



CEOSE STEM Comments: June 29, 2009

Good morning. My name is Adam Zimmerman, and I am the Regulatory Affairs Manager for the American Association of University Women. On behalf of AAUW, it is my privilege to address the Committee regarding women and other underrepresented minorities in the STEM fields.

AAUW supports promoting and strengthening science, technology, engineering, and mathematics education, especially for these particular populations. In fact, we've been known to go out on a limb to help women scientists when the rest of society scoffed at their efforts: In 1920, Marie Curie, then only a future Nobel Prize-winning scientist, received \$156,413 from AAUW members toward the purchase of one gram of radium for her research. Today, our foundation still provides at least \$3 million annually to women scholars and our branches provide Tech Savvy camps to girls across the country. As you can see, AAUW takes reducing barriers that deter women from pursuing academic and career goals in STEM fields quite seriously. These efforts aren't just the feel-good, right thing to do; they will help improve women's economic security and increase America's competitiveness in the process.

The shortage of American scientists threatens our nation's ability to compete and innovate in the coming years, especially as the outsourcing of jobs to, and importing of science from, other nations continues to grow.

By 2010, one in four new jobs will be “technically oriented,” or involve computers.¹ However, women still lag far behind in earning computer technology degrees and working in computer technology-related professions; moreover, women comprise only 27 percent of computer and mathematical professionals.² Statistics further show that the ‘gender lag’ in the STEM fields begins at an early age; high school girls represent only 17 percent of computer science Advanced Placement test takers.³ College-educated women earn only 26.8 percent of bachelor's degrees in mathematics and computer science (down from 39.3 percent in 1984) and 25.3 percent of doctorate degrees in mathematics and computer science.⁴

AAUW’s own research has documented the troubling shortage of girls and women preparing to work in STEM fields. In order to close this gap, AAUW is involved in a number of efforts designed to encourage girls and other underrepresented groups to pursue STEM careers. AAUW currently has two National Science Foundation grants funded by the Gender in Science and Engineering division. One of the grants supports the National Girls Collaborative Program, focused on increasing opportunities for K-12 girls in science and engineering. The other is a dissemination grant to publish, promote, and distribute an AAUW report highlighting recent key research findings about girls and women in STEM. AAUW is hopeful that funding aimed at bringing more women and girls into STEM fields continues to be a priority for the administration, and applauds Secretary of Education Arne Duncan’s recent announcement of \$2.4 million in grants made under the Women’s Educational Equity Act.

The lack of women and girls in the typically higher-wage STEM fields has significant implications for women's economic security—and the well-documented, persistent wage gap⁵— as well as the overall economy and America's global competitiveness. Fortunately, the U.S. has a significant pool of untapped talent. In fact, if women and members of other traditionally underrepresented groups joined the STEM workforce in proportion to their representation in the overall labor force, the shortage of STEM professionals would disappear.⁶ Therefore, in addition to funding NSF grants and programs, AAUW also supports a number of initiatives that will enhance gender equity vis-à-vis the STEM fields: proactively using Title IX as an enforcement tool to improve the climate for women and girls in STEM fields; measuring student achievement in science, as we currently do for reading and mathematics; and training our teachers to better encourage girls to pursue STEM careers in the face of gender-based differences, peer pressure, and parental expectations.

CEOSE has played an integral role in fostering the development of STEM-related projects and programs, efforts that will lift our nation's economic standing and position the United States as a driving scientific force in the 21st century. Millions of smart, capable and motivated women and girls stand ready to be involved in these endeavors. With encouragement, focus, and determination, we can work together to ensure that the next generation of technological pioneers are given all of the tools they need to succeed and thrive.

¹ AAUW Educational Foundation, Commission on Technology, Gender, and Teacher Education. (2000). *Tech-Savvy: Educating Girls in the New Computer Age*. Retrieved December 29, 2008, from <http://www.aauw.org/research/upload/TechSavvy.pdf>.

² Bureau of Labor Statistics. (2006). *Current Population Survey, Table 11. Employed persons by detailed occupation, sex, race, and Hispanic or Latino ethnicity*. Retrieved December 11, 2007, from <ftp://ftp.bls.gov/pub/special.requests/lf/aat11.txt>.

³ College Board. (2007). *Program Summary Report*. Retrieved December 22, 2008, from http://apcentral.collegeboard.com/apc/public/repository/2007_Program_Summary_Report.pdf.

⁴ National Science Foundation, Division of Science Resources Statistics. (October 2008). *Science and Engineering Degrees: 1966-2006. (NSF 08-321)*. Retrieved December 29, 2008, from <http://www.nsf.gov/statistics/nsf08321/pdf/nsf08321.pdf>.

⁵ U.S. Census Bureau and the Bureau of Labor Statistics. (August 2008). *Annual Demographic Survey*. Retrieved December 11, 2008, from http://pubdb3.census.gov/macro/032008/perinc/new05_000.htm.

⁶ Congressional Commission on the Advancement of Women and Minorities in Science, Engineering and Technology Development. (2000). *Land of Plenty: Diversity as America's Competitive Edge in Science, Engineering and Technology*. Retrieved April 8, 2009, from http://www.nsf.gov/pubs/2000/cawmset0409/cawmset_0409.pdf.