ENHANCING ACCESS AND EQUITY IN STEM

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THE UNDERREPRESENTATION OF WOMEN IN STEM IS WELL DOCUMENTED

• This is true… despite the likelihood that STEM will drive economies world wide in the foreseeable future.

• No nation can afford to under develop a population sector in building its STEM workforce to be competitive.

• In the US, 60% of all college students are women and people of color will be the majority in 20 years.

• Yet, women - and especially women of color - continue to be underrepresented in almost all STEM disciplines.
AFTER 40 YEARS OF ATTENTION GENDER EQUITY ISSUES REMAIN IN STEM

• There has been some progress; 58% of STEM faculty at 2-year colleges are women; 46% in 4-year institutions (mainly in the life and social sciences)

• However, women are generally in lower academic ranks than men

• Women comprise 40.6%, 33.9% and 19.4% of assistant, associate, and full professors

• Women of color comprise only 4.5%, 3.7% and 1.2% of assistant, associate, and full professors and more underrepresented in general.
The US Census Bureau projects that by the year 2042, minorities in the US, will make up more than 50% of the US population.

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Representation Of Women: Science And Engineering Faculty

How It Should Be

- White: 89,879
- Black: 18,050
- Amer Ind: 18,050
- Hisp: 1,078

How It Is

- White: 68,600
- Black: 4,500
- Amer Ind: 3,900
- Hisp: 200
FEW REMEDIES HAVE FOCUSED ON PREPARING AND ADVANCING WOMEN IN ACADEMIC LEADERSHIP

• Formal academic leadership preparation programs for STEM women have been largely understated for advancing women in academia, especially women of color.

• Anecdotal evidence suggests more women academic leaders produce more access, achievement and retention in STEM.

• Academic leaders set climate, have budgetary oversight, and have hiring influence within academic units and institutions.
EXAMPLES OF ACADEMIC LEADERSHIP PROGRAMS

Higher Education Resource Services (HERS)

• Executive Leadership in Academic Medicine (ELAM)

• Executive Leadership in Academic Technology and Engineering (ELATE)

• American Council On Education (ACE) Inclusive Excellence Group
Higher Education Resource Services (HERS)

- Institutes located at Wellesley College, Bryn Mawr & University of Denver

- Four weekend seminars throughout the year

- Leadership development to advance women to senior leadership positions throughout the ranks of faculty and staff
Executive Leadership in Academic Medicine (ELAM)

• Drexel University, College of Medicine

• Preparing senior women faculty at schools of medicine, dentistry and public health

• One-year fellowship program
Executive Leadership in Academic Technology and Engineering (ELATE)

- Drexel University, College of Engineering

- Three 4-6 days residencies

- National leadership development program to advance senior women faculty in STEM into effective leadership roles within their institutions
AMERICAN COUNCIL ON EDUCATION (ACE)  
INCLUSIVE EXCELLENCE GROUP

- Three-day leadership program for senior level women administrators (typically deans and above) seeking presidency, vice presidency or major deanship.

- Held both in June and December

- Fosters discussions with women presidents and executive search firm consultants who help participants develop effective job search strategies
OURS IS THE MOST STEM FOCUSED ACADEMIC LEADERSHIP PROGRAM IN THE U.S.

- Opportunities for UnderRepresented Scholars (OURS) was launched in 2012 and funded by the NSF

- Housed at The Chicago School of Professional Psychology

- Launched initially for women STEM faculty and emerging leaders from Historically Black Colleges and Universities

- Recently added a component from Tribal Colleges & universities

- Offers post graduate certificate in academic leadership upon completion
MORE ON OURS

- Interdisciplinary and intercultural
- Builds on research in organizational psychology, organizational leadership and the related social sciences
- Seeks to advance career identities and aspirations of STEM women participants in academic leadership
- Contains a 10 month online graduate curriculum based on an initial Needs Assessment
- Requires an initial Leadership Effectiveness Assessment
- Requires an action learning project at the home campus
- Access to a career and personal coach provided to each participant
THEORETICAL FOUNDATIONS OF OURS

• Attends to issues of intersectionality, inclusive excellence and presumed incompetence of STEM women
• Addresses issues of the “double bind”
• Addresses such psychosocial issues as emotional intelligence, resilience, and self-efficacy.
MAJOR TOPICS IN THE OURS CURRICULUM

- Current and future landscape in higher education
- Essential leadership competencies
- Influencing and negotiating toward high visibility and career advancement
- Building staff and curriculum to meet needs of the 21\textsuperscript{st} century student
- Governance and accreditation issues for leaders in colleges and universities
Examples of Curriculum Considerations from Tribal College Needs Assessment

• Leadership preparation must be reflective of culture
• Leaders must be connected to the larger community
• Leaders must understand cultural systems of organization and management, e.g., flattened hierarchies
• STEM leaders must value traditional STEM knowledge
• STEM leaders should support cultural ways of knowing
• Mentoring should be conducted from a cultural perspective
SCALABILITY AND IMPLICATIONS OF OURS FOR THE GLOBAL COMMUNITY

• Greater attention to formally preparing STEM women for academic leadership roles

• One Size Doesn’t Fit All

• Cultural competence is a key ingredient for academic leadership preparation

• Coaching and mentoring on personal, psychosocial and career issues are a plus
• Consider academic, hands-on and psychosocial components of leadership preparation and training.

• Leaders from home institutions should be engaged in the process of removing barriers faced by women in ascending to leadership.

• Advocate for government and private funding and support for academic leadership preparation for STEM women generally and for underrepresented and marginalized women especially.