



Diversifying STEM Faculties: The Intersection of Race, Ethnicity and Gender

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Focus on Faculty

- **Just as it matters “who will do science” so too does it matter “who teaches science.”**
- **For example, the most accurate predictor of subsequent success for female undergraduates is the percentage of women among faculty members in their college**



Focus on Faculty

- **This effect is more pronounced for African American women: among African women awarded doctorates in biology between 1975 and 1992, for example, 75% graduated from Spelman and Bennett—which are women’s colleges (as well as Historically Black Colleges)**
- (Leggon & Pearson 1997)



Framing Diversity

All too often discussions of the demographic diversity of the STEM workforce are framed in terms of two categories

- 1. Women and**
- 2. Under represented minorities (Race/ethnicity)**



Framing Diversity

- ❑ **What about women from underrepresented racial/ethnic minority (URM) groups? In theory, women from URMs are presumed to be included in both the categories “women” and “URM”**
- ❑ **In practice, women from URMs often tend to “fall through the cracks” insofar as policy and programs are rarely targeted on the bases of race/ethnicity AND gender**



Framing Diversity

- **Not disaggregating STEM workforce data by race/ethnicity AND gender is extremely problematic because it masks significant differences**



Intra-racial

Similarities

- Severe underrepresentation among tenured faculty at research universities

Differences

- Field distribution of PhDs
- Degree trends in earning PhD
- Representation on faculty



Intra-racial/ethnic distinctions

- **During the 1990s, women were responsible for the increases in the numbers of faculty positions held by**
 - **African Americans**
 - **Hispanics**

- **Nevertheless, African American and Hispanic males hold the majority of faculty positions** (Harvey 2003)



Intra-racial/ethnic distinctions

- Despite earning PhDs at higher rates than their male counterparts, African American women comprise less than one-half of African American faculty (Derbyshire 2002)**



Intra-gender

Similarities

- **Severe Underrepresentation among tenured faculty at research universities**
- **Inverse correlation between rank and participation of women**

Differences

- **Representation in engineering, physics, computer science**
- **Probability of being a spousal hire differs by race**



Intersection

- **The results of the intersection of race/ethnic and gender are not additive but synergistic. That is:**
 - **Race/ethnicity influence how gender is experienced**
 - **Gender influences how race/ethnicity is experienced**



Reframing Diversity in the Professoriate:

What can be done?

- Reframing the issue of diversity in STEM fields in the academy by reconceptualizing diversity in terms of the intersection of race, ethnicity AND gender**
- Viewing diversity among the professoriate not in isolation but as part of a complex system: increases in faculty diversity will effect other parts of the system (increase in student diversity; enhancing the S&E enterprise; enriching education for all)**



Reframing Diversity in the Professoriate: What can be done?

- Identifying the “worst” practices may be as informative and instructive as identifying the “best” or more effective practices**
- Focusing on successes rather than on barriers**



Reframing Diversity in the Professoriate: What can be done?

- Policy and programs to diversify the professoriate must not only be research-driven but also institutionalized—that is, be an integral part of the standard operating procedures of an institution and, consequently, one criterion on which faculty and administrators’ are evaluated**



**NSF ADVANCE Cross-
Disciplinary Initiative for
Minority Women Faculty
(CDIMWF)**

Georgia Institute of Technology



CDIMWF

- **Cross-disciplinary –**
 - **Gilda Barabino, BME**
 - **Cheryl Leggon, Public Policy**
- **Three-year research-driven initiative (research and evaluation literatures) based on what is known and what needs to be known about URM women faculty**
- **Target: 20-25 tenure-track engineering female faculty who are African American, Mexican American, Puerto Rican, Native American, and Native Pacific Islander**



CDIMWF

- **Purpose of the initiative: professional development and socialization into academe; strategically planning one's career in academic engineering**
- **Theme of initiative's first conference: Making Informed Choices, Succeeding in Academic Engineering**