

NATIONAL
ACADEMIES OF
SCIENCES,
ENGINEERING,
AND MEDICINE

*ADDRESSING DIVERSITY, EQUITY, INCLUSION,
AND ANTI-RACISM IN 21ST CENTURY
STEMM ORGANIZATIONS*

PRESENTATION FOR THE
NIH SCIENTIFIC WORKFORCE DIVERSITY SEMINAR SERIES
OCTOBER 25, 2021

A NASEM SUMMIT

- June 29-30, 2021. First stage of a major, multi-component NASEM initiative
- Response to a request from Congresswoman Eddie Bernice Johnson (D-TX), chair of the House Committee on Science, Space and Technology:

Define research and policy actions related to diversity, equity, inclusion, and the systemic racial biases that disadvantage people from marginalized backgrounds in pursuit of STEMM careers.

STATEMENT OF TASK

Convene a national summit that will:

- Highlight how racism operates at different levels in STEMM settings
- Recognize the effect of systemic racism on the careers of individuals historically underrepresented in the STEMM workforce (Black/African American, Hispanic/LatinX, American Indian, Alaska Native, Asian, and Pacific Islander communities)
- Identify policies, strategies, and practices for confronting systemic racism
- Identify ways to advance diversity, equity, and inclusion in STEMM settings



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WHAT ARE WE TALKING ABOUT??

- **Diversity:** proportional representation of groups of individuals based on their primary and secondary characteristics and identities
- **Equity:** support provided to individuals, according to need, for access, opportunity, and advancement
- **Inclusion:** acknowledged, impactful participation and contribution, to the benefit of the individual and the organization
- **Racism:** devaluation and the denial of rights, dignity, and value of individuals due to race, ethnicity or geographical origin

HISTORY AND LEGACY

- Racism and its sequelae, inequity and injustice, are foundational in the US, rooted in colonization, expansion, and development occurring over four centuries
- Settler Colonialism displaced Indigenous cultures, and denied STEMM skills and insights of Indigenous people, producing educational policy and law that precludes equal access to quality education
- Black Americans were consigned to slavery and discrimination in housing, education, and health services.
- Many policies that sought to broaden access to education included detrimental impacts on the Black community
- Racism is deeply embedded in all elements of society, including educational policy and law, including STEMM organizations



VALUE AND IMPORTANCE OF DEI AND ANTI-RACISM

- The moral case for DEI&A – it's what's right
- Racism breeds and exacerbates disparities, which are corrosive to society and its people
- DEI increases the quality and significance of research and innovation – it is an engine for advancing STEM.

RESEARCH FINDINGS ON BIAS, STEREOTYPES AND RACISM

- Biases create mental associations between race and other characteristics, such as competence or capability
- White behavior is seen as *status quo*, devaluing actions and mannerisms of Black, Indigenous, and people of color
- Stereotypes contribute to tokenism, isolation, and exclusion for those outside the *status quo*
- Implicit bias can be demonstrated even in individuals who disavow it, and is very difficult to change. However, we can *learn* to align values with intention, and to recognize bias and produce the right responses, despite the persistence of bias

BIASED POLICIES IN HIGHER EDUCATION

- Academia's admissions policies and culture have historically *exclusionary* roots
- Faculty and administrators serve in gatekeeping roles, which are impacted by intrinsic bias, causing exclusion of individuals from historically underrepresented backgrounds
- For admissions decisions on borderline students, faculty depend on racialized signals, e.g., test scores, undergraduate university, hometowns

BIASED POLICIES IN STEMM ORGANIZATIONS

- Exclusionary, gender- and race-biased hiring
- Job postings that list ideal candidate characteristics based on White male stereotype
- “Colorblind” policies, which seek to provide *equal* treatment by ignoring race and gender, fail to provide *equitable* treatment – treatment that addresses unequal needs
- Employees from historically underrepresented backgrounds receive less support than White male employees.

APPROACHES AND POLICIES THAT FAIL TO ADVANCE DEI&A

- Control tactics, compliance-based training, hiring tests, and performance rating procedures
- Policies focused on promoting the under-represented individual's grit and resilience, without changing the larger system
- Harassment and civil rights grievance procedures
- Training focused on eliminating bias

PROGRAMS THAT ADDRESS ISSUES IN STEMM DEI&A

- HBCUs allow students to avoid the isolation they feel on majority White campuses
- Shift focus from attempts to eliminate bias to teaching about disparities and ways to *enhance diversity*
- A holistic approach with coordinated changes: engagement through active recruitment and mentoring, interaction through cross-training and self-managed teams, and mechanisms for social accountability, e.g., diversity task forces, diversity managers – all institutionalized as formal practices applied to all employees/trainees
- In “cluster hiring” approach, institution opens multiple positions explicitly encouraging gender, race, or ethnic diversity, together with follow-on developmental resources and mentoring

LEADERSHIP STRATEGIES FOR SUSTAINED DEI&A ADVANCES

- Provide incentives and resources, e.g., faculty positions, research funds, awards, to departments who identify candidates who would expand faculty diversity
- Align institutional priorities around DEI; recognize that DEI advances innovation and excellence; allocate resources to drive needed changes; set a culture that celebrates differences and invites individuals to embrace their diverse backgrounds.

ONGOING RESEARCH AND PROGRAMMATIC EFFORTS

- The National Center for Science and Engineering Statistics is a resource for exploring representation and trends across disciplines
- NSF's Racial Equity Task Force reviews internal processes and external programs to address the inequity in STEMM
- The NIH UNITE initiative uses five interacting work streams to address a range of intramural and extramural issues including stakeholder experiences, research on health disparities, transparency, and accountability
- A 3 year, \$60 million, multiphased NIH Common Fund program is focused on transformative health disparities research
- The National Academies DEI&A Initiative will next host an expert meeting in November 2021 to begin to consider recommendations and actions

CONCLUSIONS AND NEXT STEPS

- Racism is embedded in all elements of society, including STEMM organizations
- Both individual-level psychological tendencies and the broader institutional/sociocultural frameworks are problematic for DEI&A efforts
- A major barrier to overcome is the false perception of a tradeoff between DEI&A and research innovation and excellence; notably, *inclusion* is the biggest challenge
- Traditional anti-bias trainings, policies, and grievances procedures, in isolation, generally fail to combat discrimination
- Solutions require a holistic approach, including recruitment, mentoring, interaction through educational training and mechanisms for social accountability, institutionalized as formal practices and policies and thereby making them accessible to all employees

COMMENTS, QUESTIONS?

- Recording of the Summit presentations available at <https://www.nationalacademies.org/event/06-29-2021/addressing-diversity-equity-inclusion-and-anti-racism-in-21st-century-stemm-organizations-a-summit>
- Proceedings-in-brief available for free download at <https://www.nap.edu/catalog/26294/addressing-diversity-equity-inclusion-and-anti-racism-in-21st-century-stemm-organizations>
- Contact NASEM Staff Officer Layne Scherer (lscherer@nas.edu) with questions