

November 19, 2007

RE: Girls and Women in Science, Technology, Engineering and Math (STEM)

Dear Committee Members:

Leaders in the Iowa General Assembly and throughout Iowa's executive branch are to be commended for their proactive approach to addressing the state's surplus of high-tech, high-growth jobs. Your efforts at this time are sure to strengthen local economies, increase the value of our state and our workers to new investors, and deepen the commitment to a future in Iowa that existing businesses have.

Clearly, this is a time to take advantage of every opportunity to enhance the skills of our diverse workforce. As the Committee makes its broad recommendations to better prepare Iowans for the jobs of the future, the Iowa Commission on the Status of Women asks that you consider an intentional effort to actively recruit girls and women for these career pipelines.

Women have not traditionally selected careers and study in information technology or advanced manufacturing. Though girls statewide have a high rate of enrollment in advanced math and science classes in high school, they tend not to select those course of study in college or to select those careers. Women are vastly under-represented in engineering and the sciences with the exception of life sciences. For instance, at Iowa State University, the percentages of BS and professional degrees awarded to women in STEM have remained relatively constant over the last ten years, with women consistently earning less than 20% of all engineering degrees.

The underrepresentation of women in STEM careers is not a phenomenon unique to Iowa, and it is not unsolvable. While direct discrimination or discouragement of girls and women has diminished considerably over the last 50 years, strong sociological forces—nearly invisible to most of us—remain at work in our schools, our families, and in our society as a whole.

Several specific strategies have been developed within Iowa and in other states to encourage girls and women to more strongly consider STEM study and careers:

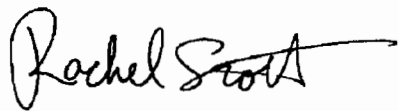
1. **Acknowledge the disparity and make a plan to address it.** Review the data about women's participation in post-secondary study of science, engineering, technology, and math, and ensure that relevant agencies and institutions are held accountable to set and reach goals for better participation of women.
2. **Provide ongoing female role models in non-traditional careers.** Having regular access to women in STEM careers and study, including graduate and undergraduate students, can be a crucial component to reinforcing girls'

interests in science and math at earlier ages. In-class volunteering, face-to-face or electronic mentoring, and focused out-of-time experiences are solutions already being utilized in Iowa.

3. **Expand recruitment strategies and curricula to include the interests of girls and women.** Non-traditional careers must be presented to girls and women in a way that they see the role of that career within a larger context. With more of a tendency to want to help or nurture, girls are likely to be more interested, for example, in an engineering project that adapts a car so a person with disabilities could drive it—rather than a project that makes a car go faster. With more efforts to emphasize the “human factors” of these careers, girls and women may be more likely to select those courses and/or careers. Similar to women running for office, girls and women also tend to respond well to being directly recruited by teachers they respect to sign up for classes they might not have ordinarily considered.

Using creativity and innovation, Iowa has an enormous opportunity in addressing the jobs surplus to also address the wage disparity between men and women. In our state, women earn \$0.77 for each dollar earned by men. Research also shows that women with STEM degrees do not leave the state for other opportunities as frequently as men do. With an intentional effort to recruit women for the high-tech, high-growth jobs in our state’s immediate future, Iowa will not only increase the standard of living for families across Iowa, we will make a smart investment in our workforce, as well as provide the skilled and diverse workers so highly sought by quality employers.

Sincerely,



Rachel Scott  
Division Administrator  
Iowa Commission on the Status of Women