



# SEA CHANGE

Changing the Narrative: DEI is Essential to  
Excellence in STEMM

*This material is based upon work supported by the  
National Science Foundation Grant No. 1841687*

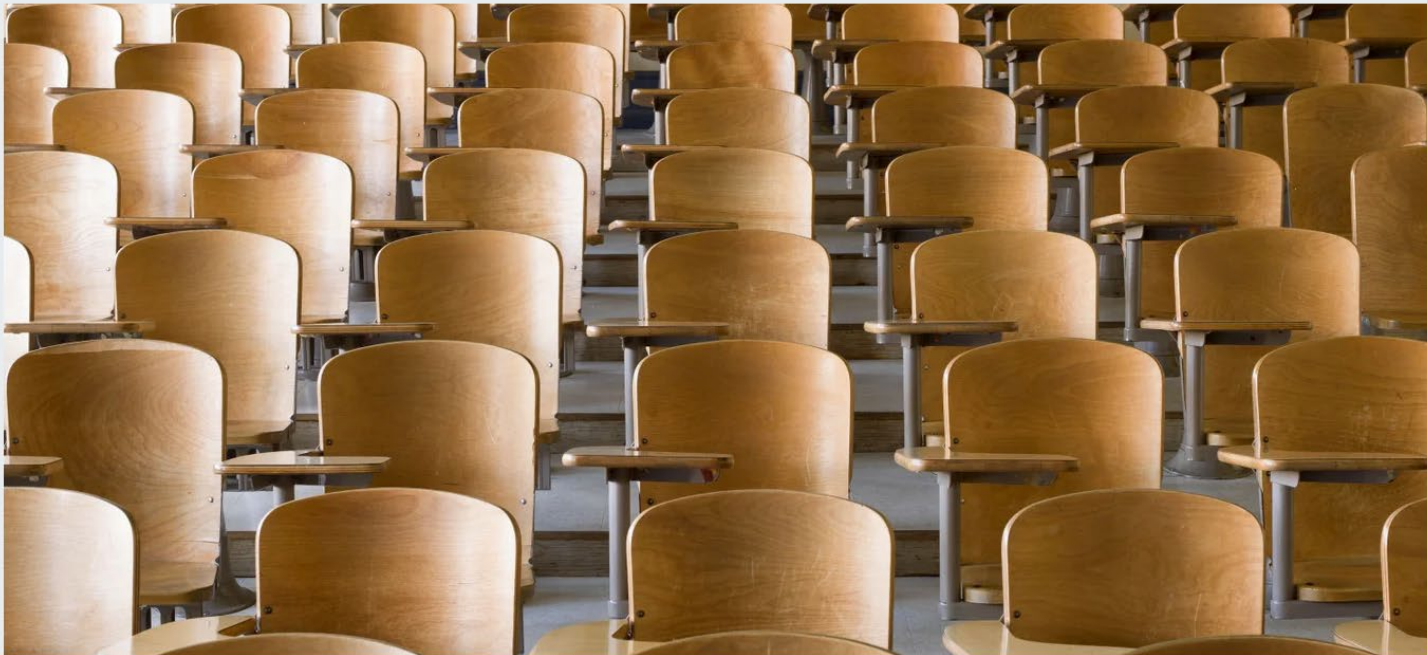
OPINION

JULY 24, 2020 | 4 MIN READ

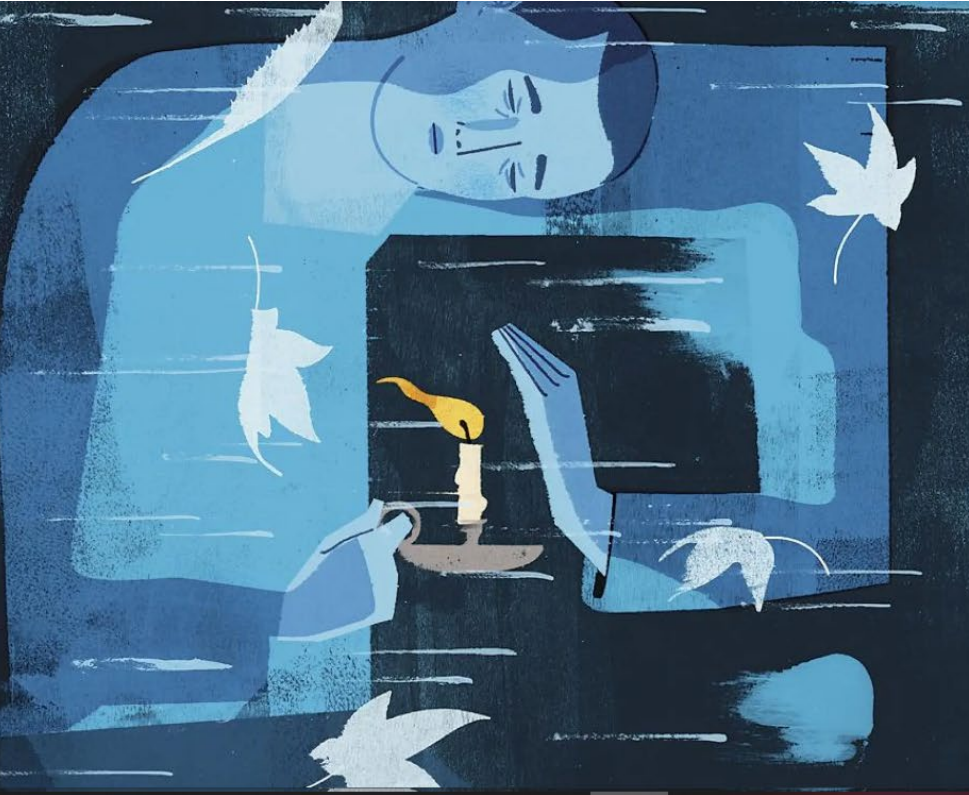
## Reimagining Colleges and Universities to Make Them More Equitable

COVID-19 could amplify the persistent lack of diversity in higher education—but the pandemic also gives us a chance to fix it

BY SHIRLEY M. MALCOM



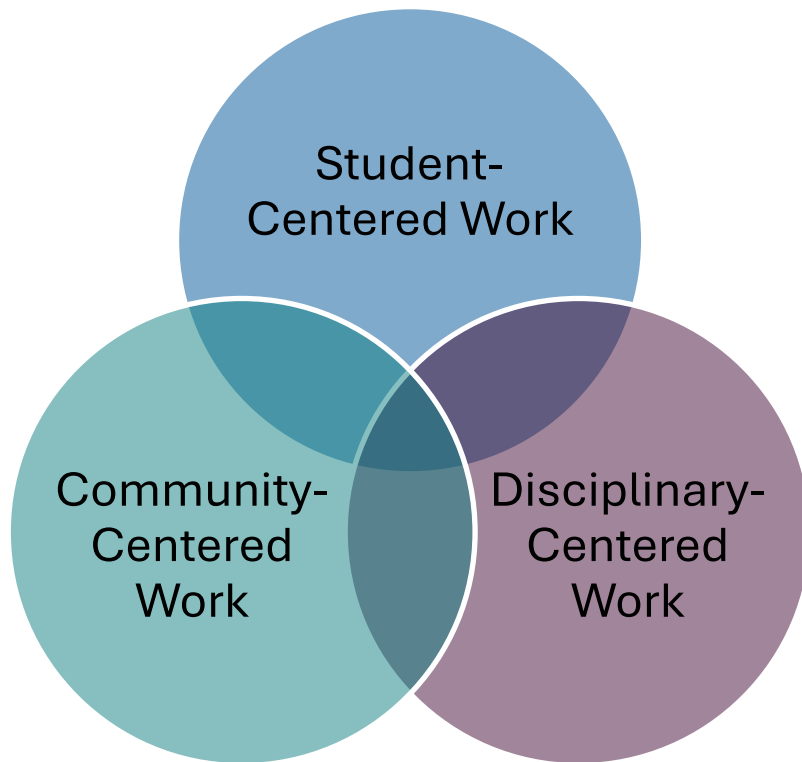




## **DEI Statements Are Not About Ideology. They're About Accountability.**

**If critics have a problem with the  
goal of diversity, they should say  
so.**

# Faculty Work



How do we embed DEIA into all aspects of faculty work in such a way that it supports excellence in teaching, research and service?

# “How do we create a more accurate narrative for the role of DEIA in supporting excellence in STEM?”

🔒 | EDITORIAL

## Strengthen the case for DEI

SHIRLEY MALCOM [Authors Info & Affiliations](#)

SCIENCE - 28 Mar 2024 - Vol 383, Issue 6690 - p. 1395 - DOI: 10.1126/science.adp4397

↓ 6,928



PHOTO: CHRIS FLYNN

Three years ago, addressing racial justice in the United States moved firmly into the mainstream. Following the murder of George Floyd, the ongoing struggle for social justice was again laid bare, and pledges to improve diversity, equity, and inclusion (DEI) began sprouting everywhere. Now, the pendulum is swinging back on these commitments. A backlash against DEI initiatives is rising across all sectors, especially at the state level. Last year’s decision by the US Supreme Court to strike down the consideration of students’

# Why Do This Work?

- The narrative for teaching excellence
- The narrative for research excellence
- The narrative for service excellence

# Excellence in Science and Inclusive Innovation

- “Lack of representation among inventors translates into a lack of breadth in inventions.”<sup>1</sup>
- Gender-diverse teams in medicine produce papers that are more novel and more highly cited...yet gender-diverse teams are underrepresented compared to what one would expect if teams were selected with no attention to gender.<sup>2</sup>
- “Demographically underrepresented students innovate at higher rates than majority students, but their novel contributions are discounted and less likely to earn them academic positions.”<sup>3</sup>

<sup>1</sup>Rembrand Koning *et al.* Who do we invent for? Patents by women focus more on women’s health, but few women get to invent. *Science* **372**, 1345-1348 (2021).

<sup>2</sup>Yang *et al.*, Gender-diverse teams produce more novel and higher-impact scientific ideas. *PNAS*, **119** (36) e2200841119 (2022).

<sup>3</sup>Hofstra *et al.*, The Diversity-Innovation Paradox in Science. *PNAS*, **117** (17) 9284-9291 (2020).



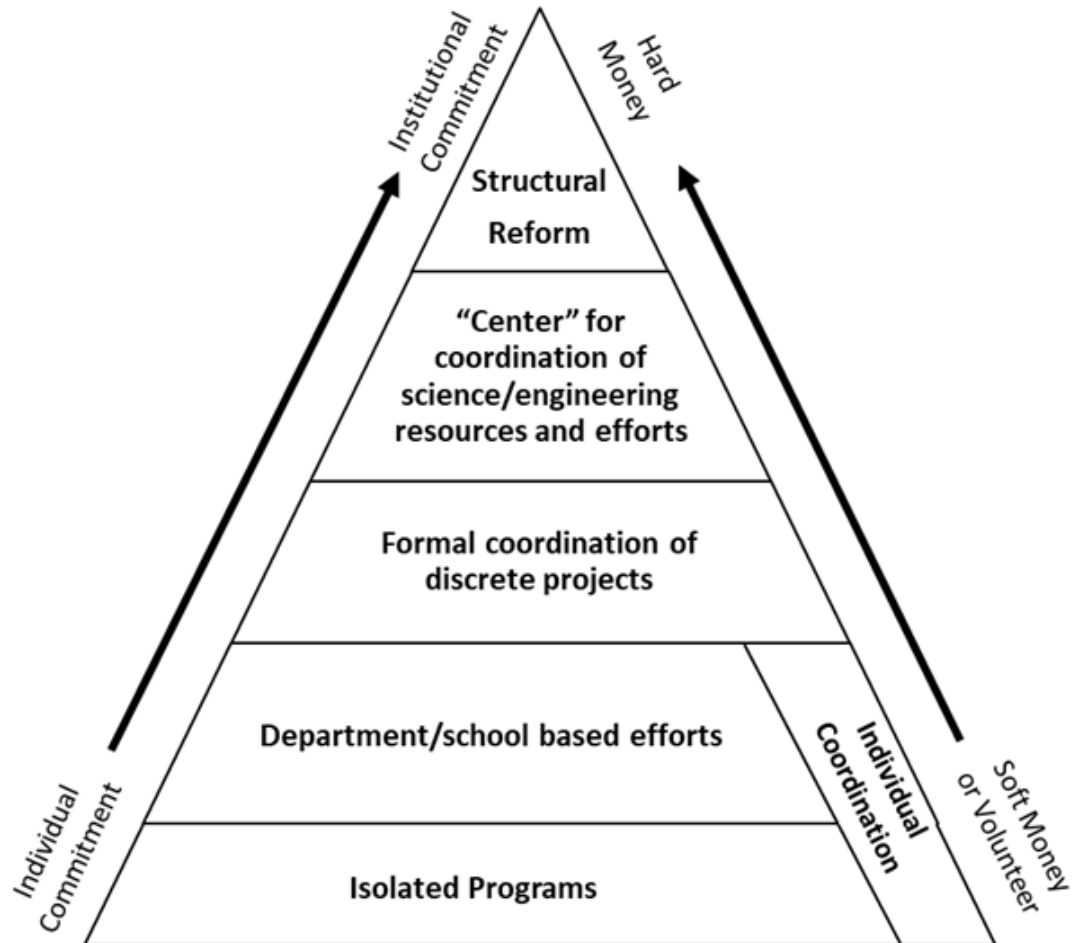
# Excellence in Science and Inclusive Innovation

The research is clear: if you want excellence and innovation in STEMM, you *must* pay attention to DEIA.

*How can we make this the norm on our campuses?*

## Model for the evolution of intervention programs

Why hasn't  
the needle  
moved?



Matyas, M.L., and Malcom, S.M. Women, Minorities, and Persons with Physical Disabilities in Science and Engineering. American Association for the Advancement of Science, 1991.

# A Landscape Analysis

“Most of the interventions devised by colleges and universities are aimed at enabling students and/or faculty to fit into, adjust to, or negotiate the existing system. There is little challenge to the structures that currently exist. A coherent, coordinated, articulated structural approach to enabling students from underrepresented groups to succeed in science, engineering and mathematics programs has yet to be achieved by the institutions.”

Marsha L. Matyas and Shirley M. Malcom, 1991

# Learning from Projects to Address Challenges to Faculty and Student Diversity

- **Faculty recruitment:** strategies such as cluster hiring in interdisciplinary areas
- **Student retention:** embracing, building and serving community
- **Improving academic culture:** supporting community and “social justice” work

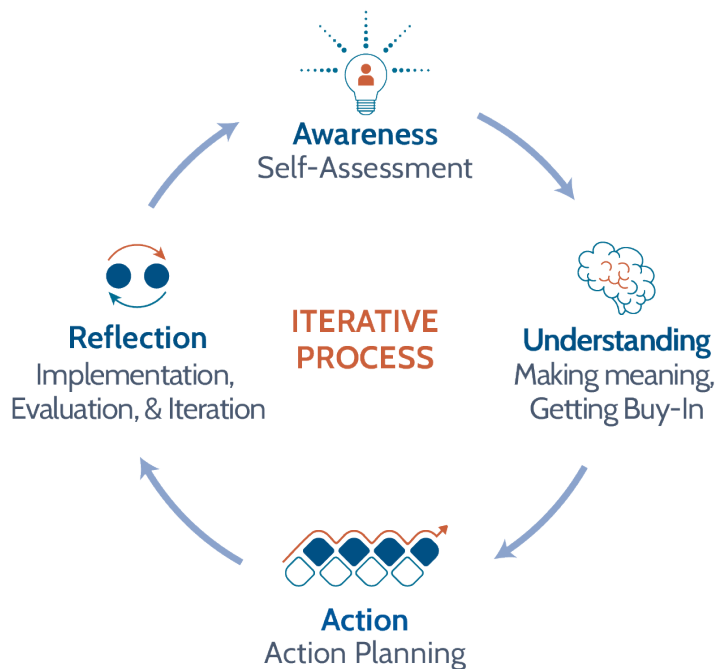
# How SEA Change Connects to Reimagining

Assessing how well current policies, practices, processes and traditions are operating in today's circumstances (e.g., anti-DEI legislation)

Are they working equally well/equitably for all?  
(health disparities uncovered for people of color and women; challenges of systemic racism)

Articulating a vision for the future and developing action plans to get from here to there

# The SEA Change Process for Transformation

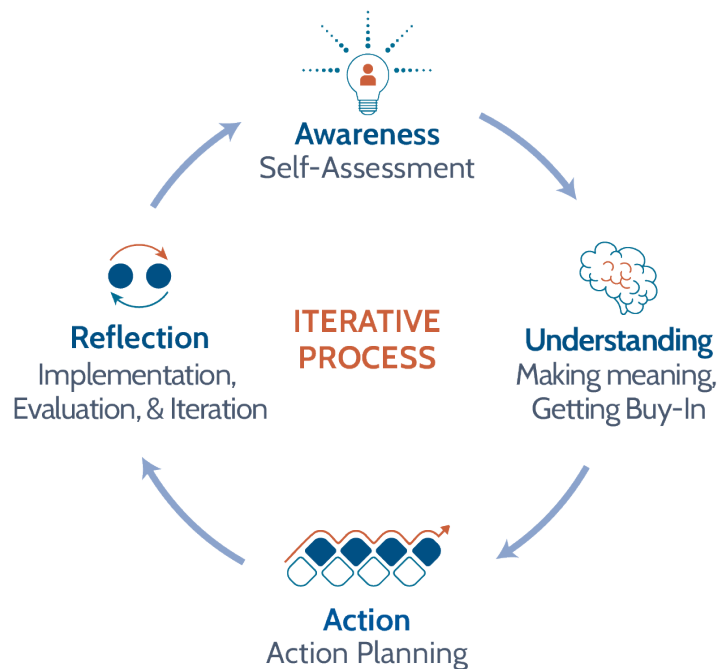


## Start from where you are – Awareness

*Do the policies, practices, processes, culture and traditions reflect what we know from the research to be equitable and inclusive?*

- Evidence (including disaggregated quantitative data)
- Faculty hiring: avoiding narrow searches; using strategies such as “cohorting” or cluster hires
- Retention, not just recruitment
  - Salary equity data
  - Disaggregated climate assessments
  - Building processes to monitor for bias
- Contributing to the talent pool, not just drawing from it
- Promotion/advancement and time in rank
- Informing transformation through use of promising practice research

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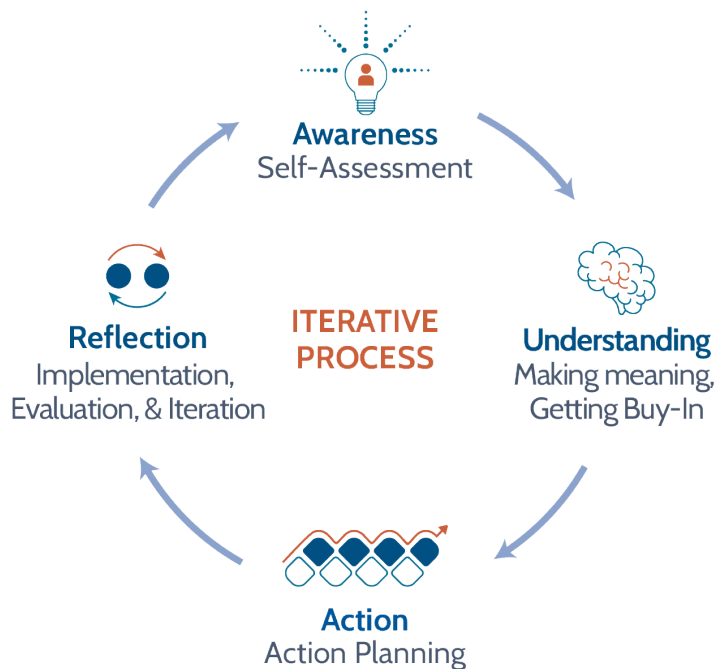


## Where do you want to be? – Understanding

*What are the policies, practices, processes, culture, and traditions, consistent with institutional mission and values, that can support DEIA? What are our barriers to their use?*

- Based on your self-assessment evidence, what do the data show?
- Does the history of faculty and staff hiring have barriers to equity? Does the history of advancement?
- What is the history of faculty retention? Do you know why people stay and why people leave?
- Do your findings resonate with the stakeholders? “Ground-truthing.”
- What is being done by exemplary programs and departments within and beyond the institution?

# The SEA Change Process for Transformation



## Where do we need to *do*? – Action

*How to respond to the self-assessment and reflection? Who should be involved in developing a plan? How to promote buy-in to the plan?*

- How to “stand up” a plan?
- Who is responsible for doing what? Are some carrying a heavier burden than others?
- How do we establish priority? Does “order” matter?
- What is the timeline?
- What are the metrics to be used?
- What is the system of accountability?
- How to use feedback?
- What other questions about action planning do we need to ask and answer?



# How Do We Talk about the Work?

- Addressing institutional mission
- Stats and stories
- Supporting all
- An investment
- Creativity and innovation
- Demand and use data and evidence