. Miller, PhD
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How are faculty responsibilities and faculty work changing in today's context?

How can we reimagine the academic workplace to meet the challenges of our time?

In this essay, I address two critical questions facing the public research university:

- How are faculty responsibilities and faculty work changing in today's context?
- Consequently, how can we reimagine the academic workplace to meet the challenges of our time?

This commentary builds on my colleagues' observations on belonging and acceptance for the full range of academic work at research universities; mentoring as an element of academic work; and an understanding that doctoral students as students and future faculty are navigating an evolving academic workplace.

The Historical Context and Current Challenges

The partnership between the federal government and American research universities is distinct to the United States and is a unique model that has served our nation extraordinarily well. The resulting system has produced remarkable scientific breakthroughs while forging an essential connection between research and education. It has placed America at the forefront of global scientific discovery and innovation, educational leadership, and economic competitiveness (Coleman, 2018).

However, this system now faces significant challenges. External pressures include federal agency grant cancellations and program eliminations, potential budget cuts at both the state and federal levels, new facility and administrative caps (Association of American Universities, 2025), concerns over the future of publicly available datasets used by the research and scholarly community, and federal agency staffing reductions. At stake is the nature of the university-government partnership and U.S. scientific and educational leadership.

The potential impacts are profound and will affect generations: loss of medical advances and new cures, weakened national security, slower economic growth, job losses, workforce degradation, and harm to America's global competitiveness.

The Changing Nature of the Academic Workforce and Faculty Work

Internally, the academic workforce is undergoing equally significant transformations. We've seen a marked decrease in tenure-system appointments and an increase in temporary, contingent, and fixed-term positions—roles that typically involve less flexibility, autonomy, recognition, and rewards. Simultaneously, faculty diversity in identity and background has increased, with greater diversity often concentrated in less secure positions (Arbeit, et al., 2021; Colby, 2023; Schneider & Bichsel, 2024).

We're also witnessing growing interest in work-life balance and workplace flexibility, especially among early-career academics (McClure, 2025), coupled with diminished likelihood of long-term institutional commitment (American Association of University Professors, 2024). Related to these changes is the rising interest in unionization among both faculty and graduate students (Hunter, The City University of New York, n.d.).

Beyond who constitutes the academic workforce, the nature of academic work itself is evolving across all dimensions:

- In research, universities face increasing expectations to produce both basic foundational work and applied translational research. We see growing emphasis on collaboration and teamwork, public impact research, the rise of open science, expansion of new technologies including AI and big data, and a greater array of scholarly outputs beyond traditional articles and books.
- In teaching, instructors must meet the needs of growing student populations with a full range of prior experiences and professional aspirations. Evidence-based pedagogical practices, including experiential learning, are increasingly vital. Employers expect graduates prepared for constantly changing workplaces characterized by rapidly shifting technologies.
- Universities are also expected to be at the forefront of innovation and knowledge discovery while simultaneously translating this work into effective science communication, public engagement, entrepreneurial successes, and high-quality interventions that address pressing local community issues.

A Framework for Reimagination

Research universities have their own workforce that requires transformation to address the current dynamic external and internal contexts. Conversation with colleagues suggests the value of developing a framework for **re-imagining the academic workforce and the academic workplace at American research universities,** guided by three core principles:

The faculty constitutes the heart of the university's work. American universities have a commitment to society to engage in knowledge discovery and innovation, provide educational opportunity, and translate knowledge into practice at the highest level of excellence and quality. Ensuring the quality of academic work and the academic workplace is critically important to ensuring institutional excellence and public trust in the value of research universities.

Excellence requires a team of talent. A variety of perspectives and activity is essential to fulfilling the missions of American universities. To accomplish their work, universities need a wide array of diverse and talented academics, including, among others, researchers, teachers, innovators, entrepreneurs, and communicators who can translate academic work into the broader community. If the academic workplace is to be successful in attracting and retaining excellent talent, each of these individuals should experience equity, respect, and opportunity in their work and careers.

Departments are the key unit around which to re-imagine academic work and the academic workplace. Departments and their related disciplines are the home base for faculty identity, the structural unit around which academic work is organized, and the primary location for preparing the next generation of academics through doctoral and post-doctoral experiences. Therefore, the departmental unit must be central to efforts to re-imagine the academic workforce and workplace.

Building on these principles, we need action in several key areas:

- For the academic workforce, we must develop strategies to attract and hire domestic and international talent in a wide array of areas, ensure doctoral students and post-docs understand the array of career options available to them both within and beyond the academy, and establish flexible career pathways that offer opportunities to make a range of contributions over a lifetime.
- For the academic workplace, we need more equitable work allocation strategies, evaluation systems that recognize the full array of contributions needed for institutional success, and approaches that assess departmental units holistically. For example, new evaluation approaches might develop ways to assess individual success on the basis of contribution to the collective whole of the department's work rather than on the basis of the individual doing all forms of work simultaneously. (The American Council on Education has offered relevant ideas in their workload allocation framework, see O'Meara, et al., 2022.)
- Finally, we must develop institutional cultures that celebrate the full range of work and career paths that together contribute to excellence in fulfilling a university's missions. (Specific ways to develop more inclusive cultures that recognize and support those in the full range of academic appointments are the focus of a recent article in *Change Magazine*, see Lee et al., 2023.)

Conclusion

The question before us isn't whether our institutions can evolve—they must. The question is whether we can proactively shape that change to ensure America's research universities continue to fulfill their critically important roles in our local communities, nation and world. By reimagining the academic workforce and workplace now, we can work to maintain the global leadership of America's research universities.

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References

American Association of University Professors. (2024). *Contingent appointments and the academic profession*. https://www.aaup.org/sites/default/files/2024Bulletin_ContingentAppts.pdf

Arbeit, C. A., Einaudi, P., & Phou, K. (2021, April). *Early career doctorates in context* (NSF 21-322). National Center for Science and Engineering Statistics, National Science Foundation. https://ncses.nsf.gov/pubs/nsf21322

Association of American Universities. (2025, July 10). *Joint Associations Group on Indirect Costs releases recommendation for updated, more efficient, transparent research funding model*. https://www.aau.edu/newsroom/press-releases/joint-associations-group-indirect-costs-releases-recommendations-f-and-a

Colby, G. (2023, March). *Data snapshot: Tenure and contingency in US higher education*. American Association of University Professors. https://www.aaup.org/academe/issues/spring-2023/data-snapshot-tenure-and-contingency-us-higher-education

Coleman, M. S. (2018). Recommitting to America's unique government-university partnership. *Change: The Magazine of Higher Learning*, *50*(3–4), 128–132. https://doi.org/10.1080/00091383.2018.1509643

Lee, M., Volpe Horii, C., Austin, A. E., Avery, L., DeSanctis, M., Finkelstein, N., Miller, E., & Schaal, B. (2023). An instructional-workforce framework for coordinated change in undergraduate education. *Change: The Magazine of Higher Learning, 55(*1), 54–63. https://doi.org/10.1080/00091383.2023.2151809

McClure, K. R. (2025). *The Caring University*. JHU Press.

National Center for Science and Engineering Statistics. (2021). *Early career doctorates: 2017* (NSF 21-323). National Science Foundation. https://ncses.nsf.gov/pubs/nsf21323/

Hunter, The City University of New York. (n.d.). *The National Center for the Study of Collective Bargaining in Higher Education and the Professions*. https://hunter.cuny.edu/national-center/

O'Meara, K., Culpepper, D., Misra, J., & Jaeger, A. (2022). *Equity-minded faculty workloads: What we can and should do now*. American Council on Education. https://www.acenet.edu/Documents/Equity-Minded-Faculty-Workloads.pdf

Schneider, J., & Bichsel, J. (2024, April). *Representation and pay equity in higher education faculty: A review and call to action*. CUPA-HR. https://www.cupahr.org/surveys/research-briefs/representation-and-pay-equity-in-higher-ed-faculty-trends-april-2024/

On Belonging in Higher Education

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How might we engage in the essential social enterprise of higher education?

How do we engage at this critical time, when our system is under existential threat?

With a backdrop of the prior pieces in this series that articulate the goals and purposes, the *why* of higher education (for individual development, societal welfare, and workforce and economic growth), and with an understanding of *who* is at the heart of enacting the promise of higher education (our faculty, staff, and students), this piece begins to explore the "how."

How might we engage in the essential social enterprise of higher education? And how do we engage at this critical time, when, as other papers in this series note, our system is under existential threat? This is work that has great meaning and purpose for so many of us, such that many of us have considered our efforts within higher education a "calling" rather than "labor."

Within this context, I argue for **belonging**, of individuals and of our institutions within our society.

Belonging is at the root of educational success, for participants and the system alike. If education is about building cultural systems - that is, the future as we would like to see it - who and what belong are essential considerations. For example, when we consider the most significant correlate with undergraduate students moving from Physics 1 to Physics 2, it is not performance (grades). It is not grit nor self-efficacy. It is belonging, for women enrolled in the class (Lewis, et al., 2017). In fact, for women, a sense of belonging has a four to five times greater association with retention than do exam scores. For men, the leading indicator of retention is exam scores; although belonging likely matters for men too. Perhaps we have constructed physics courses in a manner such that men already feel like they belong. In this framing, physics is traditionally a place of exclusive identity.

There are many studies on the impacts of belonging and programs designed to foster belonging in academic environments, though these studies and efforts tend to focus on *student* belonging (as in the example above), and are often isolated as an area of attention. Instead, it is worth considering a connected system of belonging, where a functioning educational system fosters belonging among students, faculty, staff, and of the institution itself. These layers are not as independent as they might seem and as they are often treated. Not only are they connected with each other, but they can support and construct a sense of belonging for one another. Each of these layers of our system - students, faculty and staff, institutions– are simultaneously *beneficiaries* and *agents* of belonging (Finkelstein and Young, 2025). Student outcomes benefit from a sense of belonging, but students are also important in cultivating belonging for one

another, and arguably, for faculty and staff and the institution itself, as well. Faculty can best serve as agents for student belonging when they themselves feel a sense of belonging in their institution and in the enterprise of higher education more broadly. And, institutions are best positioned to develop sustainable structures of belonging for all participants, but only so long as the institutions are valued from the outside—so that these institutions can operate from a secure sense of belonging in society at large to serve the public good.

As we consider "big questions" for the academic profession, we should consider belonging. That is, how do we foster belonging within higher education for individuals (students, staff, and faculty) and, within society, for higher education?

Framing Belonging

Most who work in higher education likely have a sense that belonging matters, but what is it? Of course, you know it when you see it; or, perhaps more accurately, know it when you feel it (or don't), but what is it?

A useful approach to understanding belonging is to see how it is rooted in a sense of connection. Belonging requires, but goes beyond, a notion of inclusion - whether someone is welcomed into a group. Someone might be welcomed in, but still not have a sense of belonging. Belonging, whether academic or social, means not only to be included, but having the capacity to bring one's authentic self - one's own perspectives, values, and norms– into a group.

We find useful to consider two key dimensions when building, enacting, and supporting academic environments of belonging. One dimension is the ***diversity of perspectives*** (values and norms, or ways of thinking), where we consider a continuum from **homogeneous** perspectives to **heterogeneous** perspectives. The second dimension is that of the ***diversity of individual identities***, which we might define by any number of self, cultural, or biological constructs (such as gender, race, age, and status), as well as and whether the system is **exclusive** or **inclusive** of these differing identities. Of course, these two dimensions are just that - continua, rather than discrete buckets. Yet, considering the four quadrants may help us understand the nature of our current and future social systems within higher education (Kezar, 2018).

Some examples might also be helpful and are illustrated in the figure below.

1) The **Inclusive - Homogeneous** quadrant is characterized as a breadth of individual identities with a common way of thinking and perspectives. These include disciplinary identities; for example, all are welcomed in my physics classroom, but my attention is to their adoption of physics culture.

2) An **Exclusive- Homogenous** framing captures a narrow band of identities and of thought. While this may seem negative, and can be (e.g., when physics is considered only a domain for men), it can also be positive (e.g., making a safe space for women in engineering).

3) The **Exclusive-Heterogeneous** quadrant includes programs where a narrow band of people are accepted, and a breadth of ideas and perspective are considered and welcomed. Perhaps

this is the origin story of our university systems, which started as a place for elite white males. And, in a more modern sense, this perspective may be captured in select clubs (such as university clubs for staff and faculty only) or student-identity groups on campuses (such as fraternities).

4) The **Inclusive - Heterogeneous** domain is characterized by valuing diversity of both thought and identities. This might be a classroom or degree program where we partner with students to both socialize people into ways of thinking, and to broaden the definitions of what disciplines and institutions are and who is welcome within them. Here, the community itself transforms by creating a culture of belonging.

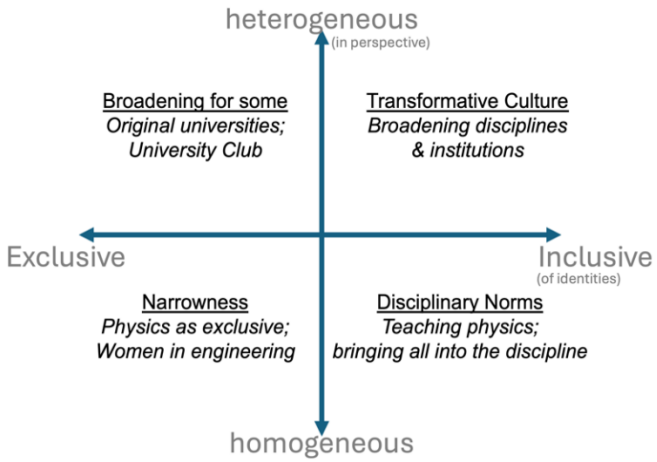

Figure 1: A framework for considering belonging as inclusion of identities (exclusive to inclusive) and as of ways of thinking (homogeneous to heterogeneous).

When I first started thinking about these quadrants, I naively thought of the inclusive heterogeneous as "best" and perhaps the exclusionary and homogenous might be "bad." However, like all educational and social systems, it is more complicated; it depends. A more nuanced view is that we should be conscious in the construction of systems, considering what kind of belonging and for whom makes sense in any given instance. Nonetheless, an appropriate broad goal is to have a heterogeneous inclusive approach, one that values the entire breadth of people and spans ideas in a broad cultural system (that of a university, region, or country), but this is in the largest scale. And the goal of this largest scale might be achieved by weaving a tapestry of smaller systems (classes, courses, degrees, social clubs, mentoring programs, evaluation systems, etc.) that may span each of the four quadrants, giving the breadth of members of a university or country the opportunities to belong and share their perspectives on their terms.

Applying These Ideas

If belonging is an anchor of our educational enterprises and our enterprise is dependent upon belonging, how might we foster this commitment within and beyond our campuses? There are myriad resources and approaches for addressing this question. Applying the 4-square framing above, the following efforts provide promising directions:

A modern approach to faculty evaluation. If we acknowledge the essential roles of faculty in an institution (and thus, that they belong), we must value them. And a dominant form of enacted values within our higher education is our evaluation system. With colleagues (Austin, Follmer-Greenhoot, Finkelstein, Ward, and Weaver, 2025), we have engaged in an effort to systematically transform our higher education evaluation practices to take a more scholarly, developmental, transparent, and human approach. The TEval project (Teval.net) begins with a scholarly definition of teaching quality (a framework), and supports academic units in the contextualization of these broad categories to their circumstances (a rubric), through a scaffolded and supported approach with external experts, allowing the department to iteratively develop and deploy new rubrics, practices, and procedures around teaching evaluation (Austin, et al., 2025). Thus, there is a common framework and language across campus (homogeneous and inclusive), that is disciplinarily defined (heterogeneous), and committed to our common goals of higher education (heterogeneous and inclusive).

We might also consider how to foster a sense of **belonging for higher education in society**. Our institutions were founded and have evolved to simultaneously serve the growth of our learners and advance the common good in our society. Now, as much as ever, we need to foster a sense of belonging of our institutions to society itself. We can do this by connecting our work to our communities. We can make the case to the communities in which we are embedded (regionally and nationally) for the essential roles higher education serves; simultaneously, we must hold ourselves accountable to these ends, creating a place for belonging of the community to our institutions and our institutions to our communities. We in higher education are not separated, as in the sense of sitting in an isolated ivory tower. Rather, we are separated in the sense of the Latin root of the *sacred* - dedicated to special purpose, with special forms of investment by society in its own future. We have the opportunity to realize this promise and might do so by building programs of belonging for students, staff, and faculty, and the community. And, for ensuring that higher education belongs to the public, for the public, and for our collective welfare.

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This piece draws from a prior piece (Finkelstein and Young, 2024) and is expanded upon in an upcoming piece (Finkelstein, Young, Farrell, and Bergin, 2026) in Change Magazine.

References

Austin, A.E., Finkelstein, N.D., Follmer Greenhoot, A., Ward, D., & Weaver, G.C. (2025). *Transforming college teaching evaluation: A framework for advancing instructional excellence*. Harvard Education Press.

Finkelstein, N., & Young, P. (2024). Building for university success: Supporting belonging among students, faculty and staff, and institutions. *Change: The Magazine of Higher Learning*, *56*(4), 4-11.

Finkelstein, N., Young, P., Farrell, E., and Bergin, S. (2026, to appear). Building Communities of belonging for college & university success: An operational framework. *Change: The Magazine of Higher Learning*.

Kezar, A. (2018). *How colleges change: Understanding, leading, and enacting change*. Routledge.

Lewis, K. L., Stout, J. G., Finkelstein, N. D., Pollock, S. J., Miyake, A., Cohen, G. L., & Ito, T. (2017). Fitting in to move forward: Belonging, gender, and persistence in the physical sciences, technology, engineering, and mathematics (pSTEM). *Psychology of Women Quarterly*, *41*(4), 420-436.

What Role Should Mentorship Play in the Reimagining of Faculty Work?

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What would need to change for us to leverage the power of mentorship and for it to become a more central part of faculty work?

Mentorship has long been a part of faculty work and is often described as central to success and development of early career scholars at research universities. Decades of research suggest that close relationships with faculty translate to many positive outcomes for undergraduate students, including critical thinking, self-confidence, degree aspirations, and sense of belonging (Crisp, et al., 2017; Mayhew, et al., 2016). Some scholars and academic leaders have described mentoring as the "heart of graduate education," (Kelly & Schweitzer, 1999), given that many programs are built on an apprenticeship model, where students study closely with and shadow faculty as they learn the research process. Graduate students and postdoctoral fellows who have access to mentorship report more positive experiences during their training, are more productive, and are more likely to stay in the academy (Cole & Griffin, 2013; Lunsford, 2012; Paglis, et al., 2006). Mentorship and support from more established scholars can be important to the success of early- and mid-career faculty as well, facilitating their transitions into their new roles, assisting them in building and broadening their networks, and helping them navigate the process of tenure and promotion (Lunsford, et al., 2018; van der Weijden, et al., 2015).

Mentorship has the potential to benefit all early career scholars but has been found to be particularly important for those who are most marginalized and underrepresented in the academy. Scholars examining the experiences of students and faculty across identity groups note the importance of mentorship in broadening access to the academy, fostering achievement, and promoting inclusive environments in which all can thrive (e.g. Cole & Griffin, 2013; Kelly & Fries-Britt, 2022; Ong, et al., 2011; Zambrana, et al., 2015). For example, mentorship has been identified as a key strategy to increase the representation of students from racially minoritized backgrounds in graduate education, and there is a particularly strong body of evidence suggesting these relationships translate to greater access to and success in STEM graduate programs (Kim, 2023).

Given these outcomes and the proliferation of mentoring programs within and across institutions, one may assume that there is a great deal of access to high-quality mentorship for all who want and need it, and that mentorship is seen as a critical part of faculty work. However, there are compelling data that refute these claims. According to a Gallup survey of over 75,000 college graduates, only a quarter of students agree that they had a mentor, and 27% report that they had a professor who cared about them as a person (Matson & Clark, 2020). Graduate students and postdoctoral scholars fare better, but both research and national news stories suggest that many

are exposed to harm and neglect in their mentoring relationships. An international study of early- and mid-career faculty found that 20% of faculty did not receive mentorship as they transitioned to their institutions. Among those who did, there was significant variability in quality and satisfaction with their relationships, with a lack of mentor availability, care, and support cited as the most frequent challenges and complaints (Sarabipour, et al., 2023).

Despite its stated value, mentorship is perhaps best described as a hoped for rather than required academic experience at most research universities. And while it is inferred that mentorship is a part of faculty work, it may be a less formal expectation that can be downgraded in priority when it comes in conflict with research demands and other institutional expectations. Research universities' inconsistent commitments to advancing access to mentorship represent a missed opportunity to advance our collective mission and promote success – not only in the recruitment and retention of students and the next generation of faculty, but also in our ability to engage in the most innovative and thoughtful scholarship that will push our respective fields forward.

What would need to change for us to leverage the power of mentorship and for it to become a more central part of faculty work? Based on a review of research on mentorship and organizational change, I recommend that leaders consider implementing three systemic interventions:

1. **Clearly define mentorship**. So often, mentorship is loosely defined or misunderstood as being synonymous with other academic relationships like advising or supervision (Baker & Griffin, 2010), which can lead to disappointment or misalignment of expectations (Johnson & Griffin, 2025). In our book, *On Being a Mentor* (3rd edition), Brad Johnson and I define mentoring as:

   > . . . a personal and reciprocal relationship in which a relatively more experienced faculty member acts as a guide, role model, teacher, and sponsor of a relatively less experienced student or faculty member. A mentor provides the mentee with knowledge, advice, counsel, challenge, affirmation, and a sense of inclusion and belonging in support of the mentee's pursuit of their educational attainment and professional development (p. 26).

   While including some elements found in teaching or advising relationships, mentorship is distinct in its intentional incorporation of reciprocal growth and learning, socioemotional and academic support, and the long-term identity transformation and career development of the mentee.

   An emphasis on defining mentorship also represents a shift from assuming that early-career colleagues just need a mentor (i.e., a person) to recognizing the importance of mentorship (i.e., access to high quality relationships). Positive outcomes are connected most closely to developmental relationships that are high in trust and reciprocity, where mentees have access to feedback that is both critical and thoughtful (Johnson, 2007). Providing more clear guidance to students and faculty on what mentorship is and means clarifies expectations for faculty practice and enables more consistent incorporation into assessments of workload and performance.

2. **Provide professional development to guide good mentorship practice**. Traditionally, faculty have received little instruction, training, or preparation on how to engage in the practice of mentorship. For example, Berberet's (2008) study of early career faculty found that only 8% of participants felt graduate school effectively prepared them to work with undergraduates and 62% perceived student expectations as a source of stress. Indeed, when I asked faculty in one study about how they developed their mentoring practice, most responded that they largely aimed to emulate their own mentors (Griffin, 2012).

   While some may see a person's ability to mentor as largely personality based, it is important to remember that good mentorship is rooted in a skill set that can be learned and developed (Johnson & Griffin, 2025). Leaders can and should be intentional in creating opportunities for their faculty to build these skills, and research suggests that training and professional development that focus on building mentorship skills can be very effective in promoting more engagement, greater mentor confidence, and improved mentee outcomes (Pfund, et al., 2014; Trejo, et al., 2022). Training can also have a powerful impact on mentors' comfort and capacity in mentoring students with minoritized racial and ethnic identities (Byars-Winston, et al., 2023), allowing mentorship to support institutional efforts to create inclusive learning environments and advance equity.

   Opportunities to develop the skills necessary for good mentorship should begin early and continue throughout a scholar's academic career. As graduate students and postdoctoral scholars learn how to be good mentees, they can and should also build their capacity to serve as mentors. More senior colleagues can continue to develop their mentorship practice throughout their careers, and opportunities for seasoned mentors to share their expertise and reflect on their own practice can have great impact.

3. **Make policy changes that elevate mentorship and make it a priority in faculty work**. Clearer definitions and more accessible professional development will not mean much or push changes in how faculty allocate their time if mentorship is seen as a "nice, but not necessary" part of faculty work. Organizational structures and dynamics must change, and leaders must create structures and opportunities that recognize the value of mentorship by better recognizing and rewarding participation in these relationships.

   Sustaining organizational change requires thoughtful consideration and interventions across multiple administrative policies and structures (Kezar, 2018). First, incentive structures at the unit, college, and institutional level must be revised in ways that align with how mentorship is defined and distinguished from other developmental relationships. For example, faculty may be encouraged to list their advisees or count the number of dissertation committees on which they have served, but there are rarely ways to indicate the individuals whom faculty members are mentoring. When faculty are unable to report or account for their engagement in mentorship, substantial emotional labor and time investments go unrecognized (Hanasono, et al., 2019; O'Meara, et al., 2017). Those on merit, tenure, and promotion committees do not get a full sense or scope of the ways scholars are contributing to their departments and disciplines, leading us to

miss meaningful work. It is also important to note that this lack of recognition gets in the way of supporting and recognizing the contributions that many women and colleagues of color make to the academy, given that they often shoulder more than their fair share of the mentoring load and labor (Griffin, 2020; O'Meara, et al., 2017).

Second, it is important that academic units clarify expectations around mentorship, in terms of frequency and quality. Departmental expectations for faculty teaching and advising in workload allocations, merit reviews, and tenure and promotion may be much clearer than those for mentorship. Also, much like evaluations of teaching, it can be helpful to create structures that allow mentorship practice to be assessed. Assessment and evaluation can signal the importance of this work and create avenues for faculty who need additional support or skill development to be more easily identified.

Finally, units must consider and implement rewards for high-quality mentorship. These rewards should include and go beyond the yearly recognitions that so many of us have on our campuses and will likely be most persuasive if they have real meaning within each unique and specific context. For some departments, it may make sense and be compelling to recognize engagement in mentorship through the allocation of course releases or a reduction in committee assignments. For others, it may be more meaningful to receive additional professional development funds or access to funding to support research. Leaders should reflect on the resources most valuable in their local communities and consider how to align demonstrated commitments to mentorship with access to those resources.

Given the important outcomes tied to mentoring relationships and its potential to help research universities fulfill some of the most critical parts of their respective missions, mentorship can and should be central to our conceptualization of faculty work. There is much that administrators and leaders can do to encourage wider adoption and engagement in good mentoring practice; however, such action requires a shift from thinking about how to troubleshoot individual instances of problematic practice to initiating larger structural changes that encourage faculty to invest more widely and deeply in mentorship. Implementing the strategies described above will move us towards building a culture of mentorship, which Brad Johnson and I define as environments where connection, support, and developmental relationships are seen as a core part of faculty work and responsibility (Johnson & Griffin, 2025). These cultures of mentorship can motivate and sustain mentorship practice, which in turn can transform our work and the lives of our next generation of students, scholars, and leaders.

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References

Baker, V. L., & Griffin, K. A. (2010). Beyond mentoring and advising: Toward understanding the role of faculty "developers" in student success. *About Campus*, *14*(6), 2-8.

Berberet, J. (2008). *Perceptions of early career faculty: Managing the transition from graduate school to the professional career*. New York, NY: TIAA-CREF Institute.

Byars-Winston, A., Rogers, J. G., Thayer-Hart, N., Black, S., Branchaw, J., & Pfund, C. (2023). A randomized controlled trial of an intervention to increase cultural diversity awareness of research mentors of undergraduate students. *Science Advances*, *9*(21), eadf9705.

Cole, D., & Griffin, K. A. (2013). Advancing the study of student-faculty interaction: A focus on diverse students and faculty. In M. B. Paulsen (Ed.), *Higher Education: Handbook of Theory and Research* (pp. 561–611). New York, NY: Springer.

Crisp, G., Baker, V.L., Griffin, K.A., Lunsford, L.G., Pifer, M.J. (2017). *Mentoring undergraduate students.* ASHE Higher Education Report (vol. 43, no. 1). San Francisco, CA: Jossey-Bass.

Griffin, K.A. (2012). Learning to mentor: A mixed methods study of the nature and influence of Black professors' socialization into their roles as mentors. *Journal of the Professoriate, (6)*2, 27-58.

Griffin, K.A. (2020). Looking beyond the pipeline: Institutional barriers, strategies, and benefits to increasing the representation of women and men of color in the professoriate. In L. Perna (Ed.), *Higher education: Handbook of theory and research (vol. 35)*. Switzerland: Springer. https://doi.org/10.1007/978-3-030-31365-4_4.

Hanasono, L. K., Broido, E. M., Yacobucci, M. M., Root, K. V., Peña, S., & O'Neil, D. A. (2019). Secret service: Revealing gender biases in the visibility and value of faculty service. *Journal of Diversity in Higher Education, 12*(1), 85-98.

Johnson, W.B. (2007). Transformational supervision: When supervisors mentor. *Professional Psychology: Research and Practice, 38*, 259-267.

Kelly, B. T., & Fries-Britt, S. (Eds.). (2022). *Building mentorship networks to support Black women: A guide to succeeding in the academy*. Routledge.

Kelly, S., & Schweitzer, J. H. (1999). Mentoring within a graduate school setting. *College Student Journal, 33*(1), 130–148.

Kezar, A. (2018). *How colleges change: Understanding, leading, and enacting change*. Routledge.

Kim, J. (2023). *Formal and informal mentoring to broaden the pathway into graduate education*. American Council on Education.

Lunsford, L. (2012). Doctoral advising or mentoring? Effects on student outcomes. *Mentoring & Tutoring: Partnership in Learning*, *20*(2), 251-270.

Lunsford, L., Baker, V., & Pifer, M. (2018). Faculty mentoring faculty: Career stages, relationship quality, and job satisfaction. *International Journal of Mentoring and Coaching in Education*, *7*(2), 139-154.

Mayhew, M. J., Rockenbach, A. N., Bowman, N. A., Seifert, T. A., & Wolniak, G. C. (2016). *How college affects students: 21st century evidence that higher education works* (Vol. 1). John Wiley & Sons.

Matson, T., & Clark, J. (2020). Improve student outcomes by building caring faculty relationships. *Gallup*. https://www.gallup.com/education/286514/improve-student-outcomes-building-caring-faculty-relationships.aspx

O'Meara, K., Kuvaeva, A., Nyunt, G., Waugaman, C., & Jackson, R. (2017). Asked more often: Gender differences in faculty workload in research universities and the work interactions that shape them. *American Educational Research Journal*, *54*(6), 1154–1186. https://doi.org/10.3102/0002831217716767

Ong, M., Wright, C., Espinosa, L., & Orfield, G. (2011). Inside the double bind: A synthesis of empirical research on undergraduate and graduate women of color in science, technology, engineering, and mathematics. *Harvard Educational Review*, *81*(2), 172–209. https://doi.org/10.17763/haer.81.2.t022245n7x4752v2

Paglis, L. L., Green, S. G., & Bauer, T. N. (2006). Does adviser mentoring add value? A longitudinal study of mentoring and doctoral student outcomes. *Research in higher education*, *47*, 451-476.

Pfund, C., House, S. C., Asquith, P., Fleming, M. F., Buhr, K. A., Burnham, E. L., Eichenberger, G., Julie, M., Huskins, C, McGee, R., Schurr, K., Shapro, E., Spencer, K., & Sorkness, C. A. (2014). Training mentors of clinical and translational research scholars: a randomized controlled trial. *Academic Medicine*, *89*(5), 774-782.

Sarabipour, S., Niemi, N. M., Burgess, S. J., Smith, C. T., Bisson Filho, A. W., Ibrahim, A., & Clark, K. (2023). The faculty-to-faculty mentorship experience: A survey on challenges and recommendations for improvements. *Proceedings of the Royal Society B*, *290*(2013), 20230983.

Trejo, J., Wingard, D., Hazen, V., Bortnick, A., Van Hoesen, K., Byars-Winston, A., ... & Reznik, V. (2022). A system-wide health sciences faculty mentor training program is associated with improved effective mentoring and institutional climate. *Journal of clinical and translational science*, *6*(1), e18.

Reimagining Doctoral Education and Preparing Future Scholars for the Work they will be Called to Do

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How can research universities reimagine doctoral education to ensure that future faculty are prepared for the work they will be called to do? What needs to change?

There is mounting evidence—empirical and anecdotal, qualitative and quantitative—that the public is increasingly skeptical of the good that can come from higher education, including the research produced within universities (Gallup News Service, 2024). The roots of this growing skepticism are cultural, social, and political in nature and transcend gender, class, and race (Calarco, 2024; Durkee, et al., 2019; Snyder-Hall, 2018). No matter the strain or source of skepticism, data clearly show many communities believe that what happens within academia is of little relevance to daily life outside of it, that higher education is not a place where they, their ideas, or their needs will be tended to. That President Trump managed to strip billions of federal dollars from academic research with limited public outcry is at least partial evidence that much of the public is not aware nor convinced of the relevance of academic research to society (Flaherty, 2025).

Given the above, those of us who work, study, and still very much believe in the promise of higher education, and more specifically in the value of academic research, must find new footing — new ways of engaging in and communicating the value of the research enterprise. This undertaking will be multi-dimensional and will likely demand reflection and change at numerous levels of higher education. I am especially interested in thinking through the changes that must be made in the context of doctoral education**,** and more specifically, in a retooling of how faculty members think about research and support students' development into researchers. In short, I am convinced this new footing must center strategies for reaching the public with research, illustrating its relevance and its impact on real life. Below, I offer three ideas for reimagining doctoral education, all of which presume that the next generation of faculty must be prepared, able, and willing to engage in some form of translational research (see Table 1). Given the great diversity of institutions within U.S. higher education, it is important to note that my reference point for this essay are highly active research universities (e.g., the Ivys, the R1s).

Translational Research

Translational research is not a new concept (UAMS Translational Research Institute, n.d.). In fact, it is a well-established concept in the sciences, especially in the health sciences, where the idea is to move basic science into applications that will more directly benefit a broader population. For example, in the sciences, a classic translational move is to take work from the experimental bench into clinical trials. Such moves, however, are time and labor intensive and require detailed planning and often the building and management of relationships, meaning researcher(s) must be willing and able to shift their focus and their thinking to complex, logistical, and relational work. Drawing on this basic premise, for the purposes of this paper, I conceptualize translational work as efforts to make academic research accessible and useful to the broader public, cognizant that there are many potential audiences within the public.

Translational efforts will look, feel, and unfold differently across different fields, but, generally, translation might include 1) planning and moving research into practice, 2) communicating research findings (and their relevance) to lay audiences in culturally and context-responsive ways, and 3) connecting meaningfully and reciprocally with community partners not only to share but to shape research (see Table 1 for examples).

Table 1

Translational Work

Strategy	Example	Example
Moving into Practice	A neuroscience researcher uses results from their lab-based studies to design a well-being program for teachers and one that a district can afford to implement.	A historian uses their skills to help a state locate, label, and strategically share sites and artifacts of local significance.
Communicating Findings and Relevance	A food science researcher works with a news outlet to share, in lay terms, research findings, explaining their utility, but also clarifying the limitations of the research.	A research team distills key insights about psychological safety in the workplace and prepares a context-relevant brief for a hospital.
Connecting with Community	An anthropologist uses their observational and interview skills to document a neighborhood's needs concerning city planning. The anthropologist then works with a community-embedded social media manager to disseminate key points from the meeting.	A plant biologist holds several meetings and 1:1 conversations with farmers to ensure that the tool they develop in basic research can be used in real life.

The strategies highlighted above may seem common sense, and to be frank, some professors and some institutions do better than others with their execution (Gonzales & Robinson, 2023). However, these are not the kinds of skills nor orientations that professors commonly nurture in their doctoral students (Cech, 2013; Gonzales, et al., 2024b; McGee, 2021). In an interview study of 40 advanced STEM and non-STEM doctoral students, for example, my research team and I found that advisors and professors 1) actively discouraged and/or 2) lacked the skills to develop students' interests in translating their work to communities (Gonzales & Moreno, 2025). For example, one woman of color wanted her plant research to be useful to local communities, especially people for whom the plant held healing properties. Another biology doctoral student described spending a considerable amount of time in local schools to ensure that children and caregivers understood water safety; he was one of the only students whose professors actively modeled and supported systematic outreach.

Unfortunately, my team and I found that most students were nudged away from community considerations, and often from smaller, qualitative inquiry to pursue "hot topics" and/or "big grants" and more basic research. One woman in our study noted:

> No, my work is not really valued [in my department] because my work is not just engineering. And it is not about just getting patents. *It is about how engineering can help communities. My professors do not even know how to talk to people in the community, so I am on my own.* (Gonzales & Moreno, 2025, italics added for emphasis).

Thus, although almost all (39/40) students in our study, including the ones highlighted above, characterized their professors as "good mentors", they also problematized, and, to be frank, were disappointed in how they were being socialized into the research enterprise.

My team's findings are not surprising. However, in these urgent times, wherein higher education is under siege, our findings represent a call from within the house, as the saying goes, to find new footing – to embrace a model of doctoral training and socialization that allows space for more translational opportunities. Such changes are in tension with two (and perhaps other) issues: 1) how faculty are hired and rewarded, and, thus, what activities faculty believe they have time for and 2) the deep privilege that big (quantitative), basic research has over contextually, community-informed research, and/or applied research. Of the former issue, if faculty do not believe that allocating time to translational efforts will be rewarded, they are not likely to engage. Of the latter, there must be efforts to create as much space as possible for diverse approaches to knowledge production, which requires faculty to be open to new ideas about research design and methods while, of course, retaining robust standards of excellence.

With all of this, I suggest that graduate faculty members consider what kinds of learning we need to do to retool our thinking and skills in service of meaningful translational work, the kind of work that many of our students already want to do! As a collective, we must reevaluate what we consider to be good science so that future scholars will be skilled and feel confident about tackling research for the public good. Academic leaders and faculty members might:

1. Invest in learning experiences to expose current faculty to public, practical, change-centered, and culturally-grounded research approaches (see, for example, the work of

Anderson & Cidro, 2019; Bang & Vossoughi, 2016; Kleine, et al., 2024; Salazar, et al., 2024).

2. Create learning opportunities and materials that intentionally explore the public and community relevance of a discipline or subdiscipline (see Kleine, et al., 2024 for a rich discussion about making engineering content context-relevant).
3. Provide opportunities for doctoral students, no matter their discipline or field, to be exposed to various "non-conventional" kinds of data and research, including practical or applied research, or qualitative research wherein there is an opportunity to consider human needs or social impact alongside the content of one's agenda (see, for example, Lopez, 2021; McGee, 2021, for examples of research that provides counter ideas for conceptualizing research and teaching practices).
4. Ensure that for every peer-reviewed paper a lab or team produces, there is some more broadly accessible deliverable. For instance, some teams produce white papers, infographics, or briefs and share those with relevant communities and partners.[1]

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References

American Association of Universities. (2025, March 11). *AAU says president's budget would cripple American scientific leadership.* https://www.aau.edu/newsroom/press-releases/aau-says-presidents-budget-would-cripple-american-scientific-leadership

Anderson, K., & Cidro, J. (2019). Decades of doing: Indigenous women academics reflect on the practices of community-based health research. *Journal of Empirical Research on Human Research Ethics, 14*(3), 222–233. https://doi.org/10.1177/1556264619835707

Bang, M., & Vossoughi, S. (2016). Participatory design research and educational justice: Studying learning and relations within social change making. *Cognition and Instruction*, *34*(3), 173-193.

Calarco, J. (2024). *Holding it together: How women became America's safety net*. Penguin.

Cech, E. A. (2013). The (mis) framing of social justice: Why ideologies of depoliticization and meritocracy hinder engineers' ability to think about social injustices. *Engineering education for social justice: Critical explorations and opportunities*, 67-84.

Durkee, M. I., Gazley, E. R., Hope, E. C., & Keels, M. (2019). Cultural invalidations: Deconstructing the "acting White" phenomenon among Black and Latinx college students. *Cultural Diversity & Ethnic Minority Psychology, 25*(4), 451.

Flaherty, C. (2025, March 6). *Presidents weigh in on public confidence crisis.* Inside Higher Ed. https://www.insidehighered.com/news/institutions/2025/03/06/survey-presidents-point-drivers-declining-public-trust

[1] The RISE UPP SSRT project maintains a set of resources that are available here: https://drive.google.com/drive/folders/168zxi0vBIQ60ortko1zT98IO7UOe1qIK.

Gonzales, L.D. & Moreno, B.B. (2025). Studying doctoral education. Epistemic injustice in motion. Paper presented at the American Education Research Association, Denver, CO.

Gonzales, L. D., Pasque, P. A., Farris, K. D., & Hansen, J. M. (2024b). Epistemic injustice and legitimacy in US doctoral education: A systematic review of literature. *Review of Educational Research*, *94*(3), 423-464.

Gonzales, L.D., & Robinson, T. N. (2023). Broad-access Institutions: Sites of Possibility and Opportunity in M. Bastedo, P.G., Altbach, & P. J. Gumport, P. Altbach (Eds.), *American higher education in the 21st century* (5th ed.). John Hopkins University Press.

Kleine, M. S., Zacharias, K., & Ozkan, D. (2024). Contextualization in engineering education: A scoping literature review. *Journal of Engineering Education*, *113*(4), 894-918.

Lopez, J. D. (2021). Giving back as an educational outcome for postsecondary Indigenous students. *On Indian ground: The southwest*, 177-190.

McGee, E. O. (2021). *Black, brown, bruised: How racialized STEM education stifles innovation*. Harvard Education Press.

Salazar, K., Jaquette, O., & Han, C. (2024). *Geodemographics of student list purchases: A first look.* The Institute for College Access & Success. https://ticas.org/wp-content/uploads/2022/09/Geodemographics-of-Student-List-Purchases_A-First-Look.pdf

Snyder-Hall, C. (2018). What's the Matter with College? Exploring White Working-Class Resentment Towards Higher Education. *New Political Science, 40*(3), 605-612.

UAMS Translational Research Institute. (n.d.). *What is translational research?* University of Arkansas for Medical Sciences. https://tri.uams.edu/about-tri/what-is-translational-research/