

Results of the Workshop on Gender Equity in Materials Science and Engineering and Follow up Actions

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GENDER EQUITY IN MATERIALS SCIENCE AND ENGINEERING

A Report on the
Workshop on Gender Equity in Materials Science and Engineering
May 18 - 20, 2008
College Park, Maryland

Sponsored by:



Workshop run May 2008

- Workshop organized at the request of the University Materials Council
- Funding by the NSF DMR & Engineering and DoE BES
- May 18-20 at the Conference Center at the University of Maryland
- 98 participants
- 62 attendees from 45 universities
- 11 attendees from 9 national laboratories



Observations

- Skit by the University of Utah ADVANCE team highlighted personality issues.
- Implicit biases are pervasive and common among both genders.
<https://implicit.harvard.edu/implicit/>
- Try it yourself:
- Expectations and standards for the genders are based on our “schemas” by which we understand our world.
- Job situations for women are different from men. 90% of faculty women have working spouses while 50% of men do.



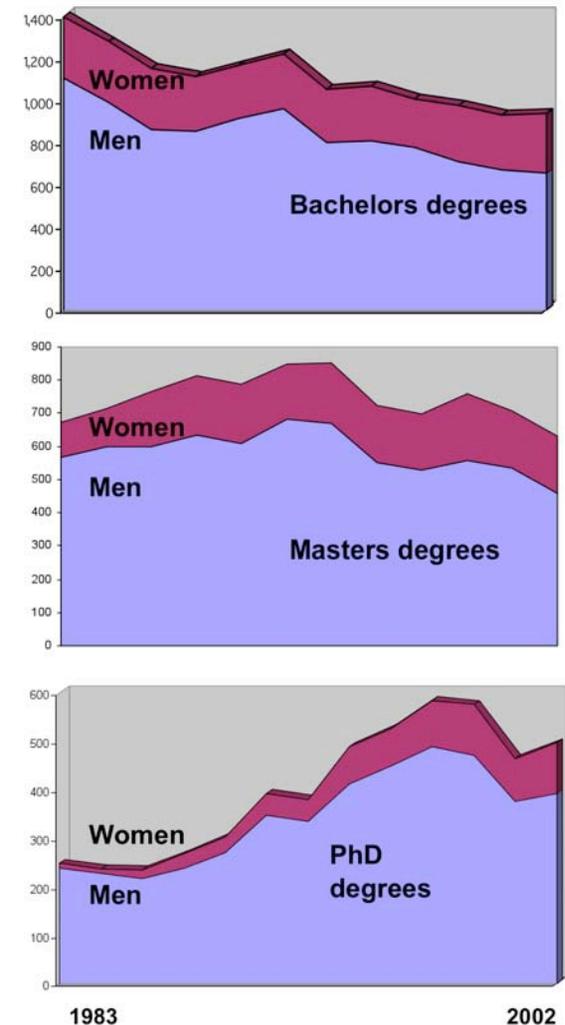
Observations

- 78% of women academics rate “balancing work and family life” as their greatest challenge.
- In one study 62% of women in STEM were married to a scientist or engineer making “two-body” problems of great concern.
- This limits the ability to move and that can restrict salary increases that such moves can induce.
- Women with children are not less productive or successful.



Pipeline

- Women have been graduating in MSE at increasing rates.
- We still lose qualified women from all ranks much faster than men.
- Especially between the Ph.D. and the junior faculty rank.
- Further attrition with rank within the faculty.
- There are problems with the job and with the climate.



Discussions

- Enhance acceptance of women by how their case is presented both when considered for hiring and at promotions.
- Improve mentoring.
- Administration should champion women faculty and put them on strong committees with leadership component.
- Develop an improved community feeling within the departments.
- Develop standards for “family friendly” environments and reward such schools.



Aside...

- This morning Chris Grovenor cited the difference in women in MSE in Germany and France. Similar observations can be made about participation of women in STEM elsewhere.
- This emphasizes the fact that diversity is a “nurture” culture and society issue, not a “nature” issue.

Recommendations

- There should be a **follow up process** to determine what additional changes need to be made to accelerate progress in gender equity.
- Departments should **strengthen documentation and enforcement** of procedures.
- Departments should **strengthen mentoring** of junior faculty.
- Departments should **raise awareness** of gender bias and work to eliminate hostile attitudes.
- A new type of **training session should be developed** that would be more effective in conveying the facts and consequences of gender bias.
- The UMC should establish a **certification of “family-friendly” or “gender equivalent” institutions**.
- **Novel approaches** to adjusting job responsibilities of faculty, staff, and students to permit them to deal with family/life issues are needed that do not carry stigmas.
- Faculty and national laboratory staff need to **promote the benefits of their careers to women**.

Recommendations of the Gender Equity Workshop

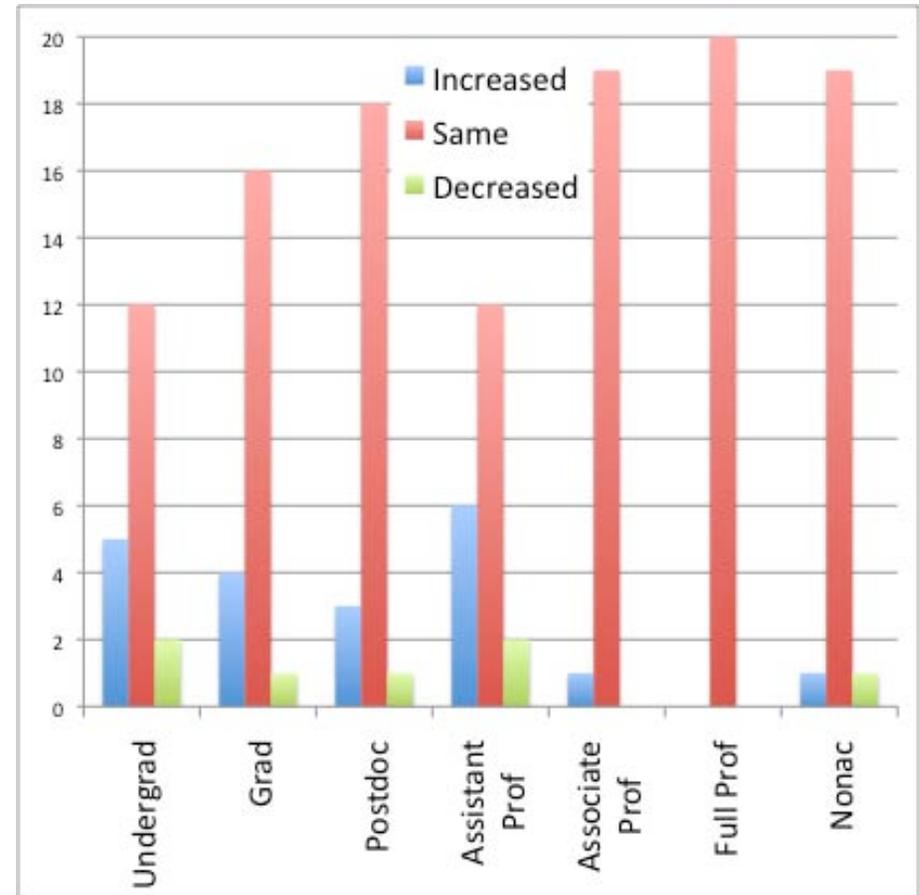
- There should be a follow up process to determine what additional changes need to be made to accelerate progress in gender equity.
 - **Doing this here.**
- Departments should strengthen documentation and enforcement of procedures.
 - **One report of specific documentation in place.**
- Departments should strengthen mentoring of junior faculty.
 - **Two reports of strengthened efforts at mentoring junior faculty.**
- Departments should raise awareness of gender bias and work to eliminate hostile attitudes.
 - **Nine departments reported increased awareness and specific efforts to reduce inequities.**

Recommendations of the Gender Equity Workshop

- A new type of training session should be developed that would be more effective in conveying the facts and consequences of gender bias.
 - **No change made in this area.**
- The UMC should establish a certification of “family-friendly” or “gender equivalent” institutions.
 - **Appointment of a committee to study this is in progress.**
- Novel approaches to adjusting job responsibilities of faculty, staff, and students to permit them to deal with family/life issues are needed that do not carry stigmas.
 - **No change in this area.**
- Faculty and national laboratory staff need to promote the benefits of their careers to women.
 - **At least two departments report a change in this area.**

Survey of Heads

- Some progress among students at several schools.
- Some progress among Assistant Professors but hiring freezes prevented action at most.
- Only one promotion of an Assistant Prof. reported. No promotions to Full reported.



What Difference did the Workshop Make?

- Six heads reported that it increased their awareness of the issue.
- Nine reported no change but all indicated that diversity was an existing policy of their department including in hiring decisions.
- Nine reported specific changes made.



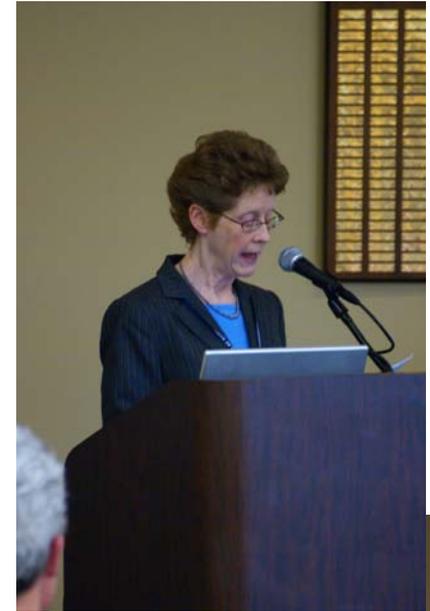
What Difference did the Workshop Make?

- Samples of changes made:
 - Establishment of an ADVANCE program on campus.
 - Increased consideration of “non-professional” responsibilities and mentoring with these.
 - Best practices in recruiting women and other policy documents in place.
 - Sabbaticals, maternity leave, and stopped tenure clocks for women faculty
 - Increased diversity on search committee.
 - Faculty meetings scheduled during normal business hours.
 - Increased mentoring of female faculty.
 - An internal workshop on gender and race sensitivity and behavior in the classroom at one institution.



What Difference did the Workshop Make?

- Samples of changes made:
 - Proactive increased involvement of junior faculty in department decisions (where there are more women)
 - On campus lecture by Brian Nosek on implicit biases.
 - Gender bias as an agenda item at faculty meeting & retreat
 - Family friendly guidelines considered.
 - Open house targeted at attracting undergraduate women.
 - Consideration given in compensation decisions at one institution.
 - Scholarship established for women undergraduates.
 - REU program focusing on women participants.
 - Family leave policy discussed for graduate students.
 - Leadership training program for women undergraduates.
 - Added women to an external advisory board.



What should the UMC do next?

- General sense that **the issue should remain on the table** to keep it visible and that periodic reports should be solicited.
- More effort should be made to **promote diversity among higher up administrators.**
- More effort should be made to **promote academic careers** among women rising through our programs.
- Focus on **best practice discussions.**
- **Reward success** among ourselves.

