

# Women in New Jersey's Science and Technology Workforce Summit

June 8, 2007

Hosted by:

Rutgers University's Office for the Promotion of Women in  
Science, Engineering and Mathematics

New Jersey Council on Gender Parity in Labor and Education



# Summit Structure

- Morning Plenary Sessions:
  - Policy in New Jersey (featuring State Agencies)
  - View from the Field (featuring researchers and industry)
- Keynote Speaker
  - Dr. Nancy Snyderman, Chief Medical Editor for NBC News
- Breakout Sessions
  - Five Topics for Facilitated Discussion
- Final Plenary: Creating Our Action Plan



# Recruitment and Retention of Women in Science and Technology Industry

- Create a portal to provide links to resources available through industry, professional organizations and academic institutions for programs.
- Develop a resource guide that can be distributed to students about existing programs for summer internships, camps, etc.
- Provide best practices regarding diversity initiatives within organizations.
- Develop a targeted information campaign focused on parents and community members about the significance of technology literacy .
- Inform employees of their rights regarding discrimination.



# Media and Cultural Perceptions of Women in Science and Technology

- Strike a balance between the elements that drive the media business (money, “newsworthy” stories), and the objectives of those who are advocating for cultural change.
- Reach out to youth using celebrities and the forms of media that are most influential with youth, such as Podcasts, graphic novels, and music.



# Work-Life Balance

- Differentiate between “time” issues (i.e. not enough hours in a day), and “presence” issues ( i.e. can’t always be at the right place at the exact time they are expected).
- Suggestions for policies that employers can implement to address work-life balance, included:
  - flexible scheduling,
  - day care at the workplace,
  - implementing maternity and family leave policies,
  - allowing work from home when possible,
  - creating equal opportunities for women ,
  - increasing levels of respect for women,
  - creating “professions with passion” to attract women’s desire to help people,
  - and starting women in smaller companies where there may be more flexibility.

# Perceptions of Career Pathways in the Sciences

- Ways to better communicate career opportunities included:
  - A two-way partnership between industry and institutions for more practical knowledge about the work environment and work opportunities.
  - Change the academic culture so that the outreach is as legitimate as research in terms of tenure ratings.
  - Add more STEM areas to Science Exploration programs
  - Excite young people about science and tech careers by signing on volunteers who will promote education careers in STEM, and use youth-friendly applications like MySpace and Facebook for interaction.
  - Modify teaching certifications to allow people from other professions to teach.
  - Utilize collaborative resources such as the state colleges (e.g. for digital library), and sustain support of cyber infrastructure from [www.NJedge.net](http://www.NJedge.net) to house knowledge.
  - Create more K-12 programs that support teaching fellowships for graduate students in STEM disciplines.

# Perceptions of Career Pathways in the Sciences

- Ways to re-structure the teaching of science:
  - Introduce career programs into the classrooms.
  - Relate the course of the study to practical situations. Do not always rely on the labs for the experiments but also open environment can be used for hands on experience.
  - Start restructuring education early from the young student's experience.
  - The academic curriculum should be more project-based than theory-based, and should be integrative (i.e. Math, Writing, Science, Social Studies) especially in elementary schools.
  - Motivate female students by mentoring using older students and teachers.
  - Counteract lack of parent involvement due to language barriers, dual earning parents, single parents/guardian families, and more. Meet with parents and provide information about their influence on career decisions.
  - Create more experiential learning opportunities like science fairs so that girls and other underrepresented students get acquainted with science and maintain their enthusiasm.
  - Create a science seminar semester course where each student should be a given a science topic to research on.



# Mentoring, K to Gray

- Institutionalize formal mentoring programs to counteract the natural tendency to mentor those who are similar to you, and encourage mentoring across racial and gender lines.
- Dedicate institutional resources (funding, staff time) to the creation of opportunities for informal mentoring opportunities.
- Before the mentoring relationship begins, ensure that both the mentor and the mentee know what to expect from the relationship. Provide formal training for mentors.
- Mentor K-8 science teachers by promoting / funding development of partnerships between K-8 science teachers and career scientists.



# Creating Our Action Plan

- In education, what do you believe is the single most important factor influencing girls/women's interest and persistence in STEM (Science, Technology, Engineering & Mathematics) curriculum?
  - Mentors and role models, 36%.
  - Co-curricular activities and hands-on experiences, 20%
  - Exposure to science and tech fields at early age ,19%
  - Classroom climate and parents' influence had some attention, but the least popular response was Resources.



# Creating Our Action Plan

- At what point should science and technology career education begin with students in order to counteract gender stereotyping?
  - 86% of respondents indicated that this education should begin at either the pre-school or early elementary levels,
  - small number indicating late elementary.
- What is the best strategy for encouraging females or underrepresented students to consider STEM careers?
  - Career Development Programming or Curriculum that emphasizes exploration, 52%
  - Mandatory training of all teachers on gender equity and career development; Curriculum requirements; and Programs for parents and community all received equal votes from the remaining respondents.



# Creating Our Action Plan

- In the workplace, what do you believe is the single most important factor influencing women's success (or lack thereof) in their field?
  - Workplace climate (37%),
  - Work hours/flexible choices (18%),
  - Mentoring or gender initiatives (16%),
  - Family care support initiatives received (12%).
  - Sexual Harassment (12%),
  - A critical mass of women workers/role models (4%),
  - Innate ability 0%—a definitive negation to the media attention on biological differences between men and women when it comes to ability to do science.



# Creating Our Action Plan

- What is the most important thing that the Council on Gender Parity in Labor and Education should recommend to the state of New Jersey with regards to this topic?
  - Media / ad campaign on the "Science Cool" factor (27%)
  - Teacher training (content and pedagogy) (19%)
  - Legislation which strongly enforces equity in education and the workplace (19%)
  - State-based incentives for workplaces with exemplary policies (18%)
  - Community education on gender and career development (13%)
  - More focused research (3%)