

Advancing STEM Women in Academic Leadership

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Background

- No nation can be globally competitive without a greater presence of women in the STEM workforce
- Women in general are underrepresented in STEM
- Women from racial/ethnic minority groups, indigenous populations, migrant and low-income populations are even more underrepresented in STEM than women generally.

Computer Science in the U.S. as An Example of Gender Underrepresentation

	Raw Data	Percentage Dist. Of All 2014 Awarded Doctorates in Computer Science
All Awarded Doctorates in Computer Science	875	100%
All Computer Science Doctorates Awarded to Women	187	21.37%
Computer Science Doctorates Awarded to Whites	554	63.31%
Computer Science Doctorates Awarded to White Women	91	10.40%
Computer Science Doctorates Awarded to Blacks	52	5.94%
Computer Science Doctorates Awarded to Black Women	16	1.83%
Computer Science Doctorates Awarded to Hispanic/Latinx	31	3.54%
Computer Science Doctorates Awarded to Hispanic/Latina Women	10	1.14%

Linking Gender
Underrepresentation
to College & University
Production &
Leadership

- The pipeline to STEM careers from colleges and universities is inadequate to address the underrepresentation of women leaders in STEM!
- Increasing women and marginalized women in STEM in colleges and universities is correlated with increasing women academic leaders in STEM!

Purpose of This Presentation

- To present two REPLICABLE gender-centric models in the U.S. for preparing a new and expanded generation of women ACADEMIC leaders to broaden participation of women and marginalized women in STEM!

STEM Leadership Academy (STEM LA)

- Offered by: Society of STEM Women of Color (SSWOC) & Fielding Graduate University
- Funded by the National Science Foundation
- *Grounded within a conceptual model that considers the cultural background and lived experiences of STEM women of color*
- 10-hour curriculum that focuses on such topics as:
 - Emotional intelligence
 - Self-efficacy
 - Resilience
 - Intersectionality
 - The spiritual dimensions of leadership
 - Mindfulness-based leadership for the academy



STEM LA: Preliminary Results

- Over the past two years 134 STEM women of color have participated in STEM LA
- 94% of STEM-LA participants have reported feeling empowered and renewed in their personal lives and academic careers
- Over 60% have reported receiving useful professional development information related to their professional growth as leaders.



Executive Leadership in Academic Technology and Engineering – (ELATE at Drexel®)



- Year-long leadership development program
- Sponsored by Drexel University
- Three in-residence sessions of 4-5 days.
- *Aims to build a community of women academic leaders who have broad organizational perspectives, leadership skills, and networks to advance and sustain women leaders in academia.*
- Curriculum is designed to address four dimensions of academic leadership
 - Personal leadership effectiveness
 - Organizational dynamics
 - Strategic finance and resource management
 - Communities of leadership practice

ELATE at Drexel®: Preliminary Results

- Currently, there are 104 ELATE alumnae at 63 universities in the US and Canada.
- Approximately 22% of our alumnae identify as racial/ethnic minorities (including African American, Asian American, and Hispanic/Latina).
- Four graduates hold deanships in engineering, and one serves as dean of graduate studies.
 - Alumnae held the competencies and objectives of the program as important to their career development across time.
 - Although participant self-confidence was fairly high upon enrollment, it increased over the course of the program and this increase was sustained for up to two years.

Summary & Conclusion

- The unique dimensions of STEM-LA and ELATE fill a void in the preparation of STEM women and STEM women of color and other marginalized groups for academic leadership roles in the US
- They recognize the importance of psychosocial and political aspects of being a woman or marginalized STEM woman academic leader.
- They equip and empower women and marginalized STEM academic women for cultivating their authentic and cultural identities for academic leadership.
- They provide a framework for advancing academic leadership development programs for women and marginalized STEM women in other countries.

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“I'm so glad that we are having this discussion here - in a manner that no other gathering would facilitate.” – STEM LA Participant Testimonial

“My learning community has been extremely supportive to me over the past year and a half. I look forward to continuing to work with and support these amazing women. I am much better prepared to take on this new challenging position, thanks to my ELATE experience.” – ELATE Alumna and Graduate Studies Dean

