Enhancing Diversity in Research Careers:
The Power of Transformative Research Opportunities

BY REBECCA COVARRUBIAS

University of California, Santa Cruz

POLICY BRIEF | MAY 2022

Progress has been made in recent years to increase the number of university students from racially- and economically-minoritized backgrounds (e.g., low-income, first generation to college, people of color). Still, these groups are vastly underrepresented in U.S. research opportunities and careers.

Minoritized people make up only 7.9% of doctoral degrees awarded, 13.3% of research scientist positions, and 24% of research faculty. This lack of diversity fails to reflect the rich lived experiences and perspectives of diverse thinkers. New and varied perspectives are critical to research — supporting and encouraging minoritized students pursuing research careers can translate into the creation of innovative solutions to complex social problems.

Research Opportunities as Sites for Transformational Change

Barriers to research careers begin early, in the development of minoritized undergraduate students' research identities and skills. Classroom or other learning spaces can be unwelcoming settings for minoritized students, perpetuating racism, sexism, and classism.

Key Takeaways

- Diversity within U.S. research careers (e.g., doctoral programs, research scientist positions, faculty lines) does not reflect the growing number of racially- and economically-minoritized students in U.S. systems of higher education.

- Focusing on diversifying pathways to research careers for racially- and economically-minoritized people can diversify the U.S. research workforce and enrich the knowledge and solutions that are produced.

- Diversifying research careers requires a careful focus on building transformative research opportunities for racially- and economically-minoritized students, including attention to building the capacity of faculty mentors to adopt anti-racist, strengths-based, collaborative approaches.

These experiences work to deter students from engaging in or pursuing research fields. Yet, research opportunities — in which undergraduate students have the chance to take part in faculty-directed research projects — have been shown

to transform students' educational pathways, facilitating their belonging, university retention and graduation, and adoption of an identity as a scientist. Such outcomes — retention, graduation, and career development — are at the core of the missions of public institutions serving minoritized students who are looking for the transformative benefits of a university degree. Faculty-student research opportunities and mentoring can be transformative if they center the needs, experiences, and perspectives of the minoritized students. To ensure a trusting and productive environment, relationships need to adopt critical research mentoring (CRM) practices. CRM practices are rooted in anti-racism and anti-classism, prioritize and honor the cultural strengths of minoritized students, and emphasize care and collectivism within relationships. This framework allows faculty mentors to offer their students a chance to develop their identities as scholars and scientists, bring their whole selves to the learning endeavor, foster a sense of belonging to a professional field, and create new knowledge about and build solutions to complex social problems.

Though many long-term undergraduate-focused research programs exist nationally, very few adopt critical approaches or evaluate and refine those approaches. Developing and evaluating CRM will help in the creation of equitable learning spaces that support the holistic success of minoritized students and mentors in the academy. Such learning spaces can also prepare diverse scholars to contribute to the workforce and to enrich science knowledge and solutions.

Development of Critical Research Mentoring: A Focus on Capacity of Faculty Mentors

A key focus of developing CRM approaches includes understanding the capacity of faculty mentors, especially those from identities that differ from their student mentees. To build the capacity of faculty mentors requires a greater understanding of their strengths as scientists and of their constraints in access to resources (e.g., tools and time for engaging in CRM) and to support systems (e.g., incentive and review structures) that make the work possible. For example, traditional and existing tenure and promotion reward structures privilege research productivity (e.g., grant writing, publishing) over teaching, mentoring, and service work. Building the capacity of faculty mentors requires a structural shift in how we incentivize CRM work on campuses aiming to prepare diverse scholars for the research workforce.

There are several recommended steps to begin this structural shift:

- Create a diverse, nationwide leadership team and network to explore and develop visionary steps for rethinking institutional reward structures.

- Provide critical resources, such as monetary compensation, to support the development and evaluation of what it means to build faculty capacity in CRM.

- Provide a platform to disseminate knowledge (e.g., briefs, talks, online workshops) to interested and wide audiences.

With the proper time and attention paid toward mentoring relationships, institutions can help minoritized students to imagine new academic, career, and personal pathways. Supporting the growth of a new, diverse generation of researchers requires institutional resources aimed at building the capacity of critical faculty mentors.