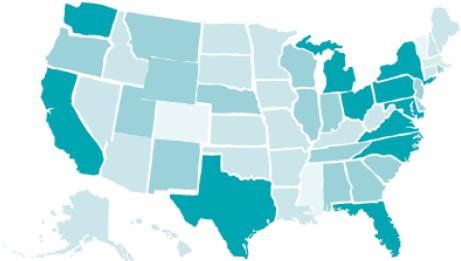




ADVANCE

ADVANCE Program Staff:

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ADVANCE 2001 to 2021 - Lessons Learned



NSF ADVANCE Theory of Change

Vision: A productive, successful, and diverse STEM academic workforce

Challenge

Systemic inequities, & cultural & climate factors impact the interest, retention, and success of women, and racial & ethnic minorities in STEM academic careers.

Intervention Strategies:

- Systemic change (organizational change)
- Equity focus
- Intersectional approach

Resources:

- Grant program
- Prizes/Challenges
- NSF-wide partners
- ADVANCE brand
- ARC Network

Outputs:

- Revised or new policies, processes, & practices
- Changes in STEM culture & climate
- New knowledge of systemic change & equity
- Sustainability, adaptability, & diffusion of ADVANCE ideas
- Community of experts on equity & systemic change

Program Goal to broaden the implementation of evidence-based systemic change strategies that promote equity for STEM faculty.

Solicitation Objectives:

O1: Intersectional approaches are integrated into ADVANCE equity strategies

O2: Adaptation of evidence-based practices by IHEs and STEM organizations

O3: Empowerment of individual and organizational stakeholders to enhance equity

Systemic & Organizational Change

ADVANCE focuses on “fixing” the systems and organizations that impact STEM academic careers.

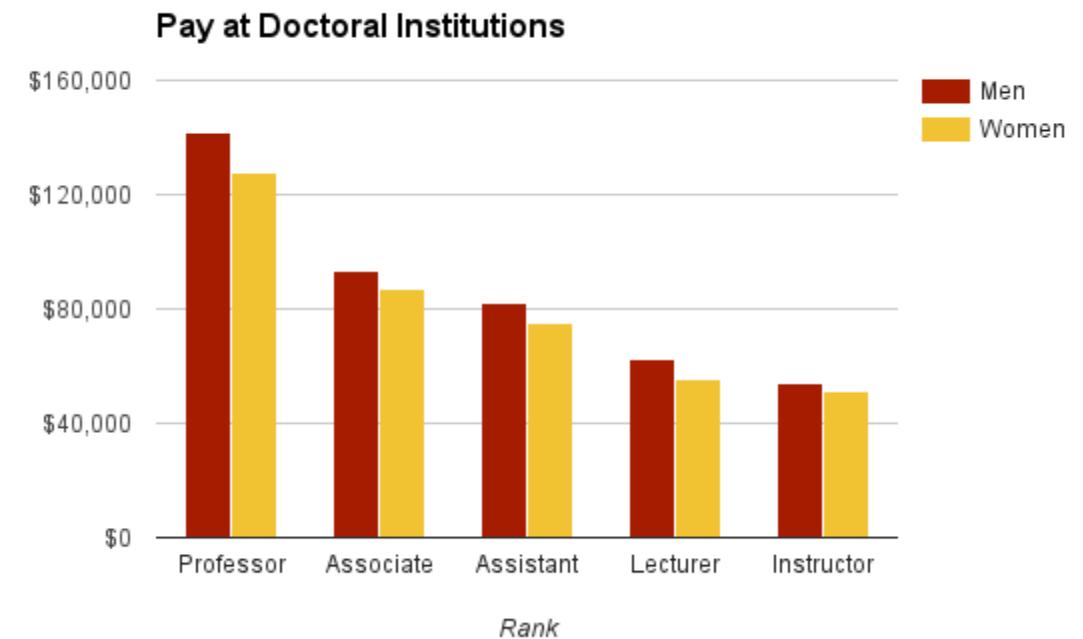
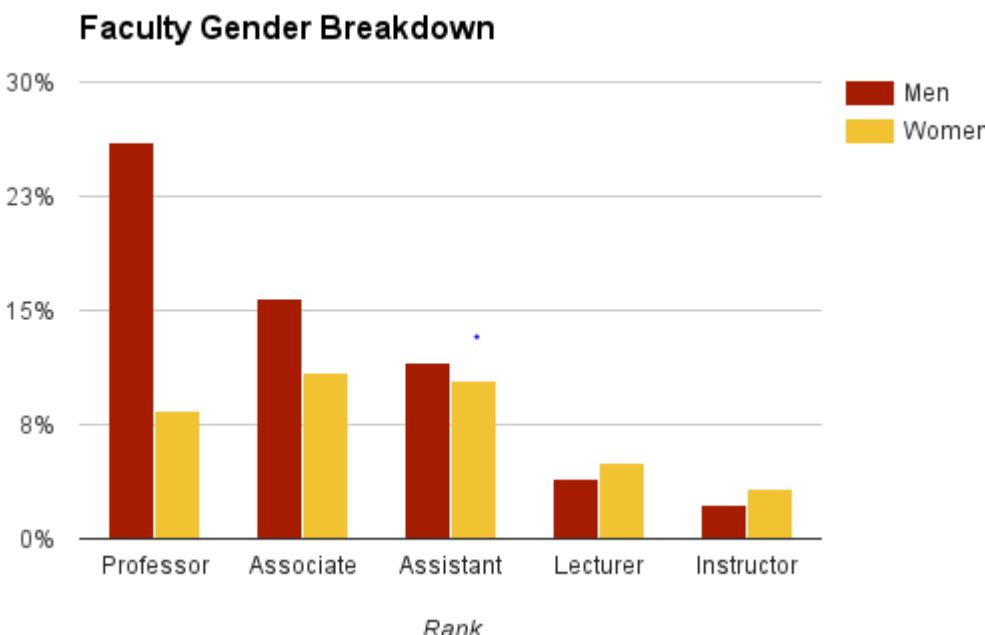
Examples of potential organizational and systemic issues:

- Recruitment, retention, tenure, and promotion policies and practices
- Work-life balance and career flexibility policies and programs and usage
- Salaries, start-up packages, and access to resources
- Institutional service allocations and requirements (committees, mentoring, etc.)
- Culture and climate of organizations and departments
- Accountability of STEM leadership and commitment to diversity

Systemic and organizational change is most likely to result in **long-term change** in STEM academics.

Equity

- Equity issues may exist even if proportional representation is achieved.
- Pay gaps are an example of a potential gender equity issue in academics (and it may persist even with full participation of women):



Intersectional Approach

- ADVANCE recognizes that barriers to gender equity may not be identical for all groups of women faculty in STEM
- Therefore, all ADVANCE proposals are expected to offer strategies to promote gender equity for all faculty

Intersectionality is a concept in social sciences that recognizes that social identity, such as gender, do not exist in isolation from the social context or other social identities such as race/ethnicity, disability status, sexual orientation, etc. The significance or salience of a social identity and the social context may potentially change over time.

*Note the only additional review criterion in the ADVANCE solicitation is focused on this expectation

ADVANCE Grant Types for IHEs

Catalyst

- Institutional self-assessment, investigate and pilot potential organizational change strategies, and develop five-year STEM faculty equity plan
- Up to \$300K over 2 years
- Single IHE that has not had IT or Adaptation before (or been the lead in any ADVANCE award before)
- Scope includes all STEM disciplines at IHE
- **Target date**
- August 7, 2020
- Proposals accepted before and after target date
- Contact Program Officer before submitting for timing of submission.

Institutional Transformation (IT)

- Develop, implement, and study **innovative** organizational change strategies to foster gender equity; perform original research; and implement organizational change strategies
- Up to \$3M over five years
- Single IHE that has not had IT before
- Scope includes all STEM disciplines at IHE
- **Target dates**
- IT-Preliminary proposal April 22, 2021 (required)
- IT Full proposal October 7, 2021 **only if encouraged after preliminary proposal**
- Proposals accepted before and after target date

Adaptation

- Adapt proven organizational gender equity strategies to an IHE
- Up to \$1M over three years + \$250K for partnering w/a NSF project
- Single IHE that has not had IT or Adaptation before
- Scope includes all STEM disciplines at IHE
- **Due Dates:**
- Letter of Intent August 3, 2020 (required)
- Full Proposal Nov. 4, 2020

ADVANCE Grant Types for Organizations

Adaptation

- Adapt proven organizational change strategies to address gender-based inequities for STEM faculty
- Up to \$1M over three years + \$250K for partnering w/a NSF project
- Must have a national or regional impact and significant reach
- A single non-profit non-academic organization can submit an Adaptation proposal
- Focus can be one or more STEM disciplines
- **Due Dates:**
- Letter of Intent August 3, 2020 (required)
- Full Proposal Nov. 4, 2020

Partnership

- Diffuse and scale-up the adaptation and implementation of proven organizational change strategies to address gender-based inequities for STEM faculty
- Up to \$1M three-five years + \$250K for partnering w/a NSF project
- Must have a national or regional impact and significant reach
- Required two or more partner organizations - can include IHE partners
- Focus can be one or more STEM disciplines
- **Due Dates:**
- Letter of Intent August 3, 2020 (required)
- Full Proposal Nov. 4, 2020

Lessons From the ADVANCE Program Model

Systemic/organizational/institutional change:

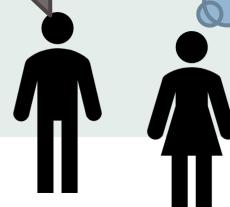
- Has potential for long-term impact on diversity, equity, and inclusion in STEM
- Band aid solutions are not adequate
 - Addresses the underlying reasons for disparities in STEM workforce – cure the problem while mitigating the symptoms
- Necessitates the involvement of those in the majority in making change
- Rejects the notion that there is something wrong with the ability or interest of individuals who have not traditionally participated in STEM education and workplaces
 - Fixes the institutions not the people!



Sustainability of ADVANCE

10 yrs	5 to 9 yrs	2 to 5 yrs
<ul style="list-style-type: none">University of MichiganUniversity of WisconsinGeorgia TechUniversity of Washington	<ul style="list-style-type: none">CUNY HunterU of Colorado BoulderCase Western Reserve UUMBC	<ul style="list-style-type: none">VA TechKansas State UNew Mexico St UUC-Irvine
<ul style="list-style-type: none">Purdue UU of Illinois ChicagoCornell UniversityU of ArizonaUNC-CharlotteIowa State University	<ul style="list-style-type: none">Washington State UOhio State UMI State UNorth Dakota St UU of Nebraska LincolnNortheastern U	<ul style="list-style-type: none">...or my chair could be expected to treat everyone equally by their boss

You should take a negotiation skills class



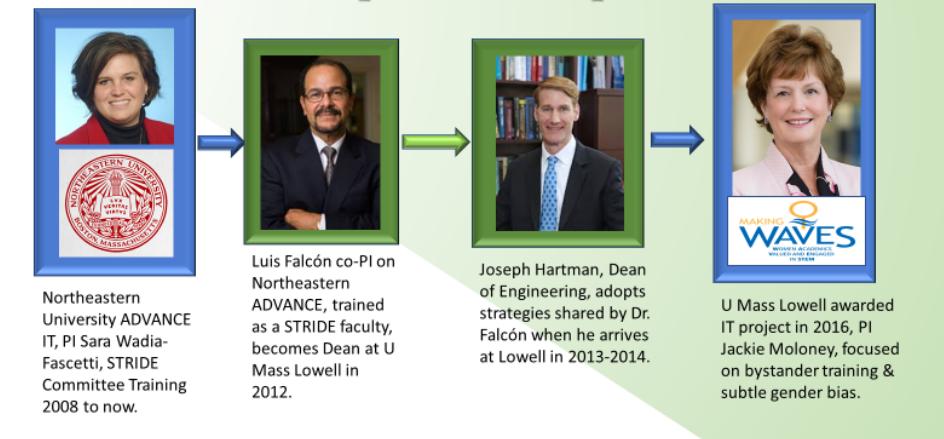
Lessons From the ADVANCE Program Model

Federal Grant Program Design:

- Focus on an important component of the STEM work force – academic faculty
- Fund the development of organizational change strategies that can be scaled up
- Build an organizational “pay it forward” model
- Design and build “organizational peer pressure”
- Support and promote the community of experts that are created
 - Reward and recognize them as experts and leaders
 - Provide platforms for communication and information sharing among them and with others
 - Incentivize diffusion and adaptation when move into new roles and/or organizations



Lateral and Upward Mobility of ADVANCE Empowered People



Lessons From the ADVANCE Program Model

Metrics to measure organizational change program success:

- Cannot only count individuals in STEM if the actual goal is diversity and equity and inclusion
- Change agents' professional and leadership success is a metric of program success
- Measure change from institutional baseline
 - Each institution will have different starting points and different long-term goals
 - Changes should reflect these parameters and context
- Diffusion of strategies to non-grantees
 - Scale and rate of uptake
 - Transition to “standard operating procedures”



Implicit Bias Research Informing NSF Practice



*Important Notes:

1. Awareness of ones own implicit biases is NOT enough to eliminate the impact of implicit biases in decision making – structures and policies around decision making need to be created to ensure mitigation of implicit bias influence.
2. “Implicit bias training” does NOT change an individual's implicit biases – rather it provided strategies and tools to mitigate the impact of implicit biases in decision making.

ADVANCE Resources

Synthesis or collections of ADVANCE products and strategies:

- ADVANCE Resource Coordination Network www.equityinSTEM.org (community of practitioners and researchers)
- Strategies for Effecting Gender Equity and Institutional Change <http://www.colorado.edu/eer/research/strategic.html> (synthesis of past ADVANCE grantee strategies)

Individual ADVANCE project websites, for example:

- University of Michigan <http://advance.umich.edu/>
- WISELI <http://wiseli.engr.wisc.edu/>
- Hunter College <http://www.hunter.cuny.edu/genderequity/>



Thank you!

Email questions to ADVANCE@nsf.gov

