TITLE IX FROM ATHLETICS TO ACADEMICS: HOW TO USE THE LAW TO INCREASE THE ENROLLMENT OF WOMEN IN COLLEGE ENGINEERING PROGRAMS

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Abstract – Aggressive enforcement of Title IX mandates in school-sponsored athletic programs has resulted in dramatic gains for female student-athletes. This success has caused engineering educators to ask whether the law could help to increase the number of women pursuing engineering degrees. In attempting to answer this question, this paper first explains the operation of Title IX, concentrating on the statutory language, regulations, interpretive materials and judicial decisions that impact the practical enforcement of the law. This paper then explores Title IX enforcement efforts in other contexts in an attempt to understand appropriate strategies for ensuring that engineering programs adhere to basic principles of gender equity, thereby creating a more suitable environment for the success of female students.

Index Terms – engineering education, gender equity, legal issues, Title IX.

INTRODUCTION

Title IX of the Education Amendments of 1972 prohibits gender discrimination in educational programs and activities that receive federal financial assistance.[1] Over the last 30 years, this law has helped to ensure equity in all aspects of education – from athletics to academics, from financial aid to housing and from health insurance to employment – and has helped women to make tremendous strides in traditionally male-dominated fields. Since 1972, the percentage of women among undergraduate students has increased from 43 to 56 percent; the percentage of women among students earning the first professional degree has increased from 11 to 45; and the percentage of women among collegiate varsity student-athletes has increased from 15 to 42 percent. Yet women comprise only 20 percent of engineering undergraduates.[2][3][4]

Despite these gains, the under-representation of women in engineering remains a subject of concern and has raised the question of how Title IX can help to increase the number of women in engineering. For example, in opening a “Hearing on Title IX and Science” in October 2002, Senator Ron Wyden, chair of the U.S. Senate Subcommittee on Science, Technology, and Space, of the Committee on Commerce, Science, and Transportation, expressed the hope that Title IX now would reach beyond athletics and into academics, “to give women equal opportunity in science, engineering and math education.”[5]

Can Title IX actually help to accomplish this goal? While aggressive enforcement of the law has dramatically changed athletic programs, would similar efforts targeted toward engineering programs produce similar gains? The answers are far from certain, particularly in an educational environment increasingly concerned about preferential treatment of any kind. But the lessons learned from Title IX in athletics, sexual harassment and other areas, such as admissions decisions, employment practices and academic programs, can help to formulate a plan for using the law to improve educational opportunities for women in engineering.

WHAT IS THE LAW?

The statutory language enacted by Congress sets out a general principle of gender equity. But the practical impact of this general rule derives from implementing regulations and other documents drafted by the Department of Education (DED), as well as from the judicial decisions that have applied the law and regulations to actual controversies.

The Statute

Title IX prohibits gender discrimination in general terms: “No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving Federal financial assistance . . . .”[1]

The law operates like a contract between the federal government and the educational institution, the terms of which require that, in exchange for federal funds, the recipient educational institution agrees not to discriminate on the basis of gender. The statute includes limited exceptions for certain traditionally single-sex activities such as Boy Scouts, Girl Scouts and Camp Fire Girls, fraternities and sororities, and father-son and mother-daughter activities, and exempts religious institutions with contrary tenets, military institutions and traditionally single-sex public institutions. The statute also establishes a Title IX compliance grace period for single-sex institutions that transition to coeducation.[1][6]

Gender quotas have become a focus of Title IX

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compliance, particularly for athletic programs. While the statute explicitly states that educational institutions need not meet any particular gender quotas, DED and the courts may consider evidence of a gender imbalance in a particular program when determining whether an institution has engaged in gender discrimination. Courts interpreting this provision in the athletics context have gone one step further, however, indicating that, while Title IX does not require quotas, the law allows educational institutions to adopt gender quotas to satisfy some Title IX requirements.[1]

The statute defines an educational institution as “any public or private preschool, elementary, or secondary school, or any institution of vocational, professional, or higher education.” “Funding” includes direct aid to the institution, such as through research or building grants, as well as indirect aid, such as federal tuition grants or student loan guarantees. “Program or activity” includes all of the operations of the educational institution, whether or not a particular program or activity actually receives federal funds. Consequently, an institution’s athletic program must comply with Title IX, even if the athletic program receives no federal funds.[1]

The statute makes each federal funding agency responsible for enforcing the terms of the funding contract. But the statute also indicates that Title IX compliance “may be effected . . . by any other means authorized by law.”[1] In 1979, the U.S. Supreme Court interpreted this provision to allow individuals to enforce Title IX through private lawsuits without first seeking redress through agency review.

Ultimately, a Title IX violation may result in a loss of federal funding to the program in which the violation occurred. But before initiating proceedings to terminate funding, the statute requires that the funding agency first give the educational institution the opportunity to remedy the violation.[1] In private enforcement actions, courts may also take steps to terminate funding, but no court has yet ordered this remedy. Rather, lawsuits typically result in an order to cease the offending conduct or to implement some corrective action, coupled with an award of monetary damages if the court finds that the institution violated the law intentionally, rather than merely inadvertently.

Title IX Implementing Regulations

Title IX implementing regulations developed in 1975 by the Department of Health, Education and Welfare (HEW), now administered by DED, explain how to apply the general provisions of the statute to particular operations of educational institutions. The regulations detail administrative obligations, including: taking any remedial action ordered by the Secretary of Education; adopting affirmative action programs “to overcome the effects of conditions which resulted in limited participation therein by persons of a particular sex”; self-evaluating programs to identify and remedy discriminatory treatment; assuring the granting agency that the institution does not engage in gender discrimination; assigning a person or persons to carry out the institution’s Title IX obligations and handle grievances; and adopting and disseminating appropriate nondiscrimination policies. The regulations also import into Title IX the enforcement mechanisms that govern racial discrimination under Title VI of the Civil Rights Act of 1964 [7], and both statutory schemes operate identically.[6]

The regulations describe permitted and prohibited conduct in areas such as: admissions and recruitment; the provision of housing, locker rooms and other similar facilities; course offerings (although preserving academic freedom by exempting the selection of textbooks and other course materials); counseling; financial aid; employment assistance (by ensuring that potential employers do not discriminate on the basis of gender); health and insurance benefits and services; and athletics. The regulations also forbid discrimination on the basis of marital or parental status. The detailed guidance concerning single-sex housing typifies the regulatory content: the regulations permit single-sex housing, but require that the institution treat male and female students similarly in terms of housing quality and quantity, and in the administration of rules, regulations and fees.[6]

The regulations address nondiscrimination in employment, generally requiring equal treatment of men and women in recruitment, compensation, job classification and fringe benefits. The regulations do allow consideration of the gender of the applicant, however, if the institution demonstrates that gender is a “bona fide occupational qualification,” such as a single-sex locker room attendant.[6]

Other Administrative Materials

As needed, DED issues other administrative materials – available on its web site, www.ed.gov – to assist educational institutions in meeting their obligations under the statute and to guide investigators in assessing compliance with Title IX mandates. Topics covered include athletics [8][9], sexual harassment [10], nondiscrimination in employment [11], and guidelines for single-sex classes and schools [12]. Additionally, “Dear Colleague” letters clarify departmental policies, and private-letter rulings respond to specific questions posed by educational institutions.

EVALUATING ENGINEERING PROGRAMS USING STATUTORY MATERIALS

The Title IX statute, regulations and other interpretive materials provide a solid framework within which to assess whether the under-representation of women in an engineering program results from gender discrimination by the educational institution, or from factors beyond its control. The regulations do require self-assessment of Title IX compliance, and an educational institution should treat
such a review as a proactive approach to ensuring that individual aspects of its program do not discriminate against women.

Four important points inform such an analysis. First, not every difference is discriminatory. While a male-female imbalance in enrollment certainly is a difference, the imbalance is discriminatory only if caused or reinforced by the institution. Second, actionable discrimination may result from intentional acts or from inadvertent omissions. Third, Title IX can remedy only that discrimination that results from an institutional decision, system or procedure, or from institutional inaction in the face of evidence or notice of discrimination. Fourth, not every instance of discriminatory conduct requires governmental intervention — in fact, a quicker, more appropriate and more satisfying solution may result simply from alerting the institution to the problem.

The Statute

Because Title IX prohibits an educational institution from engaging in gender discrimination, the first step in a Title IX compliance inquiry should seek to identify the particular institutional action or inaction that yielded the discriminatory result. A mere imbalance in the male/female ratio of engineering students does not violate Title IX. Such an imbalance may, however, indicate that some institutional practices adversely affect women. Consequently, a Title IX review should not stop at the discovery of a difference, but should seek out the reason for that difference and determine whether that reason has roots in some institutional action or inaction.

Areas to examine include: whether the institution has established engineering program admissions criteria that disadvantage women because of their past educational experiences; whether an engineering admissions committee routinely rejects a disproportionate percentage of women applicants; and, a more difficult inquiry, whether female students find the engineering program uninviting, or even hostile, because of limited access to mentors, limited opportunities to engage in research with professors, or some other sort of negative systemic practice.

Implementing Regulations and Other Administrative Materials

The implementing regulations [6] also aid the inquiry into whether Title IX prohibits particular conduct. An imbalance in the number of male and female engineering undergraduates may indicate the need to review certain practices in admissions, counseling or financial aid, for example.

The regulations governing admissions policies prohibit certain practices, including: preferring one applicant over another solely on the basis of gender; giving preference in admissions to applicants from particular single-sex high schools, if such preference “has the effect of” discriminating on the basis of gender; ranking applicants separately by gender; limiting admission to certain numbers of applicants of each gender; administering a test or other admission criterion that disproportionately and adversely affects applicants of one gender, unless the institution can prove both that such test or criterion validly predicts success in the program and that no alternative tests or criteria exist; and treating students differently because of marital, parental or pregnancy status.[6]

The regulations governing counseling services caution that, if a program has an imbalance in its male/female ratio, the institution must take appropriate actions to ensure that the imbalance did not result from gender discrimination in counseling services or appraisal materials.[6]

The regulations governing financial aid allow scholarships restricted to male or female students, but only if the institution also ensures that its overall financial aid practices do not disadvantage students of one gender. In particular, the institution must evaluate each student’s financial need without regard to gender or marital or parental status, but then may award to female students aid restricted to women, as long as the institution does not then deny aid to male students solely because of the absence of comparable aid restricted to men.[6]

Some of the other administrative materials developed by DED may inform these inquiries as well, by identifying areas to review when determining whether the institution has engaged in discriminatory conduct. Such materials often include examples of inappropriate conduct on the part of the institution and may provide sound guidance on ways to remedy the effects of discriminatory conduct. A review of these materials may help an institution to identify areas for additional exploration.[9][10][11][12]

TITLE IX CASE LAW

Private enforcement actions — that is, lawsuits — help to fill in the analytical framework created by the statutes, implementing regulations and other policy interpretations, and provide guidance on how the law works in various fact situations. So far, the most significant Title IX cases have involved either athletics or sexual harassment of students — neither of which applies directly to the issue of under-representation of women in engineering programs, but both of which present a fuller picture of the operation of the law.

Extrapolating from Title IX cases in other areas to understand the issues surrounding gender equity in engineering programs requires caution, however, because of the differing facts and analytical contexts. Moreover, it is important to remember that such cases arise either when the institution’s proactive Title IX compliance efforts have failed to remedy discrimination, or when the institution has ignored its Title IX obligations — that is, when the issue raised cannot be settled to the student’s satisfaction. Consequently, reported cases present the most intractable problems in Title IX compliance, rather than the most
typical. Nevertheless, these cases do present other questions to ask when reviewing a program for discriminatory elements.

These cases also illustrate three principles common to all Title IX litigation. First, for Title IX to apply, the institution must have made a decision based on gender that results in a discriminatory effect. Second, since administrative regulations require funding agencies to allow the institution to try to remedy a Title IX violation before terminating federal funding, courts similarly require that the institution have an opportunity to cure the violation before allowing a lawsuit to proceed. Third, the efforts necessary to avoid liability under Title IX differ according to the circumstances that give rise to the violation.

**Gender Discrimination in Athletics**

Title IX cases involving athletic programs have created a well-developed and generally accepted analytical framework that helps to identify the differences in athletic programs that provide evidence of institutional discrimination. These cases differ from other types of Title IX cases, however, in three significant respects. First, athletics accepts the segregation of student-athletes by gender. A Title IX inquiry, then, does not ask whether the institution has made decisions based on the gender of the student-athlete, because it has; rather, the inquiry focuses on whether these separate programs treat student-athletes equally, although not necessarily identically. Second, financial considerations affect decisions about the size and scope of athletic programs to a degree not present in academic programs. Thus, if improving opportunities for female student-athletes requires additional financial resources, the institution might take those funds from men’s athletic programs and reduce opportunities for male student-athletes. Third, athletics cases draw on a large body of administrative and interpretive materials, developed by DED and by the courts over more than a decade of litigation, that provide clear and precise, albeit controversial, guidance on how to ensure equitable treatment for male and female student-athletes.

Much of the athletics litigation under Title IX questions whether an institution has provided an appropriate number of participation opportunities for male and female student-athletes. To avoid Title IX liability, the institution must pass at least one of three parts of a well-established test: (1) achieving “substantial proportionality” between the male-female undergraduate student ratio and the male-female student-athlete ratio; (2) demonstrating a history of continuing program expansion; or (3) satisfying the interests and abilities of the under-represented gender.[8]

Although Title IX does not require an institution to meet a quota, the inquiry in athletics cases first asks whether an institution has, in fact, met a quota. For those institutions that have, the inquiry ends, regardless of the methods used to achieve that goal – that is, regardless of whether the institution actually expanded opportunities for women or simply limited opportunities for men. For those institutions that have not met a quota, Title IX compliance may be proven in either of the other two ways – that is, with an active plan to improve opportunities for women or with proof a lack of student interest in adding more women’s teams. For institutions that fail all three tests, courts have crafted a range of remedies, including orders that restore dropped women’s teams or add new women’s teams, and orders that approve the elimination of men’s teams. Absent solid proof by the institution that it cannot field particular teams because of lack of interest, then, courts in these cases have tended to order remedies that actually drive institutions toward quotas.

Engineering educators might find it appealing to secure a court order to add women to an engineering program, as the courts have done for athletics. Two aspects of Title IX, however, prevent such a result. First, the implementing regulations explicitly prohibit basing admissions decisions on the student’s gender, which makes it impossible to force a particular gender ratio in an academic program. That these numbers become important in the athletics litigation results solely from one of the starting conditions – that is, from the fact that athletics programs accept as appropriate the segregation of student-athletes by gender. Second, even if this admissions regulation did not exist, the athletics cases have shown that meeting a prescribed gender quota may be filled in one of two ways – either by increasing opportunities for women or by decreasing opportunities for men. An institution that experiences difficulties in adding women to its program might decide instead to meet its quota by limiting the number of men in its program – a result that does not benefit women, hurts men and harms engineering generally.

**Sexual Harassment**

Sexual harassment cases may prove more helpful to a Title IX compliance review, by explaining how to ensure that an institution has provided an appropriate learning environment for all students. In the employment context, sexual harassment constitutes a form of gender discrimination prohibited by Title VII of the Civil Rights Act of 1964.[13] Title IX has adopted this concept and similarly prohibits the sexual harassment of students, whether by other students or by school employees, because such harassment may affect the ability of students to participate in particular programs.

Sexual harassment may be *quid pro quo*, meaning that an employee promises a benefit, such as a grade or a job, to a student who submits to sexual advances. *Quid pro quo* harassment typically involves specific individuals and discrete events, and can be fairly simple to identify and end by taking appropriate disciplinary action against the employee.

Sexual harassment may also manifest itself as a hostile environment, created when employees or students engage in pervasive conduct that denies or limits the ability of other
students to participate in or benefit from the school’s program,[10] Hostile environment harassment presents more of a challenge to identify and remedy. It encompasses a range of conduct, from telling off-color jokes to physical assaults. It may be subtle or overt. The targeted students might not even recognize the behavior as harassment.

To work toward a harassment-free environment and avoid Title IX liability, institutions must educate students and employees about behaviors that constitute sexual harassment. The regulations also require that institutions establish some mechanism for handling sexual harassment complaints.[6] But note that courts have given students some flexibility in pursuing these complaints. A student’s failure to follow a set reporting procedure typically does not bar that student’s case.

The Supreme Court has set forth explicit standards for evaluating sexual harassment claims of either type under Title IX. For harassment by an employee against a student, institutional liability requires that the institution (1) has received actual notice, (2) to an appropriate person, (3) who acted with deliberate indifference. These standards apply to institutional liability for student-on-student harassment, but the Supreme Court has also recognized the meaningful difference between adults harassing students and students harassing their peers. The Court has thus articulated one additional requirement for institutional liability for student-on-student harassment, limiting damages to behavior so severe, pervasive and objectively offensive that it denies its victims equal access to education, but excluding instances of simple, childish teasing.

Many Title IX sexual harassment claims fail because the victim – for reasons good and bad – did not give any notice to the institution. In these cases, courts find that the institution did not have the opportunity to cure the Title IX violation, and will deny the claim. Even when the victim has given such notice, however, many claims still fail because courts tend to find that an institution that has taken some action to end the offensive conduct has not acted with deliberate indifference, regardless of the effectiveness of the action. Cases in which plaintiffs do prevail follow a typical pattern: a professor harasses a student or students repeatedly; the professor’s supervisor somehow learns of the misconduct and takes some weak or ineffective action against the professor; the professor continues the harassment; and the supervisor either takes the same weak or ineffective action against the professor or ignores the situation entirely.

While it may appear that eradicating sexual harassment has little direct relevance to the goal of increasing the number of women participating in an engineering program, an educational institution that neglects its obligations under Title IX to ensure that women can study and work in a harassment-free environment may instead see a decrease in the number of women willing to participate in particular programs. Engineering educators can help to improve the climate for female students by teaching all students and employees how to recognize harassment in its various forms and how to report offensive conduct. Although likely to have only an indirect impact on the increasing the number of female students in an engineering program, Title IX does require that educational institutions take such efforts to confront and eradicate the attitudes and practices that create a hostile or otherwise uncomfortable environment for female students.

Other Gender Discrimination Cases

Other types of gender-discrimination cases illustrate an analytical framework that can help to determine whether an under-representation of women in an engineering program results from discriminatory conduct prohibited by Title IX, or from factors outside the scope of the statute.

An under-representation of female students might result, in part, from an under-representation of female role models on the faculty. Discriminatory hiring practices or employment conditions, both of which violate Title IX, may manifest themselves in a variety of ways: a disproportionately small number or high turnover of female faculty; overrepresentation of female faculty in the lower tenure-track ranks or in non-tenure-track positions such as lecturer or instructor; and pay differentials between male and female faculty who possess similar credentials.[14]

But as coaches’ compensation lawsuits illustrate, when asserting that an institution discriminates in its compensation practices, it is important to ensure that the faculty actually have similar experiences and achievements. In one coaches’ compensation case, for example, the court found that the university did not violate Title IX by paying its men’s basketball coach substantially more than it paid its women’s basketball coach, because the men’s coach had 14 years more experience, had written books on basketball and had coached the U.S. Men’s Olympic Basketball Team. Yet in another coaches’ compensation case, differences in the conditions of employment beyond a mere salary differential, such as inadequate budgets, equipment, facilities and staffing, provided sufficient proof that the university had discriminated against its women’s basketball coach. In engineering education, such discrimination might take the form of providing female faculty with fewer research assistants, inadequate support staff or undesirable offices or laboratories.

An under-representation of female students may also result from systems or customs that tend to benefit male students. Entrance standards or gatekeeper courses may favor male students who might enter an engineering program with stronger pre-college experiences in technology and computers. A professor may, year after year, hire next year’s research assistant on the recommendation of this year’s research assistant, who might prefer to recommend a fraternity brother rather than an equally qualified female classmate. A professor may choose not to hire a female graduate student whose potential or actual pregnancy might disrupt a tight research timetable. A professor may
consistently give male students more latitude in completing course requirements, while denying female students that same opportunity. One court recently disapproved of this particular practice in a case in which a nursing school’s predominantly female faculty routinely gave female students extra opportunities to succeed, while refusing to give similar latitude to male students.

Institutions must identify, review and, if found to disadvantage women, end such practices and customs. Securing Title IX compliance in this way helps to ensure that the institution has met its Title IX obligations, and may also improve the climate for women engineering students.

**TITLE IX AND WOMEN’S ENGINEERING PROGRAMS**

Women’s engineering programs, which have evolved to remedy the under-representation of female students in the male-dominated field of engineering, soon may face Title IX review by DED or the courts. Recently, MIT ended its policy of minority-only admissions to its summer preparatory programs after DED began a Title VI investigation in response to a complaint that MIT had refused to allow a white child to participate in the program. Princeton, fearing a similar investigation, quickly followed MIT’s lead.[15] Because Title IX prohibits gender discrimination in the same way that Title VI prohibits racial discrimination, similar challenges could affect the viability of single-sex initiatives such as women’s engineering programs.

A gender imbalance alone cannot justify sponsoring a women-only program, because such an imbalance, by itself, does not violate Title IX. An institution would face Title IX liability for such an imbalance **only if the institution somehow either caused or failed to address** the imbalance. Consequently, any remedy – including women-only programs – must respond to the cause of the imbalance. Moreover, DED regulations generally prohibit single-sex classes, but do allow educational institutions to “take affirmative action to overcome the effects of conditions that resulted in limited participation” by women in engineering programs.[6][12] Consequently, engineering educators need a firm grasp of the issues faced by their women students, and must design programs that address those particular needs.

The survival of women-only programs likely will depend on whether the institution has developed programs that respond to identified needs. A number of questions may aid in making this determination: Can the institution identify the factors that have caused or resulted in an under-representation of women in its engineering programs? Has the institution explored gender-neutral ways to increase the participation of women in engineering programs? Does the institution have pedagogically sound reasons for initiating or continuing single-sex programs?[16] A women-only programming class, for example, might respond to the suggestion of some researchers [17] and to evidence from the students themselves that women approach the subject so differently from men that one teaching method may leave women behind. On the other hand, an ostensibly gender-neutral change in teaching methods might benefit women to a greater extent than it benefits men, but may also make the program more manageable for all students. Does an engineering program that provides services for female students also meet the similar needs of some male students? While it might not be necessary to include men in women’s program activities, men should somehow have access to similar resources if needed.

A thorough review of institutional practices and culture against the Title IX enforcement scheme may help to achieve several discrete goals: identifying the cause of the imbalance and formulating an appropriate cure; avoiding liability for gender discrimination under Title IX; and ensuring the survivability of women’s engineering programs. Achieving these individual goals should have a positive impact on engineering education in general, and may, over time, help to increase the total enrollment of women students.

**REFERENCES**