

Title IX and Women in Academics

By Senator Ron Wyden

This fall the athletic fields of America's elementary and secondary schools, colleges and universities will resound with the voices of girls and young women who choose to include sports as part and parcel of their educational experience. Those girls and young women will not only be taking physical exercise; they'll be exercising their rights to equal opportunity under a law known as Title IX.

Title IX states a simple principle. The entire statute reads: "No person in the United States shall on the basis of sex, be excluded from participation in, be denied the benefits of, or be subject to discrimination under any educational program or activity receiving Federal financial assistance."

Many Americans know the enforcement of that common-sense rule has brought women much closer to parity in high school and college sports opportunities. But in my view, what Title IX has achieved on the playing field remains undone in the classroom, where the promise of this law was originally directed. Particularly, I believe that Title IX has yet to be applied stringently enough in traditionally male-dominated fields such as the hard sciences, math and engineering-disciplines where our nation needs competent workers now more than ever before.

We can all agree that fairness implores us to create and enforce equal opportunity for women in math, science and technology. That is a compelling argument in itself, but it is not the only argument. A report from the Hart-Rudman Commission on National Security to 2025 warned that America's failure to invest in science and to reform math and science education was the second biggest threat to our national security, greater than that from any conceivable conventional war.

America will not remain the power it is in the world today, nor will our people be as healthy, as educated, or as prosperous as they should be, if we do not lead the world in scientific research and engineering development. To make our country better, to improve our national security and quality of life, we need to encourage people to go into these disciplines. Women represent a largely untapped resource in achieving this vital goal. Encouragement through Title IX is more than the right thing to do; it is the smart thing to do.

The numbers reveal a striking inequity when it comes to gender representation in the math, science and technology fields. A National Science Foundation study found that women accounted for only 23 percent of physical scientists and 10 percent of engineers. The percentages of women on faculties in these areas are even lower, with 14 percent of science faculty members being women and a mere 6 percent in engineering departments. Moreover, the numbers are getting worse in some areas. The percentage of recipients of computer and information sciences bachelor's degrees who were women, which peaked at 37 percent in 1984, had decreased to just 28 percent in 1999. That is a movement in the opposite direction from athletics, where Title IX has been adequately enforced. Before Title IX, one in 17 girls in school played sports. Now it is one in 2.5. This country needs that kind of progress in math, science, and technology. But it will not happen as long as subtle and not-so-subtle discriminations persist in our educational institutions.

Studies show that women often have trouble advancing in math, science and technology due to a lack of equal access to financial aid and a lack of access to child care in graduate school. Additionally, evidence indicates discrimination toward not only aspiring students, but toward members of university faculties as well. Women in science and math often find themselves pushed into traditional female roles, such as teaching, while their male counterparts receive almost all the research fellowships that pay more completely for graduate school. Without a research background, women are less likely to obtain tenure-track faculty positions, which carry higher pay and prestige.

Just as America's schools were sent a clear message that they would lose Federal funding unless women were given parity in sports, it's time for our institutions to understand that there will be consequences if Title IX does not become a guiding principle in hiring, tenure, scholarships, and the provision of lab space and equipment. It is the law on the books, and schools that are not following it now should be put on notice that Title IX will be enforced as vigorously in the halls of academia as it is on athletic fields.

Applied more comprehensively, Title IX can serve as a valuable tool in not only breaking down formal barriers to entry, but in actually ensuring that more women succeed at math, science and engineering-or any other disciplines they choose.

This will require a sea change in the attitudes of many people at the nation's educational institutions. In my view, the Federal government should move now to bring about that change in a number of ways-particularly by helping to clearly define just how pervasive and how institutionalized discrimination in these fields has become.

Despite a great deal of anecdotal evidence, there are few studies about just how often women are discouraged from studying math, science and engineering, and how regularly women who do enter these fields face discouragement from their supervisors and colleagues. That is why Senator Barbara Boxer and I have asked the General Accounting Office to find out what is being done, if anything, to ensure Title IX enforcement in math, science, and engineering.

I also passed legislation requiring a review of whether the National Science Foundation is meeting its goals to expand opportunities in these disciplines for women, minorities, and people with disabilities, particularly in faculty hiring, promotion, tenure, and allocation of lab space. Another section of my amendment required a study to look at gender differences in the distribution of Federal research and development funds.

Shifting awareness in the government's scientific culture may be just as critical as changes at our educational institutions. As chair of the Science, Technology, and Space Subcommittee in the previous Congress, I held several hearings on the topic of encouraging women to enter math and science fields. I called on NASA Administrator Sean O'Keefe and his agency to use a new education initiative to help triple the number of women graduating with math, science, and engineering degrees by 2012. With clear evidence of inequity, there was no reason a Federal agency launching an education program should not do so with an eye to closing the gender gap.

I am committed to continuing to push government agencies and institutions receiving Federal funds to abide by and actively consider the text and spirit of Title IX. That is why I have signed on as a co-sponsor to two resolutions, one introduced by Senator Joe Biden (D-Del.) and the other by Senator Patty Murray (D-Wash.), both of whom reaffirm our commitment to the principles set forth in the Title IX law.

After I began advocating publicly on this issue, I received an e-mail from a professor on a search committee for a chemistry professor. He was lamenting the fact that out of 80 applicants for the position, only six were women. This frustrated educator suggested that gender inequity had to be attacked much earlier in the process, and I agree-it must be attacked much earlier, and in some cases even outside the scope of Title IX.

In addition to the barriers women face in the educational arena, cultural stereotypes discourage girls from math and science at a young age. Young girls in their formative years too often receive the message that math and science are not meant for them. In fact, one popular talking doll on the market a few years ago actually spouted catch phrases like "math is hard" and "shopping is fun." Inside the classroom, a lack of expectations and a shortage of female role models frequently perpetuate the problem.

The good news is that the stereotypes can be overcome. Nancy Stueber, the president of the Oregon Museum of Science and Industry, has told me stories of young girls who walked into the museum thinking that science and math were for boys. When the girls were asked to draw pictures of a scientist, they all drew an older white man in a lab coat. However, after participating in programs at the museum, those same girls drew pictures of women in lab coats. They had begun to imagine themselves as mathematicians, scientists and engineers.

My goal is to make sure that when those young women choose their careers, this nation's educational institutions are fully compliant with the law that guarantees them equal access. Careers in math and the hard sciences are their right-and it is in our nation's interest to encourage them. The enforcement of Title IX may well be America's best hope to maintain our position at the forefront of key scientific disciplines and our leadership in the world community.

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