Data Tools for Institutional Transformation – Project Overview

Lisa M. Frehill, Ph.D.
Senior Program Office, CWSEM, National Academies
Director of Research, Evaluation and Policy, NACME
Senior Analyst, Energetics Technology Center

Research is supported by a grant from the National Science Foundation, ADVANCE: Partnerships for Adaptation, Implementation and Dissemination HRD #0820057. The opinions, findings, and conclusions are those of the author and do not reflect those of the National Science Foundation.

Original Indicators, ADVANCE PI Meeting, April 2002

Outcome	1	2	3
1. # and % of women faculty in science/engineering by department	9		
2. # and % of women in tenure-line positions by rank and department	9		
3. Tenure promotion outcomes by gender	4	5	
4. Years in rank by gender	8	1	
5.a.Time at institution and b. attrition by gender	9, 5	0,3	0,1
6. # of women in S & E who are in non-tenure-track positions (teaching and research)	5	3	1
7. # and % of women scientists and engineers in administrative positions	8	1	
8. # of women S & E faculty in endowed/named chairs	5	4	
9. # and % of women S & E faculty on promotion and tenure committees	7	2	
10. Salary of S & E faculty by gender (controlling for department, rank, years in rank)	6	3	
11. Space allocation of S & E faculty by gender (with additional controls such as dept., etc.)	4	2	3
12. Start-up packages of newly hired S & E faculty by gender (with additional controls such as field/department, rank, etc.)	3	4	2

Baseline – 2000 and 2001
Rate: (1) Can do easily
(2) Not easy but would like to do
(3) Just can't do – i.e., no way

Non-institutional Indicators
Climate
Productivity
Family/work-friendly policies

Precursor Projects

Toolkits: Developed by the ADVANCE Institutional Transformation Indicators Working Group (NSF-Funded supplement on Frehill's IT award at NMSU):

- **Toolkit for Reporting Progress Toward NSF ADVANCE: Institutional Transformation Goals**
  Available at **http://www.cpst.org/diversity/toolkit1.pdf**

- **Using Program Evaluation To Ensure the Success of Your Advance Program**
  Available at
  http://www.cpst.org/diversity/toolkit2.pdf

Effective Strategies to Diversify STEM Faculty (NSF funded, Research on Gender in Science and Engineering – Co-PIs O'Connell and Serrano at NMSU)

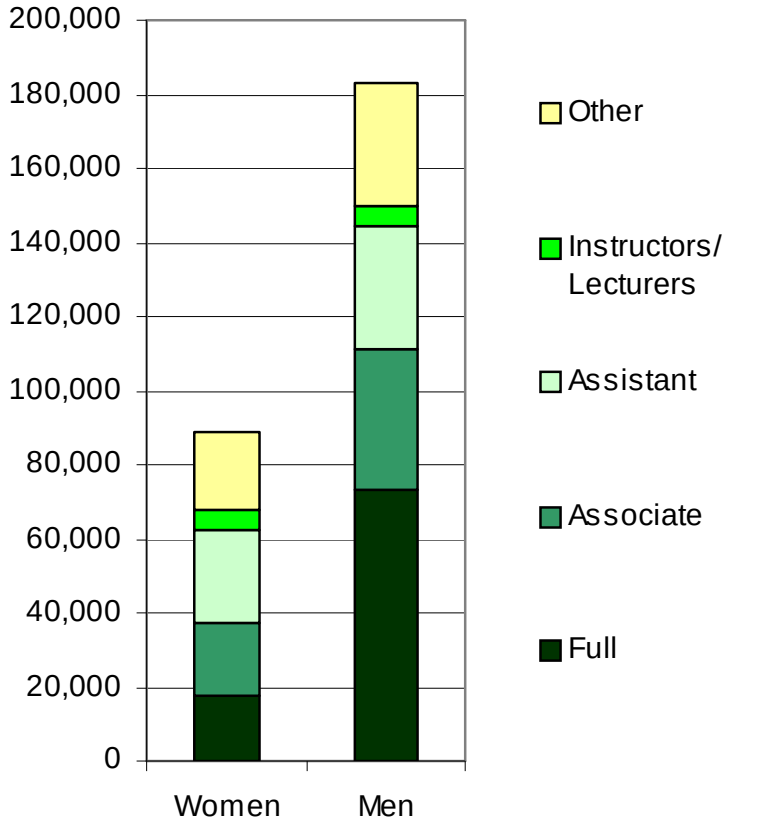
Alfred P. Sloan Foundation: Minorities and Non-Minorities in Academia: A Natural Sciences and Engineering Career Pipeline Approach (Commission on Professionals in Science and Technology)

Sloan Minority Faculty Project, 2006-2007 Data Sources

- Survey of Doctorate Recipients.
- Survey of Earned Doctorates.
- Sigma Xi survey of postdocs.
- National Study of Postsecondary Faculty (1999 and 2004 . . . Next one was supposed to be fielded 2009).
- Professional societies' data.
- Nelson Diversity Surveys.
- IPEDS – integrated postsecondary education data system.
- SESTAT: Scientists and engineers statistical analysis system – access via NSF, compiles results of NSCG, NSCRG and SDR.

Women account for less than half of “regular ranks” faculty with low representation among full professors.

Figure. 5-12. Rank of Doctoral S&Es Employed at Four-Year Colleges and Universities by Sex, 2006

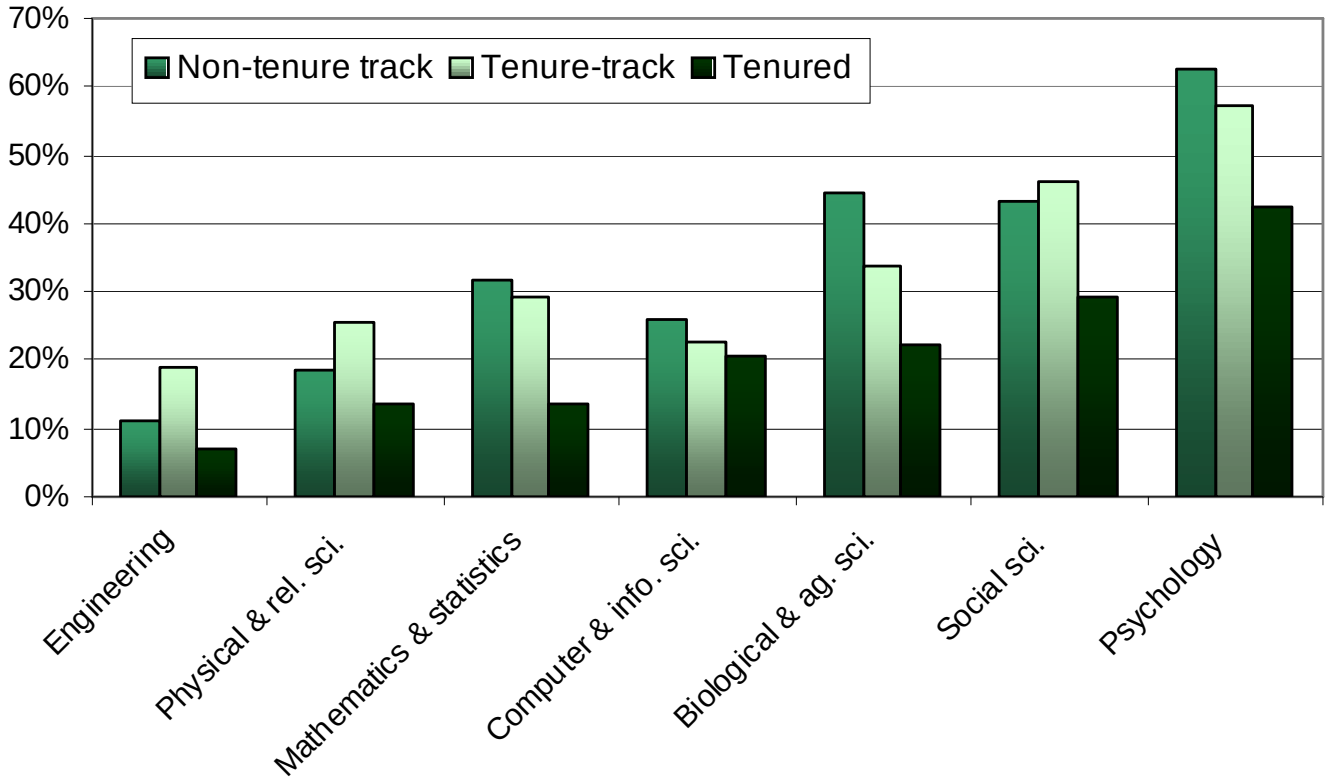


Source: CPST analysis of National Science Foundation SESTAT data base. The use of NSF data does not imply NSF endorsement of the research, methods, results or conclusions presented here.

CPST

Women's representation on the faculty varies by field in STEM and by level.

Figure 5-14. Women Doctoral Degree Faculty by Tenure Status and Field, 2006



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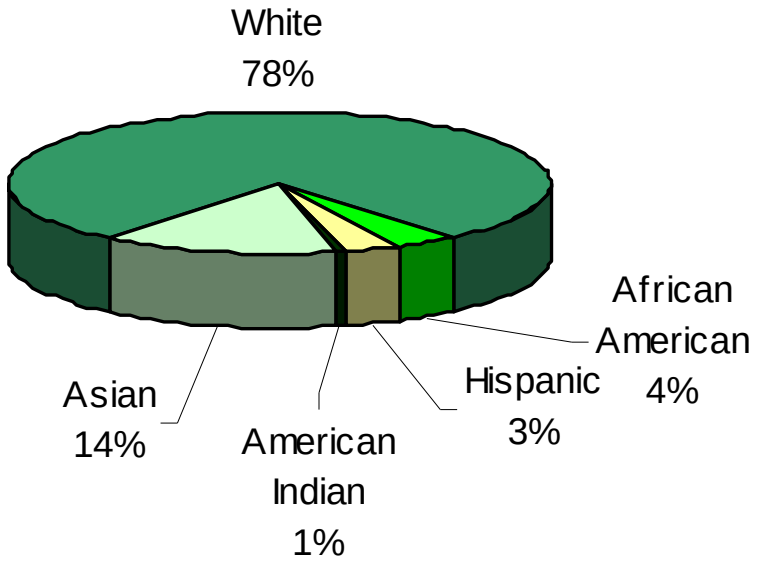
Only 8% of doctoral scientists and engineers at four-year academic institutions are under-represented minorities.

Figure 5-13. Doctoral Scientists & Engineers Employed in Four-Year Colleges and Universities by Race/Ethnicity, 2006



Source: CPST analysis of National Science Foundation SESTAT data base. The use of NSF data does not imply NSF endorsement of the research, methods, results or conclusions presented here.

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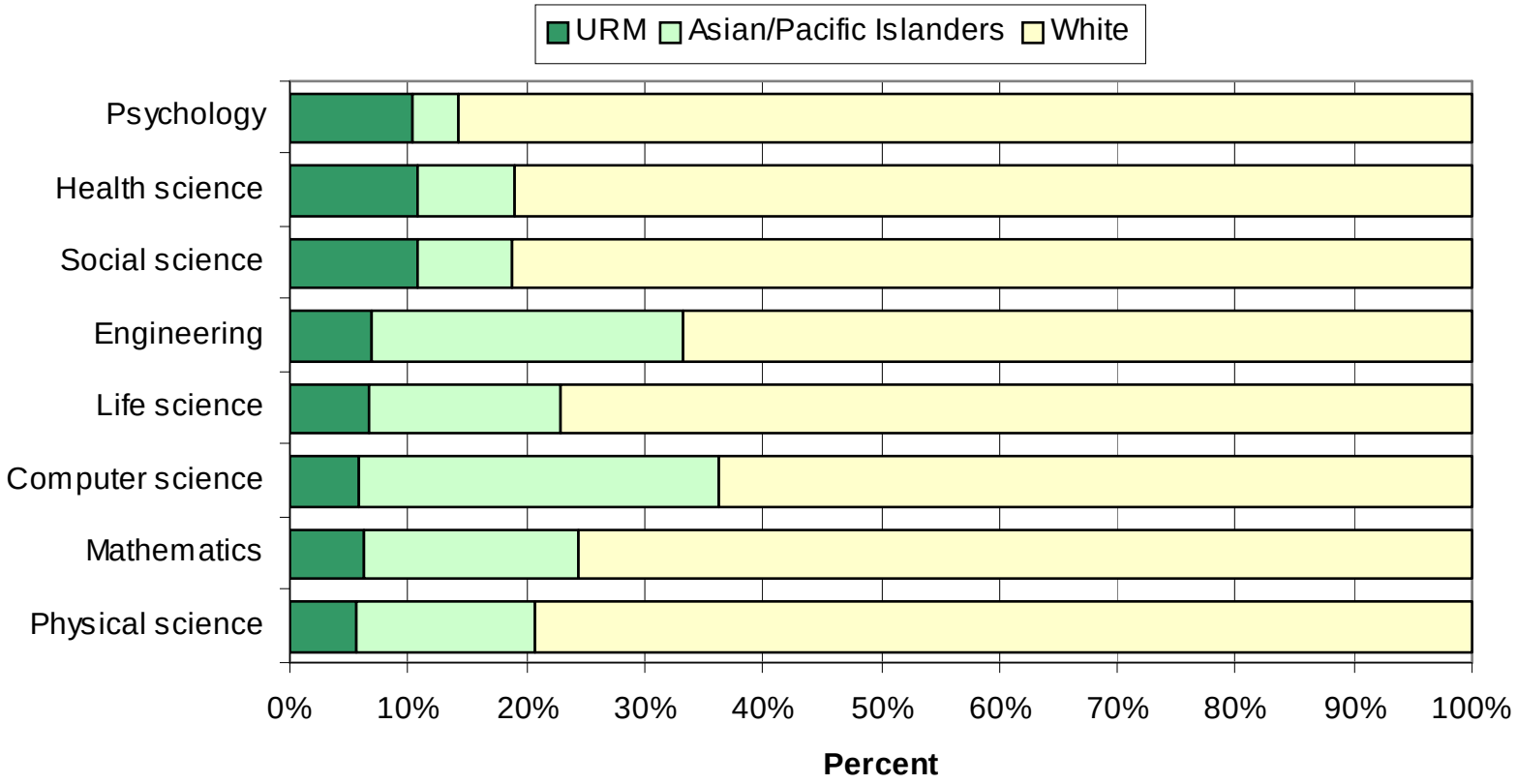
Doctoral-degreed URMs account for less than 10% of most STEM field faculty at U.S. 4-year institutions.

Figure 5-15. Race/Ethnicity of Doctoral Scientists and Engineers Employed at Four-Year Colleges and Universities by Field of Doctorate, 2006



URM = underrepresented minorities, includes African Americans, American Indians, and Hispanics.
Source: CPST data derived from National Science Foundation, *2006 Survey of Doctorate Recipients, Characteristics of Doctoral Scientists and Engineers in the United States, 2006* .

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Women of color – increasing visibility & data availability
Frehill & Ivie, PAID

- White Papers

  (1) Professional societies – Ivie and Frehill workshop 6/18/2009.
    - Which societies collect data?
    - What can we learn about women of color in academia?

  (2) Survey of Doctorate Recipients (longitudinal) – replication of Ginther & Kahn 2005 (adding ethnicity).

  (3) National Study of Postsecondary Faculty (cross-sectional, multi-year) – replication of Frehill 2007 and Frehill & Cardenas 2005 (adding gender).

- Culminating Event: Double-Bind Revisited Conference