



SWE General Position Statement on the Application of Title IX to the Science, Technology, Engineering, and Mathematics (STEM) Fields

One of the most daunting challenges facing aspiring and practicing science, technology, engineering, and mathematics (STEM) professionals today is having equitable opportunities to access jobs and education critical for American prosperity. Attracting students who represent the diversity of our nation is part of the Society for Women Engineers' (SWE) mission and critical to ensuring the talent to lead America into the future has a seat at the table. As the number of jobs requiring engineering and scientific training grows, the number of students preparing for those careers remains level, with women and minorities severely underrepresented.

Title IX of the Education Amendments of 1972 (commonly referred to as Title IX) requires gender equity for boys and girls in every educational program that receives federal funding.¹ In the 48 years since the enactment of Title IX, girls and women have experienced tremendous progress in educational programs and activities. Women have comprised nearly 60% of all undergraduate college students, and nearly half of all master's, doctoral, law, and medical students for the last two decades.² Yet women remain underrepresented in the STEM disciplines, earning only 20% of all bachelor's degrees granted in engineering and physics, and a decreasing share of bachelor's degrees in mathematics and computer science.³ Therefore, while progress is encouraging, equity remains out of touch, putting our nation at risk for losing out on some of the brightest minds and talent we have for STEM.

This August, a new Title IX rule with the force of law will go into effect for the first time in two decades, despite resounding condemnation from the field, and concern about how it may chill the progress made since the last century for women and girls.⁴ Since the rule was proposed, SWE has expressed its concerns with the new rule and is working with other advocates for women, girls, and underrepresented minorities, some of which are suing the Department of Education, to ensure there are better protections and opportunities in the STEM fields. Despite the Secretary of Education's claim that this rule will "balance the scales of justice," it is clear that the greatest

¹ 20 U.S.C. §§ 1681-1688 (2000).

² National Science Foundation, National Center for Science and Engineering Statistics. 2019. *Women, Minorities, and Persons with Disabilities in Science and Engineering: 2019*. Special Report NSF 19-304. Alexandria, VA.

³ Id.

⁴ Nondiscrimination on the Basis of Sex in Education Programs or Activities Receiving Federal Financial Assistance, 85 Fed. Reg. 30,026-30,579 (May 19, 2020) (revising 34 C.F.R. § 106).

burden of these rule changes will be felt by female faculty members and students at colleges and universities. In particular, although not in summation, the new rule will allow or require the following concerning changes:

- Institutions are required to allow cross-examination of the complaining and responding parties, as well as any witnesses, during a live hearing led by institution officials with questioning done by representatives of the parties;
- Limits the obligation to respond to reports of sexual harassment that occurred off-campus to locations in use by an officially recognized student or institution organization, such as recognized fraternity or sorority housing or athletic housing; (Colleges are also not obligated to handle complaints of harassment outside the U.S.)
- Allows flexibility on whether to use the previous “preponderance of the evidence” or a higher “clear and convincing” standard as a burden of proof, which, once decided, must be used for all complaints, regardless if they involve student or faculty misconduct;
- Narrows the definition of sexual harassment to be defined as any unwelcome conduct that a reasonable person would find so severe, pervasive, and objectively offensive that it denies a person equal educational access; (Reports of sexual assault, dating violence, domestic violence, and stalking do not need to meet the description of “severe, pervasive, and objectively offensive,” but the definition has created confusion among institutions.)
- Allows a Title IX coordinator who receives multiple informal complaints of harassment against a single respondent to not be required to begin a formal complaint process, a significant change from the proposed rule, which had sought to make this an obligation.

For some, Title IX’s impact has been most visible with regard to women’s participation in collegiate athletics and addressing sexual harassment, but those are only two of 10 key areas addressed by the law. The law also applies to eight other areas: (1) access to higher education, (2) career education, (3) education for pregnant and parenting students, (4) employment, (5) learning environment, (6) math and science, (7) standardized testing, and (8) technology. Additionally, Title IX imposes four basic requirements on educational institutions in exchange for coveted federal funds:

- (1) Give assurances to federal granting agencies that programs and activities comply with Title IX;
- (2) Designate at least one employee to coordinate Title IX compliance efforts;

- (3) Establish a Title IX grievance procedure; and
- (4) Disseminate information about Title IX nondiscrimination policy.⁵

The U.S. Department of Education's Office for Civil Rights (OCR) is most often charged with enforcing Title IX, which protects people from discrimination at institutions that receive federal financial assistance for educational purposes. However, the Department of Education is not the only federal agency charged with ensuring compliance with Title IX. Federal agencies are required to enforce the law at universities they fund, such as prohibiting sexual harassment and other forms of gender discrimination in education programs that receive federal funding.

History

Enforcement of Title IX has helped women to achieve a measure of equity in intercollegiate athletics. In 1972, women comprised approximately 15% of collegiate student-athletes, despite comprising 44% of bachelor's degree recipients.^{6, 7} After the enactment of Title IX, many colleges and universities dramatically expanded their athletic offerings for women. By 1992, however, 54% of all bachelor's degree recipients were women, but women represented only 34% of student-athletes at NCAA member institutions.^{8, 9} The 1990s saw a wave of Title IX litigation, which had the dual effects of forcing educational institutions to reevaluate their commitment to women's athletics and educating students and their parents about their rights under the law. And, because of increased awareness of their obligations under the law, educational institutions underwent a second wave of athletics program expansion for women. As a result, women today comprise 44% of student-athletes at NCAA member institutions.¹⁰

These gains in athletics have inspired many concerned about the gender disparity in STEM education to explore how Title IX can help women to achieve similar gains in academic programs such as the STEM fields still dominated by male students. In terms of advocacy, educational institutions need to be educated about their obligations under the law; students and their families need to be educated about their rights under the law. As far back as 2004, a report by the U.S. Government Accountability Office (GAO) and a

⁵ 34 C.F.R. § 106.

⁶ National Coalition for Women and Girls in Education (NCWGE). *Title IX at 45: Advancing Opportunity through Equity in Education*. Washington, DC: NCWGE, 2017.

⁷ U.S. Department of Education. National Center for Education Statistics, *Digest of Education Statistics, 2016*. Table 318.10.

⁸ *Id.*

⁹ NCAA Sports Sponsorship and Participation Rates Database. Retrieved from <http://www.ncaa.org/about/resources/research/ncaa-sports-sponsorship-and-participation-rates-database> on July 15, 2020.

¹⁰ *Id.*

2004 “Dear Colleague” letter issued by the U.S. Department of Education both stressed the need for applying Title IX to STEM fields to address continued disparity.^{11, 12}

More than Athletics and College Education

However, in the years since, relatively few Title IX complaints have been filed with the four federal agencies that grant the most funding to STEM research at the college or university level. A 2020 GAO report concluded that two federal agencies, the Department of Energy and the Department of Agriculture, lack finalized procedures for complaints, thus making it impossible to consistently handle them.¹³ The National Science Foundation, which received the majority of complaints shown in the GAO report, only recently started requiring reports of Title IX violations and Title IX-related suspensions from institutions receiving funding.

Additionally, some faculty and students do not file complaints because either they did not know they can, or they fear retribution from supervisors or colleagues. Although civil rights laws clearly prohibit retaliatory actions directed toward individuals who act to enforce their civil rights, further education on this point could clarify this matter among faculty and students. In the K-12 environment, parents need to know that certain practices might unfairly discriminate against their children. An honors math or physics class full of boys does not, by itself, violate Title IX. But if that condition occurs because the teacher in charge of the class actively discourages girls from participating, or because counselors routinely steer girls away from such demanding courses, because they don’t think she looks like an engineer, it is more than prejudice — it is discrimination. Comprehensive education campaigns have worked to alert parents to situations that deserve more explanation, but many of those have been conducted by advocates, not the institutions who are responsible.

Conclusion

As of January 2020, there are 131 women serving in Congress: 105 women serve in the House and 26 women serve in the Senate. Nine women serve as committee chairs (seven in the House, two in the Senate) including the first Black woman ever to chair the House Science, Space, and Technology Committee. The protections and assurances of Title IX have surely led to

¹¹ U.S. G.A.O. (2004). *Gender issues: Women’s participation in the sciences has increased, but agencies need to do more to ensure compliance with Title IX*. GAO-04-639. Washington, DC.

¹² Marcus, K. L. (August 4, 2004). *Title IX grievance procedures, postsecondary education*. U.S. Department of Education. https://www2.ed.gov/about/offices/list/ocr/responsibilities_ix_ps.html.

¹³ U.S. G.A.O. (2020). *Sexual harassment in STEM research: Agencies have taken actions, but need complaint procedures, overall plans, and better collaboration*. GAO-20-187. Washington, DC.

many women being able to pursue their aspirations of STEM careers and beyond.

To ensure progress continues, SWE believes that active enforcement and application of the law by the federal government can be used to uncover policies, procedures, or practices at institutions that discourage women from pursuing education in the traditionally male-dominated STEM disciplines. In other words, an educational institution that actively embraces Title IX's mandates can create an environment that ensures that any underrepresentation of women in STEM disciplines results from the personal interests of women, and not from environmental factors that discourage them from pursuing education in these fields. However, enforcement of those mandates only works when they are just, sensible, and adhere to the original congressional intent of the law, expanding opportunities and access for those who have been historically limited from such. Changes such as the rule set to go into effect this August will undermine progress made and endanger STEM equity, putting us all at a disadvantage when equity in science and technology may literally hold the key for our world's economic and health well-being.