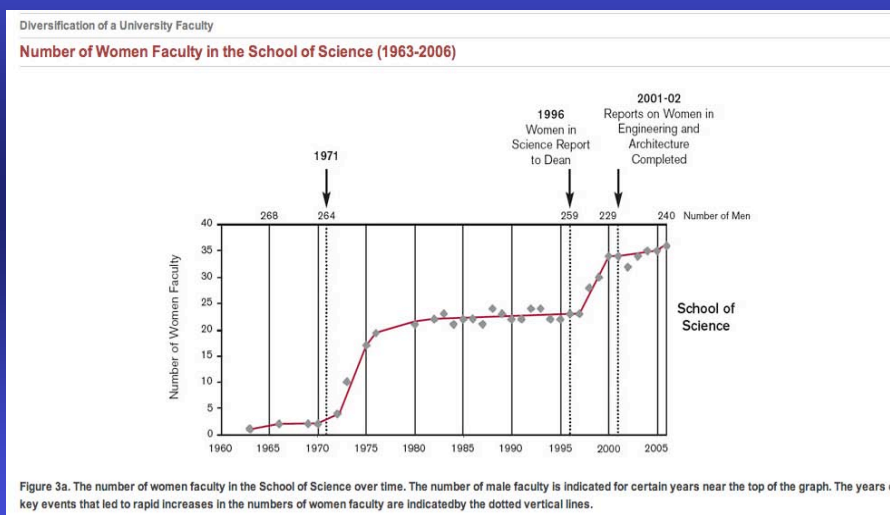


Powering Up: Women as Leaders in the Scientific Enterprise

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Beyond the MIT Report



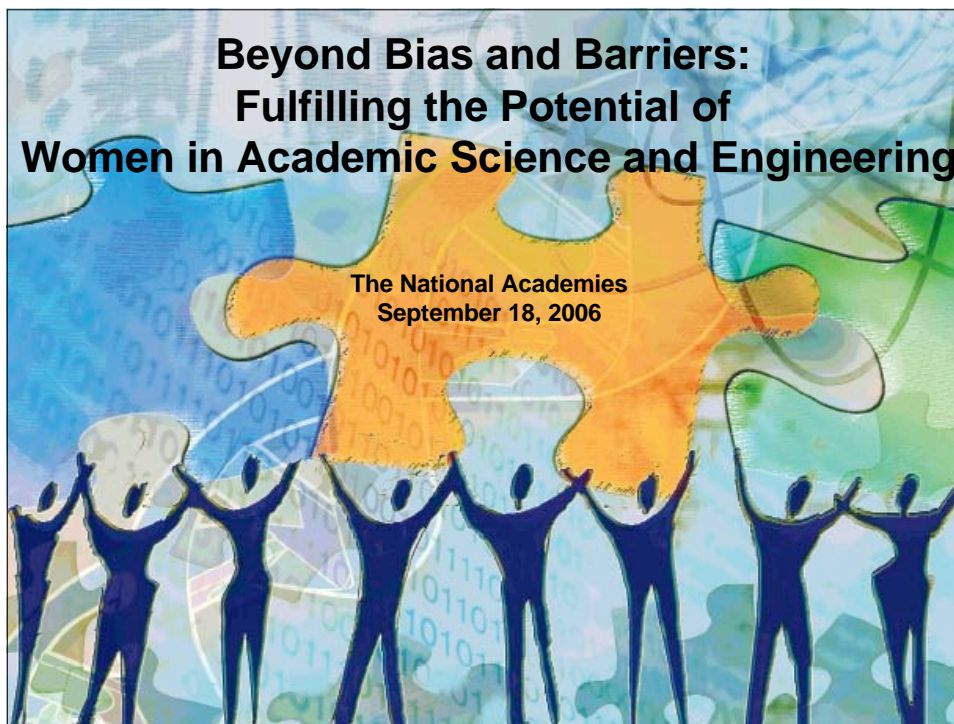
Recent US Programs with Positive Impact

Federal Level: National Academies Report: Beyond Bias and Barriers:

University Level: National Science Foundation ADVANCE Program

Departmental Level: National Workshops for Science and Engineering
Department Chairs

Individual Level: Leadership Development Programs for Women Science
Faculty, Postdoctoral Associates and Graduate Students (COACH)



ISSUES EXAMINED

- Pipeline
- Differences in biology and aptitude
- Outright discrimination
- Unconscious bias
- Climate
- Rules, policies, and structures

RECOMMENDATIONS

Transforming institutional structures and procedures to eliminate gender bias is a major national task that will require strong leadership and continuous attention, evaluation, and accountability.

The committee's recommendations are large-scale and interdependent, requiring the interaction of university leaders and faculties, scientific and professional societies, funding agencies, federal agencies, and Congress.

For more information on the study, see

<http://www7.nationalacademies.org/womeninacademe/>

Recommendations for Universities



Higher education organizations, scientific and professional societies, journals, and honorary societies

have a responsibility to play a leading role in promoting equal treatment of women and men and demonstrate this commitment in their practices.

Foundations and federal funding agencies



**PROGRAMS
and POLICIES**

Ensure that their practices—including rules and regulations—support the full participation of women and do not reinforce a culture that fundamentally discriminates against women.

Federal Enforcement Agencies



MONITOR

Federal agencies should *move immediately to enforce the federal anti-discrimination laws* at universities and other higher education institutions through regular compliance reviews and prompt and thorough investigation of discrimination complaints.

Workshop on Building Strong Academic Chemistry Departments Through Gender Equity

January 29-31, 2006
Arlington, VA

*56 Department Chairs from top Chemistry Departments
~30 University Leaders, Funding Agency Leaders and Speakers/Panelists*

Goals of the Workshop

- ❖ Educating Chairs on the factors that contribute to under-representation and under-participation of women faculty in the U.S. scientific enterprise.
- ❖ Developing a series of goals for the departments and institutions to increase the number and success of their women faculty in their institutions.
- ❖ Following up on implementation of the goals.

Program:

*Data Driven Presentations by Social Scientists and Academic Leaders
Panels and Break-out Sessions*

Workshop Action Items

- **Departmental Level:** Each department was to select 2 action items for implementation.
- **Administrative Level:** Propose gender equity action items to institutional administration
- **Funding Agency Level:** Work with funding agencies to develop new strategies for funding equity
- **Follow-up:**
Interactive website created by COACH for chairs to report their goals and progress towards these goals.

Effect of Accumulation of Disadvantage



Search Committees
Heavier teaching loads
Departmental Service
Advising, mothering...
Inadequate mentoring

“Why So Slow? The Advancement of Women”
Virginia Valian, 1998 MIT Press, Cambridge, Mass

Action items developed for the Departmental Level

1. **Double the percentage of women applicants in the applicant pool in the next year.**
2. **Establish effective mechanisms for assisting career development of young faculty, especially women.**
3. **Consider personal obligations in academic scheduling and planning.**
4. **Develop and implement programs that educate *all* faculty members and students in your department regarding the accumulation of disadvantage of women.**

Action at the Institutional Level

1. **Make diversity an academic priority and develop programs that enhance recruitment and retention of faculty.**
2. **Develop policies to facilitate the hiring of women, including facilitating spousal hiring.**
3. **Assure that mid- and senior-level faculty, especially women, are participating in leadership roles.**
4. **Recognize the importance of and advocate for institutional support of child care.**

Results of the Workshop: Attitude shifts

From COACH pre and post survey of the Chairs:

PRE: Principle factors limiting Chairs' ability to hire women were beyond their control, e.g.
too few applicants, losing candidates to other departments, spousal hires.

POST: More likely to report limiting factors were within their control, eg.
departmental faculty not committed to or opposed hiring women, didn't have enough financing.

Results of the Workshop: Attitude shifts

The Chair's perceptions of factors that slow the progress of women chemistry faculty *changed* for 9 of the 11 sampled barriers including:

- *Few available mentors*
- *Inability to recruit best graduate students.*
- *Women excluded from important departmental decisions.*
- *Lack of success in securing funding.*
- *Subtle biases against women.*
- *Unwelcoming departmental climate.*
- *Discrimination in peer review process.*
- *Heavier service/teaching load.*
- *Women do less self-promotion.*

Results of the Workshop: Follow through

Action items selected by Department Chair goals: 45/56 responded on Website.

- Establish effective mechanisms for assisting career development of young faculty, especially women. (n=26)
- Double the percentage of women applicants in the pool. (n=22)
- Assure that mid- and senior-level women faculty in leadership roles. (n=21)
- Develop policies to facilitate the hiring women, including spousal hiring. (n=15)
- Make diversity an academic priority and develop programs that enhance recruitment and retention of faculty. (n=13)
- Consider personal obligations in academic scheduling and planning. (n=10)
- Educate faculty members in your department regarding the accumulation of disadvantage that impact women faculty. (n=10)

COACH

An organization of women science and engineering faculty working to increase the numbers and success of women scientists and engineers.

Website: <http://coach.uoregon.edu>

Sponsors: NSF, NIH, DOE

Membership open to both men and women.

COACH

COACH Program Goals

Enhancing leadership skills.

Expanding networks.

Improving institutional climate.

Leveling the playing field.

COACH Programs

1. Leadership Workshops for Women

Faculty Postdocs Graduate students

2. Leadership Workshops for Minority Women

3. Leadership Forums (men and women)

Academic Institutions Departments

Research Institutes and Centers

Examples of COACH Workshops

Coaching Strong Women in the Art of Strategic Persuasion

- Successful negotiation techniques and strategies
- Case studies
- Group problem solving
- Using the “Power of Partnerships”



Facilitators

- **Barbara Butterfield**, *Chief Human Resource Officer for Academic and Staff Human Resources and Affirmative Action, University of Michigan*
- **Jane Tucker**, *Senior Manager, Sap - Administration Systems Management Group, Duke University*

COACH Workshops

Coaching Strong Women in the Art of Powerful Presentations

- Strategic rather than reactive behavior
- Effective speaking voices and self presentation
- Stress reduction and confidence building
- Leadership and team development skills



Facilitators

- **Lee Warren**, *Associate Director, Derek Bok Center for Teaching and Learning, Harvard University*
- **Nancy Houfek**, *Head of Voice and Speech, Institute for Advanced Theater Training, Harvard University*

COACH Workshops

The Chemistry of Leadership: A Women's Leadership Development Program

- Concepts of leadership (including self evaluation).
- Explore what is known the role of gender in leadership situations.
- Reflect on own leadership challenges.
- Identify/develop areas for skill enhancement.



Facilitator

Sandra L. Shullman, *Executive Development Group - Columbus, OH*

COACH Workshops

Impact

Over **2000** women science faculty in the USA in

- *Chemistry*
- *Physics*
- *Mathematics*
- *Biochemistry*
- *Geology*
- *Computer science*
- *Biology*

have attended these COACH developed workshops at professional meetings or home institutions.

Over **1000** science and engineering graduate students have attended at home institutions and regional meetings.

COACH Workshops

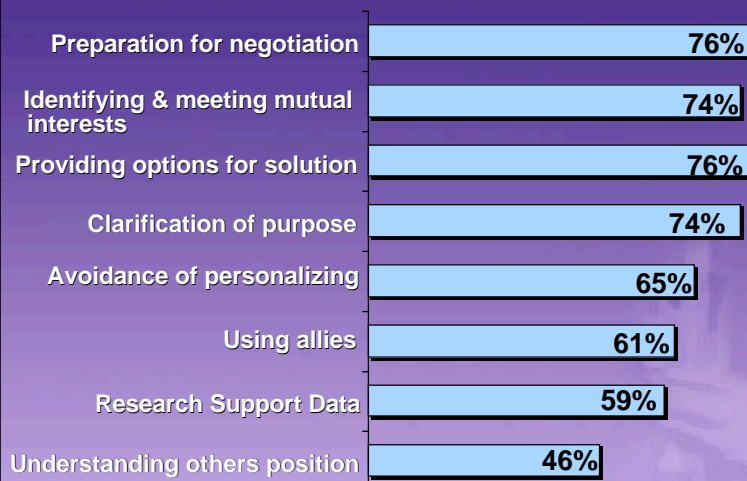
Taking the Impact Home

Our research shows that **> 90%** have mentored other women in negotiation skills learned in the COACH workshops.*

*From surveys conducted 2 years after the workshops.

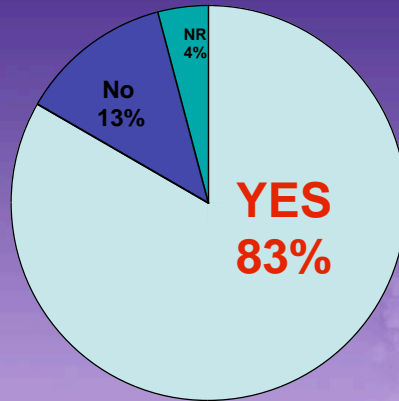
Assessing the Impact: 2-3 years later

Skills used most:



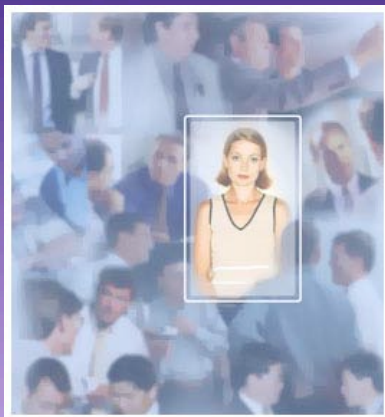
Assessing the Impact: 2-3 years later

Did the skills learned lessen stress?



COACH

A career in academia?



~~Why Bother?~~

Why NOT?

COACH

For a summary of the reports and activities in this talk see:

<http://coach.uoregon.edu/> (Resources link)

Email: coach@uoregon.edu