Advancing Women Scientists in Academe: The U.S. NSF Experience

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The European Gender Summit 2011
Brussels
9 November 2011
Framing the Issues

- U.S. STEM Talent Development: The Underrepresentation Challenge
- Representative External Drivers
- Representative US/NSF Activities
  - White House Council of Women and Girls
  - NSF Programs: ADVANCE, GSE
  - NSF Policy Issues: Merit Review, Broader Impacts
  - Critical Systems and Processes: Data
  - International Engagement
Framing the Issues

- International Engagement (cont.):
  - Commission on the Status of Women – U.S. Department of State
  - Women’s International Research Engineering Summit (WIRES)
    www.wiresnetwork.org
  - Multinational Development of Women in Technology (MDWIT)
    www.mdwit.org/index.php?ht=d/Home/pid/175
Addressing Underrepresentation

Milestones by Race/Ethnicity and Gender 2009
(rounded numbers)

Advanced Degrees in Science and Engineering
Total: 169,000

Bachelor’s Degrees in Science and Engineering
Total: 505,000

First Time Freshmen Interested in Science and Engineering
Total: 1,178,000

First Time Freshman
Total: 3,255,000

High School Graduates
Total: 2,826,000

Sources: National Center for Education Statistics, IPEDS Completions and Fall enrollment surveys; Higher Education Research Institute, American Freshman Survey; and U.S. Census Bureau, Current Population Survey.
Representative External Drivers

Staying Competitive
Patching America's Leaky Pipeline in the Sciences
Marc Goldin, Ph.D., Karin Frisch, Ph.D., and Abby Ann Mason, J.D., Ph.D.
The University of California, Berkeley - Berkeley Center on Health, Economic & Family Security and The Center for American Progress
November 2009

Dual-Career Academic Couples
What Universities Need to Know
Michelle R. Clayman Institute for Gender Research, Stanford University
Balancing the Scale: NSF’s Career – Life Balance Initiative
Career – Life Balance Initiative

Why?

➢ To assure an excellent U.S. STEM workforce, by creating a coherent set of career—life balance policies and program opportunities that take into account the career-family life course.

➢ To reduce the rate of departure of women from the STEM pathway, taking into account/taking advantage of, the large production rate of highly capable women graduates.

Why Now?

➢ “To renew and strengthen U.S. leadership in STEM talent development and “to expand STEM education and career opportunities for underrepresented groups, including women” (Educate to Innovate)

➢ Global competitiveness
Career – Life Balance Initiative: NSF Plan

- Agency-level pathway approach across higher education and career levels (i.e., graduate students, postdoctoral students, and early career populations).

- Initial focus on career—life balance opportunities such as dependent care issues across the pathway (i.e., postdoctoral fellows and early career faculty).

- Initial Programs: CAREER and NSF postdoctoral programs.

- Also expand later to GRF, ADVANCE, and others.
Career – Life Balance Initiative: Implementation

FY 2012:

- **Leadership**
  - Expand best practices NSF-wide across the pathway
  - Defer award start date for child birth/adooption
  - No cost extension for parental leave
  - Provide resources to accommodate career—life balance opportunities such as support for research technicians
- Enhance program management
  - Educate/train program officers, reviewers & panelists
  - Revise program solicitations; issue FAQs & announcements
  - Promote family-friendliness for panel reviewers
    - Virtual panels
    - Increase use of NSF lactation room in Health Unit
- Support research/evaluation on women in STEM issues
- Promote Federal policy -- Title IX
- Lead by example to become a model agency for gender equity
Career – Life Balance Initiative: Implementation

FY 2012 (cont.):

- **Partnerships**
  - With institutions of higher education
    - Supporting & promoting institutions’ best practices
      - Extending the tenure clock; dual career opportunities
  - With Federal agencies
    - Exchange best practices
    - Better harmonize family-friendly policies & practices
    - Issue joint statements
Communications

- NSF Important Notice to College/University Presidents
- NSF webpage and program-specific webpages
- NSF webinars

FY 2013 and Beyond

- Strengthening career-life balance opportunities through broader portfolio of NSF activities

“Federal agencies and research universities need to take concerted action to provide a suite of family responsive policies and resources for America’s researchers to change the problems [cited] and keep young researchers in the pipeline to fast-track academic careers in the sciences.”

-- Staying Competitive, 2009