

TITLE IX AND GENDER EQUITY IN SCIENCE, TECHNOLOGY, ENGINEERING AND MATHEMATICS EDUCATION: NO LONGER AN OVERLOOKED APPLICATION OF THE LAW

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INTRODUCTION

In June of 1972, Congress enacted Title IX of the Education Amendments of 1972¹ to ensure that “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”² In the three decades since, and in the 1990s in particular, Title IX enforcement actions, including investigations by the U.S. Department of Education (DED) and lawsuits brought by, or on behalf of, students to challenge decisions made by educational institutions at every level, have focused primarily on whether educational institutions have provided equitable athletic opportunities for male and female student-athletes,³ or on whether educational institutions have properly addressed charges of sexual harassment to ensure that inappropriate conduct by employees or other students does not inhibit access to educational opportunities.⁴ Rarely have courts examined gender equity in the academic

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1. Pub. L. No. 92-318, §§ 901–907, 86 Stat. 235, 373–75 (codified as amended at 20 U.S.C. §§ 1681–1688 (2000)).

2. 20 U.S.C. § 1681(a) (2000).

3. For a review of Title IX in the athletics context, see, for example, Symposium, *Title IX at Thirty*, 14 MARQ. SPORTS L. REV. 1 (2003); Catherine Pieronek, *Title IX Beyond Thirty: A Review of Recent Developments*, 30 J.C. & U.L. 75 (2003); and Suzanne Eckes, *The Thirtieth Anniversary of Title IX: Women Have Not Reached the Finish Line*, 13 S. CAL. REV. L. & WOMEN’S STUD. 3 (2003).

4. For a review of Title IX in the sexual harassment context, see, for example, Catherine Pieronek, *Discrimination Against Students in Higher Education*, 26 J.C. & U.L. 307, 309–17 (1999); Catherine Pieronek, *Discrimination Against Students in Higher Education*, 27 J.C. & U.L. 367, 369–81 (2000); Catherine Pieronek, *Discrimination Against Students in Higher Education*, 28 J.C. & U.L. 387, 388–96 (2002); and Catherine Pieronek, *Discrimination Against Students in Higher Education*, 29 J.C. & U.L. 359, 402–12 (2003). To understand the development of the law with regard to peer-on-peer sexual harassment, see Diane Heckman, *Tracing the History of Peer Sexual Harassment in Title IX Cases*, 183 EDUC. LAW REP. 1 (2004). For discussions of the law with regard teacher/employee-on-student sexual harassment, see Charles J. Russo et al.,

context, as distinct from athletics or sexual harassment.

At the dawn of the twenty-first century, however, the focus of Title IX enforcement has begun to shift toward examining the under-representation of women in science, technology, engineering and mathematics (STEM) disciplines and academic careers. While women comprise a growing majority of all college students, they remain a minority in most of the STEM disciplines, with the most extreme under-representation in engineering and in select science fields such as physics.⁵

In 2001, the latest year for which the National Science Foundation (NSF) has published statistics, women earned 721,625 of the 1,257,648 bachelor's degrees granted in all fields (57.4%), but only 11,914 of the 59,258 bachelor's degrees granted in engineering (20.1%).⁶ This disparity continues at all levels of higher education, as shown in Tables 1–4, which present the percentages of various college degrees awarded to women since the advent of Title IX in 1972.

As Table 1 shows, women now comprise a majority of all bachelor's degree earners, and a majority of those earning bachelor's degrees in the natural sciences,⁷

Guidelines for Addressing Sexual Harassment in Educational Institutions, 182 EDUC. LAW REP. 15 (2003), and Neal Hutchens, *The Legal Effect of College and University Policies Prohibiting Romantic Relationships Between Students and Professors*, 32 J. L. & EDUC. 411 (2003).

5. A number of theories attempt to explain the disproportionately low representation of women in STEM fields. Some researchers subscribe to a “nurture” theory, which identifies the societal behaviors that discourage women from attempting to succeed in STEM disciplines. For example, some researchers posit that, in underperforming in mathematics and science, women merely live up to society's expectations that they cannot perform as well as men in those fields. *See, e.g.*, VIRGINIA VALIAN, *WHY SO SLOW? THE ADVANCEMENT OF WOMEN* 192 (1998). On the other hand, some researchers posit that typical adolescent pressures to conform may discourage girls from distinguishing themselves among their schoolmates by succeeding in mathematics and science. *See, e.g.*, JANE MARGOLIS & ALLAN FISHER, *UNLOCKING THE CLUBHOUSE: WOMEN IN COMPUTING* 33–48 (2002).

Still other researchers subscribe to a “nature” theory. One such study has suggested that women's and men's brains are wired differently, with women tending toward empathy and men toward understanding and building systems. *See, e.g.*, SIMON BARON-COHEN, *THE ESSENTIAL DIFFERENCE: MEN, WOMEN AND THE EXTREME MALE BRAIN* 1 (2004). Harvard president Lawrence H. Summers recently stirred up controversy when he suggested that “innate differences between men and women might be one reason fewer women succeed in science and math careers.” Marcella Bombardieri, *Summers' Remarks on Women Draw Fire*, BOSTON GLOBE, Jan. 17, 2005, at A1. Still other research has identified brain differences that could explain why women tend to have better communication skills while men tend to have better spatial-orientation skills. Natalie Angier & Kenneth Chang, *Gray Matter and the Sexes: Still a Scientific Gray Area*, N.Y. TIMES, Jan. 24, 2005, at A1.

No research has yet yielded a definitive answer to the question of why women comprise a disproportionately small segment of engineers and scientists. Quite possibly, this occurs due to a combination of many factors. Nevertheless, environmental or cultural factors in academic settings can influence the persistence of women in STEM disciplines. Title IX cannot correct for the personal choices—whether inspired by nature or nurture or something else—that cause women to seek careers in fields other than STEM, nor should it. The law can, however, eliminate the environmental or cultural factors that affect men and women differently, metaphorically leveling the academic playing field.

6. NSF, *Science and Engineering Degrees: 1966-2001* at 13, Table 5; 17, Table 9 (2004) [hereinafter NSF Report].

7. The term “natural sciences,” as used in this article, encompasses: physical sciences

psychology, social sciences, and non-STEM fields.⁸ Yet, in 2001, women earned only 20.1% of all engineering bachelor's degrees, comprised a shrinking segment of students earning mathematics and computer science bachelor's degrees and, despite the growth in the proportion of women across all of the natural sciences, comprised a disproportionately small segment of some natural-sciences fields such as physics.⁹

TABLE 1¹⁰
BACHELOR'S DEGREES GRANTED TO WOMEN
1972 vs. 2001

| | 1972 | 2001 | % Growth |
|--------------------------------|-------|-------|----------|
| All Fields | 43.7% | 57.4% | 31.4% |
| Engineering | 1.1% | 20.1% | 1768.0% |
| Mathematics & Computer Science | 35.9% | 31.8% | -11.3% |
| Natural Sciences | 21.6% | 54.4% | 151.9% |
| Psychology & Social Sciences | 39.5% | 63.7% | 61.5% |
| Other | 51.1% | 60.5% | 18.4% |

Although the growth rates in Table 1 look phenomenal, these numbers also hide some trends that raise concerns. In 1972, only 492 women nationwide earned a bachelor's degree in engineering.¹¹ In 1987, 11,404 women earned bachelor's degrees in engineering, growing to 15.3% of all engineering graduates.¹² Since 1987, however, the number of women earning engineering bachelor's degrees has remained essentially the same, despite the tremendous growth in the number of women earning bachelor's degrees in all fields since that time.¹³ And, since 1985, the number of men earning engineering bachelor's degrees has decreased steadily, so at least part of the increase in the proportion of women among engineering

including astronomy, chemistry and physics; earth, atmospheric and ocean sciences; and biological and agricultural sciences. It excludes the social sciences and psychology.

8. NSF Report, *supra* note 6, at 13, Table 5; 17, Table 9.

9. Women earned only 19.3% of all bachelor's degrees granted in physics in 1998. NSF, WOMEN, MINORITIES, AND PERSONS WITH DISABILITIES IN SCIENCE AND ENGINEERING: 2002, at 148, Appendix C, Table 3-6, (2002) [hereinafter NSF Diversity Report].

10. NSF Report, *supra* note 6, at 13, Table 5; 17, Table 9.

11. *Id.*

12. *Id.* at 13, Table 5; 17, Table 9. This reflects a growth rate of 2217.9%.

13. *Id.* at 17, Table 9. Between 1987 and 2001, the number of women earning a bachelor's degree in any field grew from 518,529 to 721,625, for a growth rate of 39.2%. *Id.* In contrast, over that same period, the number of women earning a bachelor's degree in engineering grew from 11,404 to 11,914, for a growth rate of 0.8%. *Id.* Overall, from 1987 to 2001, the number of women earning an engineering bachelor's degree has varied from a low of 9,636 in 1992 to a high of 12,216 in 2000. *Id.*

graduates actually results from a decrease in the number of men in the pool.¹⁴ Thus, looking at the numbers shown in Table 1 does not provide a complete picture of women's progress in earning engineering bachelor's degrees: It is not as good as the numbers themselves indicate.

Table 2 presents the same data for master's degree recipients, and shows trends similar to those in Table 1 for bachelor's degree recipients.¹⁵ Again, women comprised a growing share of master's degree recipients in non-STEM fields, earning nearly 60% of all master's degrees in 2001.¹⁶ But that year, women earned less than a quarter of all master's degrees in engineering, only about a third of all master's degrees in mathematics and computer science, and just under half of all master's degrees in the natural sciences, although under-representation also persists at the master's degree level in certain natural-sciences fields such as physics.¹⁷

TABLE 2¹⁸
MASTER'S DEGREES GRANTED TO WOMEN
1972 vs. 2001

| | 1972 | 2001 | % Growth |
|--------------------------------|-------|-------|----------|
| All Fields | 40.6% | 58.6% | 44.4% |
| Engineering | 1.6% | 21.2% | 1212.6% |
| Mathematics & Computer Science | 24.7% | 35.2% | 42.1% |
| Natural Sciences | 21.2% | 48.6% | 128.9% |
| Psychology & Social Sciences | 28.7% | 62.4% | 117.5% |
| Other | 47.4% | 62.6% | 32.1% |

Table 3 presents the same data for doctoral degree recipients.¹⁹ While the percentage of female Ph.D. degree recipients has grown tremendously, women still earn less than half of all doctoral degrees.²⁰ While women earned more than half of the Ph.D. degrees granted in psychology, social sciences and non-STEM fields in 2001, they earned considerably less than half of all Ph.D. degrees in STEM fields.²¹

14. *Id.* at 16, Table 8. Since peaking in 1985 at 66,326, the number of engineering bachelor's degrees awarded annually to men has decreased steadily, almost every year, to 47,344 in 2001. *Id.* at 15, Table 7. Between 1987 and 2001, the period of no growth among women in engineering, the number of men earning an engineering bachelor's degree dropped from 63,021 to 47,344, or by 24.9%. *Id.*

15. *Id.* at 20, Table 12; 24, Table 16.

16. *Id.* at 10, Table 2. Women earned 273,639 of the total 466,642 master's degrees awarded in 2001. *Id.*

17. In 1998, women earned only 18.2% of all master's degrees in physics. NSF Diversity Report, *supra* note 9, at 201, Table 5-2.

18. NSF Report, *supra* note 6, at 20, Table 12; 24, Table 12; 24, Table 16.

19. *Id.* at 27, Table 19; 31, Table 23.

20. *Id.* at 33, Table 25. Women earned 17,935 of the total 40,790 doctoral degrees awarded in 2001. *Id.* at 31, Table 23.

21. In 1999, women earned only 12.6% of all Ph.D. degrees in physics. NSF Diversity Report, *supra* note 9, at 212, Table 5-7.

TABLE 3²²
DOCTORAL DEGREES GRANTED TO WOMEN
1972 vs. 2001

| | 1972 | 2001 | % Growth |
|--------------------------------|-------|-------|----------|
| All Fields | 16.0% | 44.0% | 174.8% |
| Engineering | 0.6% | 16.9% | 2587.8% |
| Mathematics & Computer Science | 7.5% | 23.5% | 213.8% |
| Natural Sciences | 10.8% | 36.6% | 237.3% |
| Psychology & Social Sciences | 18.6% | 54.0% | 189.7% |
| Other | 22.9% | 56.4% | 146.6% |

Finally, for comparative purposes, the data in Table 4 show that women have also made strong gains in professional studies, with equivalent growth in both health and non-health fields.²³

TABLE 4²⁴
FIRST PROFESSIONAL DEGREES GRANTED TO WOMEN
1972 vs. 2001

| | 1972 | 2001 | % Growth |
|---------------------------------|------|-------|----------|
| All Professional Degrees | 6.3% | 46.2% | 633.3% |
| Non-health Professional Degrees | 6.1% | 45.4% | 644.3% |
| Health Professional Degrees | 6.5% | 47.2% | 626.2% |

Together, the data presented in these tables indicate that women, as a growing majority of all college students, can achieve at the highest levels of education, including in such demanding fields as medicine and law. Yet women do not engage in the similarly demanding STEM disciplines to the same degree. Comparing the percentages of women in engineering at all degree levels highlights specific areas of concern.

First, the under-representation of women among engineering Ph.D. recipients has repercussions throughout the educational process. While women comprise 16.9% of those earning a Ph.D. in engineering, only about half (8.4%) find their way onto engineering faculties.²⁵ Moreover, those who do pursue careers in higher education comprise a disproportionately large segment of the lower-status faculty ranks: 27.1% of instructors/lecturers; 13.9% of adjunct faculty; and 10.6% of non-tenure track faculty.²⁶ Thus, many women who do complete the engineering Ph.D.

22. NSF Report, *supra* note 6, at 27, Table 19; 31, Table 23.

23. *Id.* at 66–68, Tables 58–60. These data reflect the “first professional degree,” defined by NSF as a degree that requires at least six years of college work for completion and two years of pre-professional training. *Id.* Professional health fields include chiropractic, dentistry, medicine, optometry, osteopathic medicine, pharmacy, podiatry, and veterinary medicine. *Id.* Professional non-health fields include law, divinity/ministry, and rabbinical/Talmudic studies. *Id.*

24. *Id.*

25. See WOMEN’S ENG’G PROGRAM ADVOCATES NETWORK, at http://www.wepan.org/documents/by_rank_broad_field_and_gender_1991_2001.pdf (last visited Feb. 25, 2005).

26. *Id.*

either do not pursue or do not secure full-time, tenure-track faculty positions.²⁷

Second, the percentage of women who earn a master's degree in engineering is higher than the percentage who earn a bachelor's degree in engineering—a statistic with many possible explanations. The increase in the percentage of master's degree recipients over bachelor's degree recipients could result from any of the following positive factors: some women in non-engineering fields such as chemistry may choose to earn a master's degree in engineering to enhance their marketability for employment, thus increasing the percentage of engineering master's degree recipients over the percentage of bachelor's degree recipients; women, to a greater extent than men, might see the value in a master's degree; or earning a master's degree might provide a way for women who have left the work force temporarily to raise a family, for example, to re-enter industry. On the other hand, the drop-off between the percentage of master's degree earners and the percentage of Ph.D. degree earners could point to a negative trend such as an increased number of women leaving Ph.D. programs before completing that final degree. Whatever the case, the numbers alone over-simplify reality. Despite the amazing growth in the numbers of women graduating with M.S. and Ph.D. degrees in engineering since 1972, these numbers still might mask concerns about equity issues in both the education and employment processes.

The gender gap in STEM education has, finally, caught the attention of the federal government. During the summer and fall of 2002, the U.S. Senate Subcommittee on Science, Technology and Space, of the Committee on Commerce, Science and Transportation, held hearings to gather information on the under-representation of women “studying and working in math, technology, engineering and the so-called hard sciences such as physics and chemistry.”²⁸ In June of 2002, the subcommittee challenged Sean O’Keefe, then-Chief Administrator of the National Aeronautics and Space Administration (NASA), to develop a plan “to help triple the number of women graduating college with degrees in science, math and engineering by the year 2012.”²⁹ And in July 2002, the subcommittee heard testimony from leading educators that encouraged the use of gender-equity legislation such as Title IX to achieve the same progress for women in traditionally male-dominated academic disciplines as has been achieved for women in athletics.³⁰

27. See also Robin Wilson, *Where the Elite Teach, It's Still a Man's World*, CHRON. HIGHER EDUC., Dec. 3, 2004, at A8 (noting that “the more prestigious the institution, the fewer women it has [across all disciplines]. In 2001, women made up 48 percent of the professoriate at two-year colleges, compared with 38 percent at baccalaureate-granting institutions, and 28 percent at research institutions . . .”).

28. *Title IX and Science: Hearing on SR-253 Before Senate Subcomm. on Sci., Tech., and Space of Senate Comm. On Commerce, Sci., and Transpo.*, 107th Cong. (statement of Senator Ron Wyden (D-OR)), available at <http://commerce.senate.gov/hearings/100302wyden.pdf> (Oct. 10, 2002).

29. *NASA and Education: Hearing Before Subcomm. on Sci., Tech., and Space of Senate Comm. on Commerce, Sci., and Transpo.*, 107th Cong. (Statement of Senator Ron Wyden (D-OR)), available at <http://commerce.senate.gov/hearings/061902wyden.pdf> (June 19, 2002). Senator Wyden, who chaired the subcommittee, also “want[ed] to see the overall number of graduates in math and the hard sciences triple as well.” *Id.* (emphasis added).

30. *Women in Science and Technology: Hearing Before Subcomm. on Sci., Tech., and*

In response to congressional concerns,³¹ the United States Government Accountability Office (GAO) published a “report to congressional requesters” entitled *Women’s Participation in the Sciences Has Increased, but Agencies Need to Do More to Ensure Compliance with Title IX*.³² The report focused on three questions:

- (1) How do the DED, the Department of Energy (DOE), NASA, and the NSF ensure that federal grant recipient institutions comply with Title IX in STEM fields?
- (2) What do the data show about women’s participation in STEM fields?
- (3) What promising practices exist to promote the participation of women in STEM fields?³³

Ultimately, the report concluded that federal agencies, by and large, have neglected their responsibilities to enforce Title IX to ensure equity in academics in general, and in STEM disciplines in particular.³⁴

This article discusses how to enforce Title IX in academics, concentrating on issues relevant to women in STEM disciplines.³⁵ Part I presents a history of Title IX, discusses how Title IX differs between the academic and athletic contexts, and reviews the Title IX implementing regulations that create the framework for enforcement in the academic context. Part II discusses current Title IX enforcement efforts as described in the GAO report. Part III summarizes the current state of Title IX monitoring and compliance efforts by the four federal agencies that fund most STEM-based research. The article concludes with a look to the future of Title IX enforcement in STEM education.

I. TITLE IX—AN OVERVIEW

Discrimination in athletic programs, sexual harassment and other forms of gender-based discrimination, on the surface, appear to have little in common. The Title IX statute, with its broad proscription of gender-based discrimination, encompasses each of these different types of discrimination. But the implementing regulations, various policy interpretations and case law together explain how the Title IX statute operates differently depending on the type of discrimination at issue.

Title IX compliance and enforcement activities occur in a number of ways.

Space of Senate Comm. on Commerce, Sci., and Transp., 107th Cong. (Statement of Dr. Kristina M. Johnson, Dean of the Pratt School of Engineering at Duke University), available at <http://commerce.senate.gov/hearings/072402johnson.pdf> (July 24, 2002).

31. Senators Ron Wyden (D-OR) and Barbara Boxer (D-CA) requested the report. See Piper Fogg, *Science Agencies Urged to Ensure that Grant Recipients Don’t Discriminate*, CHRON. HIGHER EDUC., Aug. 13, 2004, at A10.

32. U.S. G.A.O., *Women’s Participation in the Sciences Has Increased, but Agencies Need to Do More to Ensure Compliance with Title IX*, GAO-04-639 (July 2004) available at <http://www.gao.gov/new.items/d04639.pdf> [hereinafter GAO Report].

33. *Id.* at 1.

34. *Id.* at 28.

35. Similar issues affect men in fields traditionally dominated by women, such as nursing. This article focuses only on women in STEM fields, however, because it addresses the issues raised in the recent GAO Report.

Federal funding agencies and grant-recipient institutions all have certain obligations under the law. Additionally, individuals also have the right to enforce the law, either through complaints directed toward funding agencies or through lawsuits filed in court. This section discusses both of these enforcement mechanisms, to provide a full picture of the rights and responsibilities of all involved in granting and benefiting from the expenditure of federal money on higher education.

Part I.A of this article provides a history of Title IX, reviewing legislative history, discussing agency actions to interpret the statute and exploring judicial decisions that have shaped the contours of individual rights under the statute. Part I.B discusses the significant ways in which athletics and academics differ for the purposes of Title IX enforcement, and thereby creates a context for understanding the Title IX implementing regulations relevant to everything other than athletics. Part I.C examines the Title IX implementing regulations, to explain the obligations of both federal funding agencies and grant recipients, using cases and other examples where appropriate to illustrate the applicability of the regulations.

A. History and Development

The Title IX statute, as enacted, presents a simple mandate:

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 . . .³⁶

This subsection of the statute concludes with several exceptions to this general rule including exemptions for military schools,³⁷ traditionally single-sex institutions,³⁸ fraternities and sororities,³⁹ and father-son or mother-daughter activities.⁴⁰

The next subsection provides:

Nothing contained in [20 U.S.C. § 1681(a)] shall be interpreted to require any educational institution to grant preferential or disparate treatment to the members of one sex on account of an imbalance which may exist with respect to the total number or percentage of persons of that sex participating in or receiving the benefits of any federally supported program or activity, in comparison with the total number or percentage of persons of that sex in any community, State, section, or other area: *Provided*, That this subsection shall not be construed to prevent the consideration in any hearing or proceeding under this chapter of statistical evidence tending to show that such an imbalance exists with respect to the participation in, or receipt of the benefits of,

36. 20 U.S.C. § 1681(a) (2000).

37. *Id.* § 1681(a)(4).

38. *Id.* § 1681(a)(2), (5).

39. *Id.* § 1681(a)(6).

40. *Id.* § 1681(a)(8).

any such program or activity by the members of one sex.⁴¹

Thus, the statute neither requires nor prohibits quotas. For the purpose of proving discrimination against members of the under-represented gender, however, the statute does permit the fact-finder—whether the judge or jury in a trial, or a federal funding agency in an investigation—to consider evidence of a proportional imbalance in male-female participation in a particular educational program or activity.

Implementing regulations written by the Department of Health, Education and Welfare⁴² (HEW) and approved in 1975 by President Gerald R. Ford provide guidelines for enforcing the law.⁴³ The regulations address such topics as nondiscrimination in financial assistance provided to students,⁴⁴ nondiscrimination on the basis of the marital or parental status of students,⁴⁵ guidelines for dealing with pregnant students,⁴⁶ and nondiscrimination issues specific to athletic programs.⁴⁷

As a statute enacted pursuant to congressional authority under the Spending Clause of the Constitution,⁴⁸ the law creates a contract that conditions the receipt of federal funds on a grant recipient's commitment not to discriminate on the basis of gender.⁴⁹ Thus, an institution that violates Title IX breaches its contract with the federal government and, as a result of that breach, could lose access to federal funding in its many forms, including student loans, building funds and research grants. The implementing regulations do, however, require that the government gives the institution the opportunity to "take such remedial action as . . . necessary to overcome the effects of such discrimination."⁵⁰ Consequently, the government cannot automatically terminate funding upon finding a breach of the funding contract, but must first inform the recipient institution of the violation and allow the recipient institution to implement corrective actions.

Cases in the sexual harassment context have underscored this point. In *Gebser v. Lago Vista Independent School District*,⁵¹ for example, the United States Supreme Court refused to hold a school district liable under Title IX for teacher-on-student sexual harassment when the school district had no knowledge of the

41. 20 U.S.C. § 1681(b) (2000).

42. In 1979, the U.S. Congress transferred HEW responsibilities for Title IX to the DED through the Department of Education Organization Act of 1979. 20 U.S.C. § 3441 (2000). DED adopted the original HEW policies as its own. *Id.*; 20 U.S.C. § 3505(a) (2000). *See also* 45 Fed. Reg. 30,802 (May 9, 1980) (establishing Title 34 of the C.F.R.). When referring to general enforcement authority under Title IX, this article refers to HEW and DED, as its successor agency, collectively as DED.

43. *See* 34 C.F.R. § 106 (2004).

44. 34 C.F.R. § 106.37.

45. *Id.* § 106.40.

46. *Id.*

47. *Id.* § 106.41.

48. U.S. CONST. art. I, § 8, cl. 1.

49. *See, e.g.,* *Pennhurst State Sch. & Hosp. v. Halderman*, 451 U.S. 1, 17 (1981) ("[L]egislation enacted pursuant to the spending power is much in the nature of a contract: . . . the States agree to comply with federally imposed conditions.").

50. 34 C.F.R. § 106.3(a) (2004).

51. 524 U.S. 274 (1998).

high school teacher's inappropriate behavior. As the Court explained:

[A] central purpose of requiring notice of the violation . . . and an opportunity [to come into] voluntary compliance before administrative enforcement proceedings can commence is to avoid diverting education funding from beneficial uses [in instances in which] a recipient was unaware of discrimination in its programs and is willing to institute prompt corrective measures.⁵²

The Court further noted that the Title IX enforcement scheme:

presupposes that an official who is advised of a Title IX violation refuses to take action to bring the recipient into compliance. The premise, in other words, is an official decision by the recipient not to remedy the violation. That framework finds a rough parallel in the standard of deliberate indifference.⁵³

Otherwise, a recipient institution "would be liable in damages not for its own official decision but instead for its employees' independent actions."⁵⁴ Thus, liability under Title IX requires a finding that the educational institution⁵⁵ knew about the gender-based discrimination and deliberately failed to take actions aimed at stopping it.⁵⁶

While the statute and implementing regulations spell out the details of the contract between a federal funding agency and a recipient educational institution, courts have also defined the contours of the rights of individuals who allege discrimination and choose to sue and recover damages under Title IX. In 1979, in *Cannon v. University of Chicago*,⁵⁷ the Court determined that private plaintiffs could bring suit to enforce the mandates of the statute.⁵⁸ The *Cannon* Court explained that, while "[t]he statute does not . . . expressly authorize a private right of action,"⁵⁹ Congress had patterned Title IX after Title VI of the Civil Rights Act of 1964,⁶⁰ fully aware that Title VI provided for a private right of action.⁶¹ The

52. *Id.* at 289.

53. *Id.* at 290.

54. *Id.* at 290–91.

55. Actually, an "appropriate person" at the educational institution—a person "with authority to take corrective action to end the discrimination"—must receive notice. *Id.* at 290.

56. At least one commentator has pointed out, however, that this notice requirement does not make sense in cases other than sexual harassment claims, because "non-harassment sex discrimination lies at the heart of Title IX's prohibition of sex discrimination in federally funded educational institutions." David S. Cohen, *Limiting Gebser: Institutional Liability for non-Harassment Sex Discrimination Under Title IX*, 39 WAKE FOREST L. REV. 311, 311 (2004). This article points out that lower courts have inconsistently applied the "notice" standard to non-harassment claims under Title IX, and argues for the consistent application of an "agency" standard in all but sexual harassment claims.

57. 441 U.S. 677 (1979) (involving female medical school applicant who was denied admission to two schools who charged that schools discriminated against her on the basis of sex).

58. *Id.* at 693–94.

59. *Id.* at 683.

60. Pub. L. No. 88-352, §§ 601–605, 78 Stat. 241, 252–53 (codified as amended at 42 U.S.C. §§ 2000d to 2000d-7 (2000)).

61. 441 U.S. at 694–96. As the Court stated:

Title IX was patterned after Title VI of the Civil Rights Act of 1964. Except for the

Court thus concluded that Congress had similarly intended to allow Title IX enforcement through a private right of action.⁶² In contract terms, then, the *Cannon* Court gave individual plaintiffs, essentially as third-party beneficiaries of the contract between the federal government and the educational institution, the right to sue to enforce the terms of the contract.

In 1984, in *Grove City College v. Bell*,⁶³ the Court ruled that Title IX applied only to the specific educational programs or activities that directly received federal financial assistance.⁶⁴ If, for example, a university biology department received a federal research grant, the biology department's activities had to comply with the mandates of Title IX; but if that university's athletic department did not receive federal funds, the athletic department had no obligations under the law.

In 1988, however, Congress explicitly gave Title IX institution-wide application by passing the Civil Rights Restoration Act of 1987⁶⁵ to "overturn the Supreme Court's 1984 decision in *Grove City College v. Bell*, and restore the effectiveness and vitality of the four major civil rights statutes that prohibit discrimination in federally assisted programs."⁶⁶ Consequently, if *any* program or activity at an educational institution receives federal funds, then the *entire* institution must comply with Title IX. Today, then, a research grant to the mechanical engineering department or even federal financial aid granted to students for personal use at a college, for example, makes an entire college or university responsible for complying with Title IX and other federal civil rights laws in all of its programs and activities, including athletics.

In its 1992 decision in *Franklin v. Gwinnett County Public Schools*,⁶⁷ the Court expanded the remedies available to private plaintiffs beyond merely enforcing the contract between the federal government and the institution.⁶⁸ Relying on a principle derived from the Court's 1946 decision in *Bell v. Hood*,⁶⁹ the *Franklin*

substitution of the word "sex" in Title IX to replace the words "race, color, or national origin" in Title VI, the two statutes use identical language to describe the benefited class. Both statutes provide the same administrative mechanism for terminating federal financial support for institutions engaged in prohibited discrimination. Neither statute expressly mentions a private remedy for the person excluded from participation in a federally funded program. The drafters of Title IX explicitly assumed that it would be interpreted and applied as Title VI had been during the preceding eight years.

Id.

62. *Id.* at 729–30.

63. 465 U.S. 555 (1984).

64. *Id.* at 574. The Court had also affirmed the program-specific nature of Title IX in at least one earlier case, *North Haven Board of Education v. Bell*, 456 U.S. 512, 535–38 (1982).

65. Pub. L. No. 100-259, § 3(a), 102 Stat. 28 (codified as amended at 20 U.S.C. § 1687 (2000)).

66. S. REP. NO. 100-64, at 2 (1988) (internal citations omitted).

67. 503 U.S. 60 (1992) (involving a female high school student who charged that her coach/teacher had sexually harassed her).

68. *Id.* at 76.

69. 327 U.S. 678 (1946). As the *Bell* Court explained, "[W]here legal rights have been invaded, and a federal statute provides for a general right to sue for such invasion, federal courts may use any available remedy to make good the wrong done." *Id.* at 684. The *Franklin* Court described "this longstanding rule as jurisdictional and upheld the exercise of the federal courts' power to award appropriate relief so long as a cause of action existed under the Constitution or

Court concluded that a plaintiff could receive monetary damages when an educational institution violated Title IX.⁷⁰ Again in contract terms, the *Franklin* Court gave individual plaintiffs the right to receive monetary damages for the educational institution's breach of the funding contract.⁷¹

The *Franklin* Court did not provide guidance on whether monetary damages could include punitive damages. But at least one federal appellate court has ruled in the athletics context that Title IX does not allow punitive damages in a private action, although the law does permit recovery of attorneys' fees and costs.⁷² Also, in *Barnes v. Gorman*,⁷³ the Supreme Court ruled that punitive damages are not available in a private action under the Americans with Disabilities Act (ADA).⁷⁴ Likening the ADA—along with Title VI and Title IX—to a contract, the *Barnes* Court indicated that “funding recipients have not, merely by accepting funds, implicitly consented to liability for punitive damages.”⁷⁵ Rather, the *Barnes* Court concluded that liability under Spending Clause legislation is limited to those remedies traditionally associated with breach of contract, namely, compensatory damages and injunctive relief.⁷⁶

B. Title IX in Academics vs. Title IX in Athletics

In his October 2002 testimony at the U.S. Senate subcommittee hearing on “Title IX and Science,” former U.S. Senator Birch Bayh (D-IN), key among Title IX congressional advocates in 1972, said that the progress of women in the athletics arena over the last 30 years “warms my heart.”⁷⁷ He then added:

[B]ut it also reminds me that at the time we were considering the Equal Rights Amendment and Title IX, I thought that the greatest benefit would come from opening the doors of our education system so that girls, young women, faculty members and administrators could fully utilize their God-given talents in the

laws of the United States.” *Franklin*, 503 U.S. at 66 (construing *Bell*, 327 U.S. at 684).

70. *Franklin*, 503 U.S. at 71.

71. *Id.* It should be noted that the Supreme Court has not yet directly addressed whether an institution might be liable to a private plaintiff for requested equitable relief for the breach of contract. That is, the Court has not yet determined whether a court might require an educational institution to change its policies or procedures to remedy gender discrimination. The Court has cautioned, however, that Title IX plaintiffs do not have a “right to make particular remedial demands.” *Davis v. Monroe County Bd. of Educ.*, 526 U.S. 629, 648 (1999). Courts decide such cases consistent with the general principle that educational institutions must retain the flexibility necessary to administer their programs appropriately. *Id.* at 648–49.

72. *Mercer v. Duke Univ.*, 50 Fed. Appx. 643 (4th Cir. 2002).

73. 536 U.S. 181 (2002).

74. *Id.* at 189. Americans with Disabilities Act of 1990, Pub. L. 101-336, 104 Stat. 327 (codified as amended at 42 U.S.C. §§ 12101–12213 (2000)).

75. *Barnes*, 536 U.S. at 188.

76. *Id.* at 187. *But see also* Charles L. Rombeau, *Barnes v. Gorman and Mercer v. Duke University: The Availability of Punitive Damages in Title IX Litigation*, 6 U. PA. J. CONST. L. 1192 (2004) (arguing for the imposition of punitive damages in Title IX cases that involve intentional discrimination).

77. *Title IX and Science: Hearing on SR-253 Before Senate Subcomm. on Sci., Tech., and Space of Senate Comm. On Commerce, Sci., and Transp.*, 107th Cong. (statement of Birch Bayh), available at <http://commerce.senate.gov/hearings/100302bayh.pdf> (Oct. 3, 2002).

academic area.”⁷⁸

Senator Ron Wyden (D-OR), former chair of the U.S. Senate Subcommittee on Science, Technology and Space, echoed Senator Bayh’s thoughts in a recent article:

Many Americans know [that] the enforcement of [Title IX] 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.⁷⁹

Nevertheless, the term “Title IX” has become shorthand for “gender equity in athletics,” and much of what the public knows about Title IX—a statute that has broad applications for all areas of federally financed education—has resulted from a number of high-profile equity-in-athletics cases that have reached the federal appellate courts.⁸⁰

While these decisions have shaped public perception about Title IX, they have also encouraged those interested in gender equity in STEM education to pursue a goal of true gender equity in a manner similar to the athletics cases.⁸¹ However,

78. *Id.*

79. Ron Wyden, *Title IX and Women in Academics*, COMPUTING RESEARCH NEWS, September 2003, at 1, available at <http://www.cra.org/CRN/issues/0304.pdf>.

80. Cases in the First Circuit include *Cohen v. Brown University*, 809 F. Supp. 978 (D.R.I. 1992), *aff’d*, 991 F.2d 888 (1st Cir. 1993) (preliminary injunction), and 879 F. Supp. 185 (D.R.I. 1995), *aff’d in part, rev’d in part*, 101 F.3d 155 (1st Cir. 1996), *cert. denied*, 520 U.S. 1186 (1997) (trial on the merits); in the Third Circuit, *Favia v. Indiana University of Pennsylvania*, 7 F.3d 332 (3d Cir. 1993); in the Fifth Circuit, *Pederson v. Louisiana State University*, 213 F.3d 858 (5th Cir. 2000); in the Sixth Circuit, *Miami University Wrestling Club v. Miami University*, 302 F.3d 608 (6th Cir. 2002); in the Seventh Circuit, *Kelley v. Board of Trustees, University of Illinois*, 35 F.3d 265 (7th Cir. 1994), and *Boulahanis v. Board of Regents, Illinois State University*, 198 F.3d 633 (7th Cir. 1999); in the Eighth Circuit, *Chalenor v. University of North Dakota*, 291 F.3d 1042 (8th Cir. 2002); in the Ninth Circuit, *Neal v. Board of Trustees of the California State Universities*, 198 F.3d 763 (9th Cir. 1999); and in the Tenth Circuit, *Roberts v. Colorado State Board of Agriculture*, 998 F.2d 824 (10th Cir. 1993).

The Second Circuit considered a number of Title IX issues in *Boucher v. Syracuse University*, 164 F.3d 113 (2d Cir. 1999), but because of standing and class-certification issues, as well as the university’s decision to add particular women’s teams during the pendency of the litigation, the court did not reach the effective accommodation issues dealt with by the *Cohen* court and the other federal circuits.

The Sixth Circuit has also addressed significant Title IX issues in the context of secondary school athletic programs in a series of cases dating back to 1992, culminating in *Horner v. Kentucky High School Athletic Ass’n*, 206 F.3d 685 (6th Cir. 2000); and *Communities for Equity v. Michigan High School Athletic Ass’n, Inc.*, 377 F.3d 504 (6th Cir. 2004).

The Fourth Circuit addressed a unique Title IX case, which involved the treatment of a female student-athlete who had the opportunity to try out for Duke University’s football team, in *Mercer v. Duke University*, 190 F.3d 643 (4th Cir. 1999).

The Eleventh Circuit has yet to hear a Title IX equity-in-athletics case of any kind.

81. See, e.g., Debra R. Rolison, *Can Title IX Do for Women in Science and Engineering*

the Title IX framework credited for tremendous growth in women's athletics over the past three decades cannot translate directly into the academic sphere for a number of important reasons.

First, the implementing regulations relevant to athletics contemplated the segregation of male and female student-athletes on separate teams.⁸² Consequently, the Title IX enforcement scheme designed for athletics adopts what could be called a "separate but equal" approach to Title IX enforcement. That is, an educational institution must prove that the benefits and opportunities afforded to men compare favorably with those afforded separately to women. Title IX enforcement actions in athletics thus focus on the *actual results* of attempts to achieve equity: whether women actually receive an equitable share of athletics-related financial assistance;⁸³ whether the institution actually provides male and female student-athletes with equivalent benefits and other opportunities associated with athletics;⁸⁴ and whether the institution actually provides an equitable number of participation opportunities for male and female student-athletes.⁸⁵

In the academic context, on the other hand, such gender segregation does not (or should not) exist. Consequently, the Title IX enforcement scheme must deal, not with the number of women who study in or graduate from a particular program, but with whether the program provides an environment that affords women and men equivalent opportunities to participate in the educational process. Thus, while a statistical imbalance in the number of men and women graduating from an engineering program may provide evidence that the educational institution's practices do not comply with Title IX, that imbalance alone cannot constitute the Title IX violation. A Title IX violation would exist only if the educational institution failed to adhere to the requirements spelled out in the relevant implementing regulations, regardless of how few women actually graduate from a particular program.

What It Has Done for Women in Sports? APS NEWS ONLINE, May 2003, at 8, at <http://www.aps.org/apsnews/0503/may03.pdf> (arguing for gender-equity reforms in STEM disciplines patterned after gender-equity reforms in athletics).

82. 34 C.F.R. § 106.41(b) (2004) states in part: "[A] recipient may operate or sponsor separate teams for members of each sex where selection for such teams is based upon competitive skill or the activity involved is a contact sport." See also 65 Fed. Reg. 52,858, 52,862 (Aug. 30, 2000) (to be codified in multiple parts of C.F.R.) (noting that "many athletic programs are sex-segregated by design, whereas Title IX requires that most academic programs be offered to all students regardless of sex. Thus, since most academic classes are not segregated by sex, different standards are used for assessing compliance with Title IX in academic programs.").

83. See 34 C.F.R. § 106.37 (2004) (discussing the equivalence in athletic financial assistance to student-athletes). See 44 Fed. Reg. 71,413, 71,415 (Dec. 11, 1979).

84. See 34 C.F.R. § 106.41(c)(2)-(10) (discussing the equivalence in other athletic benefits and opportunities—the so-called "laundry list" of nine items such as coaches' compensation, facilities, equipment, etc.). See 44 Fed. Reg. at 71,415.

85. See 34 C.F.R. § 106.41(c)(1) (discussing the ways in which an educational institution can demonstrate that it has provided equitable participation opportunities). These discussions encompass the three-part test for compliance with the effective accommodation requirements of Title IX, under which an educational institution must show that it satisfies one of three criteria: proportionality between the percentage of female student and female student-athletes, a history of continuing program expansion, or that its athletic program meets the interests and abilities of its students. *Id.* See 44 Fed. Reg. at 71,417–18.

Second, in athletics, women typically compete for spots on women's teams and men compete for spots on men's teams. And, of course, women cannot compete for participation opportunities on women's teams that do not exist due to an educational institution's failure to provide adequate funding and other support for those teams. Thus, the competition between men and women does not involve a head-to-head battle for the same position. Rather, it involves a broader battle for properly allocated resources.

In the academic context, on the other hand, men and women do compete head-to-head with each other for admission to particular schools, to work with top faculty advisors, to secure research funding, and to earn particular teaching assignments. Thus, any gender discrimination that occurs in the academic context more closely resembles gender discrimination in the employment context, in which men and women compete head-to-head for particular jobs.

Third, because of the team nature of athletics participation, Title IX compliance inquiries and enforcement efforts focus on whether the educational institution has distributed benefits equivalently to men's and women's *teams*.⁸⁶ This changes the equity inquiry somewhat, because it requires courts to assess things like whether the scheduling of men's and women's sports seasons provides equitable opportunities to the affected teams,⁸⁷ whether the men's and women's teams have equivalent facilities,⁸⁸ or whether the men's basketball coach should command a higher salary than the women's basketball coach.⁸⁹ Only in rare instances, such as when a woman tries out for a men's team,⁹⁰ does the Title IX discrimination inquiry focus on the circumstances surrounding the treatment of an individual student.

In the academic context, on the other hand, charges of discrimination under Title IX often involve individual students. Courts must determine whether an educational institution violates Title IX when a male student does not receive the

86. An exception to this general rule exists for athletics-related financial assistance, which the educational institution must distribute equivalently to male and female *student-athletes*, rather than to men's and women's *teams*. See, e.g., 34 C.F.R. § 106.37 (2004); 44 Fed. Reg. at 71,415–17.

87. See, e.g., *Cmtys. for Equity v. Mich. High Sch. Athletic Ass'n*, 178 F. Supp. 2d 805, 855 (W.D. Mich. 2001), *aff'd*, 377 F.3d 504 (6th Cir. 2004) (holding that defendant state athletic association's practice of scheduling girls' sports in off-seasons discriminated against the girls on the basis of gender in violation with Title IX); *McCormick ex rel. McCormick v. Sch. Dist. of Mamaroneck*, 370 F.3d 275 (2d Cir. 2004) (similar facts, but at the district school level).

88. See, e.g., *Daniels v. Sch. Bd. of Brevard County of Fl.*, 985 F. Supp. 1458, 1463 (M.D. Fla. 1997) (holding that school district violated Title IX by providing unequal facilities for boys' baseball and girls' softball teams, even where boys' superior facilities were funded by booster club donations and not by the school district).

89. See, e.g., *Stanley v. Univ. of S. Cal.*, 178 F.3d 1069, 1077 (9th Cir. 1999) (finding no discrimination under Title IX when defendant university paid female women's basketball coach less than male coach of men's basketball team, when defendant university offered legitimate, nondiscriminatory reasons for the salary difference, including his extensive and superior experience).

90. See, e.g., *Mercer v. Duke Univ.*, 190 F.3d 643, 648 (4th Cir. 1999) (finding violation of Title IX when football coach refused to allow female student-athlete, who tried out for and secured position as kicker on defendant-university's football team, to practice with the team and dress for games).

same sorts of success-oriented assistance as female students typically receive,⁹¹ or when admissions policies favor men in a majority-female public university.⁹² Rarely do widespread instances of systemic discrimination become the focus of a Title IX claim in the academics context.

Fourth, the discrimination that occurs in athletics cases results primarily because the educational institution must allocate a limited resource: money. The college or university decides whether to drop a men's team in order to fund a women's team, whether to take advantage of an opportunity to pursue a highly successful (and consequently expensive) coach for the men's basketball team but not pursue the same opportunity for the women's team, when to renovate particular facilities, or how to schedule practice times to make the best use of available facilities. Typically, the discrimination that does occur in athletics results more from a lack of money to do everything perfectly well, rather than from a desire to support one group to the exclusion of the other—although the rare exception to this general rule does exist.⁹³ The institution causes the discrimination by the improper allocation of resources, and the institution can, therefore, remedy the discrimination by a proper reallocation of resources.

In the academic context, on the other hand, the discrimination that occurs typically results from policies, procedures, or even informal practices that disproportionately disadvantage students or faculty of one gender. Remedying such discrimination requires more than a comparatively simple reallocation of resources. It requires changing the discriminatory policies, procedures, or practices, and, in many instances, changing the mind-set of (or otherwise removing from the process) those who have operated under the offending policies, procedures, or practices for, perhaps, many years. In other words, such remediation requires more than a comparatively simple shift of assets from one side of a ledger to another; it requires education and persistent oversight.

Fifth, in the athletics context, the institutional discrimination necessary for a Title IX violation is readily apparent, because the educational institution decides where and how to spend its money and allocate other resources. Thus, the educational institution can be held accountable for its decisions and has an

91. See, e.g., *Gossett v. Okla. ex rel. Bd. of Regents for Langston Univ.*, 245 F.3d 1172 (10th Cir. 2001) (addressing evidentiary matters in case involving male nursing student who sued university under Title IX, claiming gender discrimination when female faculty members refused to give him the same help they routinely gave to female nursing students); *Bucklen v. Rensselaer Polytechnic Inst.*, 166 F. Supp. 2d 721 (N.D.N.Y. 2001) (addressing evidentiary matters in case involving male graduate student who sued university under Title IX, claiming gender discrimination when faculty refused to accommodate his request to take qualifying exam for the fourth time, although faculty had made accommodations for a similarly situated female student who also had difficulty with the qualifying exam).

92. See, e.g., *Johnson v. Bd. of Regents of the Univ. Sys. of Ga.*, 106 F. Supp. 2d 1362 (S.D. Ga. 2000) (discussing claims of female applicants who challenged a university admissions policy that lowered threshold admissions standards for men in an attempt to remedy an imbalance in the student body in favor of women).

93. See, e.g., *Pederson v. La. State Univ.*, 213 F.3d 858, 882 (5th Cir. 2000) (holding that university discriminated against female student-athletes in words as well as deeds, by failing to create appropriate participation opportunities for female student-athletes and by discussing the matter in a dismissive and chauvinistic manner).

incentive to remedy the discrimination.

In the academic context, on the other hand, the discrimination that occurs typically involves individual students or individual faculty members, perhaps at the lowest levels of academic administration and in isolated pockets. But even when an “isolated pocket” is as large as an entire academic department, a successful Title IX plaintiff must prove that the educational institution—rather than an individual professor or an isolated group of professors—engaged in the discriminatory conduct.⁹⁴ In this regard, at least, Title IX claims for discrimination in the academic context more closely resemble Title IX claims in the sexual harassment context, in which courts tend not to impose liability on an academic institution for individual conduct unless the institution had proper notice of the misconduct and failed to act to stop it.⁹⁵

Finally, for all of the complicating factors that make Title IX cases in the athletics context difficult—most significantly, the seeming need to discriminate against men while working toward equity for women, but also the realistic limitations on financial resources—Title IX athletics cases are comparatively easy to resolve. In many instances, the Title IX violation results from an inequitable allocation of resources, so courts order a reallocation of resources.⁹⁶

Gender discrimination in the academic context, on the other hand, does not typically lend itself to such facile solutions. Changing the entrenched attitudes of faculty members in particular disciplines, or of individual faculty members throughout a college or university, may prove extremely difficult or even nearly impossible. Male faculty members might react with hostility and impede efforts at reform.⁹⁷ The fear of sexual harassment claims may cause some male faculty members to shy away from working too closely with female graduate students. Tight research schedules may not permit a research assistant to take time off to care for a new baby or an ailing parent. And most importantly, pursuing a claim of gender discrimination against an academic advisor could limit a student’s post-graduation opportunities.

94. See, e.g., *Chontos v. Rhea*, 29 F. Supp. 2d 931, 934 (N.D. Ind. 1999) (noting that, to hold the defendant university liable for the sexual harassment allegedly committed by a professor, the plaintiff would have to prove that the university acted with deliberate indifference after the student reported the misconduct to an appropriate university official). This case points out that discrimination under Title IX results not from a professor’s misconduct, but from a university’s failure to take appropriate steps to end the reported misconduct.

95. See, e.g., *Gebser v. Lago Vista Indep. Sch. Dist.*, 524 U.S. 274, 291 (1998) (stating that sexual harassment liability under Title IX requires actual notice to an appropriate person who acts with deliberate indifference toward the harassment).

96. See, e.g., *Cohen v. Brown Univ.*, 879 F. Supp. 185, 214 (D.R.I. 1995), *aff’d in part, rev’d in part*, 101 F.3d 155 (1st Cir. 1996), *cert. denied*, 520 U.S. 1186 (ordering defendant university to fund certain teams at appropriate levels and to maintain a particular funding scheme for men’s and women’s teams, allowing a deviation only with court approval).

97. Duke University, for example, has received attention recently for its efforts to improve conditions for women in its physics department. But when the department chair sent a memo to faculty indicating his dissatisfaction with the department’s climate for women, some male faculty members responded that the chair was “fostering a ‘hypersensitive’ environment, one that is good for neither gender.” Robin Wilson, *Louts in the Lab*, CHRON. HIGHER EDUC., Jan. 23, 2004, at A7.

Although academics and athletics co-exist within an educational institution, these real differences between them mean that the Title IX enforcement scheme that has developed in the athletics context has little utility for the academic context, except perhaps in the limited area of employment discrimination as explored in coaches' compensation cases. Thus, it becomes necessary to develop a different framework for understanding how Title IX applies in the academic context. Rather than creating an environment that encourages actions aimed at achieving proportionality in participation opportunities and funding, Title IX in the academic context aims merely to level the playing field, so that women (and men) interested in a particular field of study can compete fairly for opportunities to engage in those programs of study or areas of employment. In this, Title IX in academics more closely parallels Title VII in the employment context, although the implementing regulations discussed in the next section have specific relevance to the operations of educational institutions.

C. Title IX Implementing Regulations

The Title IX implementing regulations spell out the details of the funding contract between the educational institution and the federal funding agency. Volume 34, part 106 of the Code of Federal Regulations contains forty-three separately numbered regulations adopted by DED in 1975.⁹⁸ In 2000, twenty-one other federal agencies adopted a final common rule that "provides for the enforcement of Title IX."⁹⁹ The rules for each of these agencies almost exactly replicate the rules promulgated by DED in 1975.¹⁰⁰ As the notice of adoption of the common rule explains:

These Title IX regulations are presented as a common rule because the standards established for the enforcement of Title IX are the same for all of the participating agencies. The procedures for how an agency will enforce Title IX, including the conduct of investigations and compliance reviews, also follow the same structure.¹⁰¹

Although DED initially had assumed primary responsibility for Title IX enforcement, these other agencies adopted the final rule to fulfill their statutory obligations.¹⁰² As explained in the notice of adoption:

As originally enacted in 1972, Title IX directed all Federal agencies providing financial assistance to recipients that operate education programs or activities to adopt regulations to achieve the statute's objectives. These Title IX regulations are thus nothing more than a long overdue effort to provide a regulatory enforcement mechanism for those Federal agencies that failed to adopt their own Title IX

98. See 34 C.F.R. § 106.41 (2004). See also *supra* note 42 (discussing the Department of Education Organization Act of 1979, which transferred Title IX responsibilities from the DED to HEW).

99. See 65 Fed. Reg. 52, 858 (Aug. 30, 2000) (to be codified in multiple parts of C.F.R.).

100. *Id.*

101. *Id.*

102. 20 U.S.C. § 1682 (2000).

regulations when the statute was originally enacted.¹⁰³

Each agency has published its version of the regulations in its part of the Code of Federal Regulations.¹⁰⁴ Because of the consistency among these sets of regulations and with the original 1975 DED regulations, this article cites to the DED regulations.

The regulations impose requirements on educational institutions in three areas: general administrative functions; student services and activities, including athletics; and employment practices. This section discusses the regulations in each of these areas. This section also includes cases, where available, to illustrate the principles embodied in the particular regulation. Unfortunately, however, many of the cases do not fully explore the Title IX ramifications of the conduct at issue. Rather, most of these cases involve motions for summary judgment or motions to dismiss, and therefore discuss the type of conduct that would, if proven, constitute a Title IX violation. This part of the article does, however, include a broader discussion of those very few cases that have reached trials on the merits.

1. Title IX and General Administrative Functions

Sixteen regulations address general administrative requirements under Title IX. Twelve of the sixteen explain the scope of the law and the operation of the regulations themselves, as discussed in Part I.C.1.a below, while four impose particular obligations on educational institutions, as discussed in Part I.C.1.b.

103. 65 Fed. Reg. at 52, 863.

104. *See id.* at 52,858. The relevant sections of the C.F.R. for each agency are as follows:
Nuclear Regulatory Commission, 10 C.F.R. pt. 5 (2005);
Small Business Administration, 13 C.F.R. pt. 113 (2005);
National Aeronautics and Space Administration, 14 C.F.R. pt. 1253 (2005);
Department of Commerce, 15 C.F.R. pt. 8a (2005);
Tennessee Valley Authority, 18 C.F.R. pt. 1317 (2004);
Department of State, 22 C.F.R. pt. 146 (2004);
Agency for International Development, 22 C.F.R. pt. 229 (2004);
Department of Housing and Urban Development, 24 C.F.R. pt. 3 (2004);
Department of Justice, 28 C.F.R. pt. 54 (2004);
Department of Labor, 29 C.F.R. pt. 36 (2004);
Department of the Treasury, 31 C.F.R. pt. 28 (2004);
Department of Defense, 32 C.F.R. pt. 196 (2004);
National Archives and Records Administration, 36 C.F.R. pt. 1211 (2004);
Department of Veterans Affairs, 38 C.F.R. pt. 23 (2004);
Environmental Protection Agency, 40 C.F.R. pt. 5 (2004);
General Services Administration, 41 C.F.R. pt. 101-4 (2004);
Department of the Interior, 43 C.F.R. pt. 41 (2004);
Federal Emergency Management Agency, 44 C.F.R. pt. 19 (2004);
National Science Foundation, 45 C.F.R. pt. 618 (2004);
Corporation for National and Community Service, 45 C.F.R. pt. 2555 (2004); and
Department of Transportation, 49 C.F.R. pt. 25 (2004).

a. Scope and Operation of the Title IX Statute and Regulations

The regulations “effectuate Title IX . . . which is designed to eliminate (with certain exceptions) discrimination on the basis of sex in any education program or activity receiving Federal financial assistance.”¹⁰⁵ The regulations import into Title IX the enforcement procedures established to eliminate racial discrimination under Title VI of the Civil Rights Act of 1964;¹⁰⁶ this means that developments in enforcing the laws that prohibit discrimination on the basis of race may also affect the enforcement of Title IX.¹⁰⁷ The regulations also caution that Title IX obligations exist independently of and do not alter other nondiscrimination obligations imposed by federal legislation or regulation, such as the prohibition of gender discrimination in employment in Title VII of the Civil Rights Act of 1964.¹⁰⁸

The regulations also define pertinent terms. “Federal financial assistance,” in particular, has a wide scope that includes: building funds; scholarships, loans, grants, wages or other funds paid on behalf of students or provided to students for payment to the educational institution; grants of real or personal federal property; provision of the services of federal personnel; all other contracts that provide assistance to the educational institution, except insurance or guaranty contracts; and the sale or other transfer of property financed in whole or in part with federal funds, unless the educational institution returns an appropriate share of the proceeds to the federal government.¹⁰⁹ Thus, *any* direct or indirect acceptance of federal funding obligates an educational institution to comply with Title IX.

Consistent with the Civil Rights Restoration Act of 1987,¹¹⁰ the regulations reaffirm that Title IX applies to all programs and activities at educational institutions that receive federal funds.¹¹¹ The regulations further define “program or activity” as “all of the operations” of an educational institution, even if a specific program or activity does not receive federal financial assistance,¹¹² but the regulations also exempt from Title IX those educational institutions with contrary religious tenets, military and merchant-marine educational institutions, and certain single-sex programs such as social fraternities and sororities, Girl Scouts, Boy Scouts, Camp Fire Girls, and some voluntary youth service organizations.¹¹³ The regulations also exempt traditionally single-sex institutions, but do set forth Title IX compliance guidelines for single-sex institutions that choose to transition to co-

105. 34 C.F.R. § 106.1 (2000).

106. *Id.* § 106.71 (referring to 42 U.S.C. §§ 2000d to 2000d-7 (2000)).

107. *See, e.g., Cannon v. Univ. of Chicago*, 441 U.S. 677, 694–96 (1979) (stating that Congress intended for Title IX to be interpreted in the same way as Title VI). *See also Franklin v. Gwinnett County Pub. Schs.*, 911 F.2d 617, 619 (11th Cir. 1990), *rev'd on other grounds*, 503 U.S. 60 (1992) (“[I]t is settled that analysis of the two statutes is substantially the same.”).

108. 34 C.F.R. § 106.6 (referring to 42 U.S.C. §§ 2000e to 2000e-17 (2000)).

109. *Id.* §§ 106.2, 106.5.

110. Pub. L. No. 100-259, § 3(a), 102 Stat. 28 (codified as amended at 20 U.S.C. § 1687 (2000)).

111. 34 C.F.R. § 106.11 (2004).

112. *Id.* § 106.2.

113. *Id.* §§ 106.12–106.14.

education.¹¹⁴

b. Obligations Imposed on Educational Institutions

Four regulations impose specific obligations on educational institutions, describing activities that the educational institution must undertake to comply with the statute. When applying for federal funding, an educational institution must: assure granting agencies that programs and activities comply with Title IX;¹¹⁵ designate at least one employee to coordinate Title IX compliance efforts;¹¹⁶ establish a Title IX grievance procedure;¹¹⁷ and disseminate information regarding its Title IX nondiscrimination policy.¹¹⁸

An educational institution also must undertake any remedial actions, including any affirmative action, ordered by the granting agency in response to a finding of gender discrimination.¹¹⁹ In the absence of such a finding, though, this regulation does allow an educational institution to “take affirmative action to overcome the effects of conditions which resulted in limited participation [in the program or activity] by persons of a particular sex.”¹²⁰ This DED regulation does not directly address whether such under-representation must be institution-wide, or whether it may be within an individual program or activity, but the notice of adoption of the common rule for all of the federal granting agencies does contemplate that educational institutions might engage in activities targeted toward only one gender to remedy a particular under-representation at something other than an institution-wide level. In response to comments received prior to the adoption of the common rule, the notice provided the following clarification:

Several comments inquired about the viability of single-sex programs such as an educational science program targeted at young women and designed to encourage their interest in a profession in which they are underrepresented. Such courses may, under appropriate circumstances, be permissible as part of a remedial or affirmative action program as provided for by [§ 106.3 of the DED version of] these Title IX regulations.¹²¹

This comment makes clear that such programs may exist “under appropriate circumstances,”¹²² but does not define those “appropriate circumstances.” Clearly, colleges and universities could benefit from some direction to help them to make the right decisions regarding programs designed to help members of under-

114. *Id.* §§ 106.15–106.17.

115. *Id.* § 106.4.

116. *Id.* § 106.8.

117. *Id.*

118. *Id.* § 106.9.

119. Any such order is, however, subject to certain procedural requirements, including a right to a hearing, per 34 C.F.R. § 106.71, which imports into Title IX the Title VI compliance scheme listed at 34 C.F.R. §§ 100.6–100.11 (2004) and 34 C.F.R. § 101 (2004).

120. 34 C.F.R. § 106.3 (2004).

121. 65 Fed. Reg. 52,858, 52,861 (Aug. 30, 2000) (to be codified in multiple parts of C.F.R.).

122. *Id.*

represented groups to become more involved in certain fields of study. Otherwise, they might make decisions not required by the law simply to avoid controversy. In 2003, for example, fearing litigation based on charges of racial discrimination prior to the decisions of the Supreme Court in the University of Michigan race-based admissions cases,¹²³ the Massachusetts Institute of Technology, Princeton University and others decided to eliminate minority-only admissions for certain college preparation programs.¹²⁴ Because of the interconnectedness of Title VI and Title IX enforcement, these actions then precipitated questions about the viability of similar programs targeted toward attracting women to, and preparing them for, further study in STEM disciplines.¹²⁵ The Title IX regulatory scheme does permit such programs, but cases interpreting the law make clear that any affirmative action must be narrowly tailored to achieve an identifiable goal.

2. Student Services and Activities

The fifteen regulations that address gender discrimination against students apply to undergraduate and graduate students alike. Four of the fifteen regulations govern discrimination against potential students in the recruitment and admissions process, while eleven address discrimination against existing students in the programs and activities offered by the educational institution.

a. Potential Students—Admissions and Recruitment

The Title IX regulations prohibit gender discrimination in student-recruitment activities.¹²⁶ Nevertheless, recruitment efforts may focus on students of one sex if ordered as a remedial action by DED's Office of Civil Rights (DED-OCR) or if part of an affirmative-action plan designed to address the under-representation of students of one sex.¹²⁷ Thus, a college or university trying to admit more women to its STEM programs (or more men to its nursing program) may engage in activities targeted toward this goal.

The regulations do prohibit certain admissions practices, including: preferring one applicant over another solely on the basis of the applicant's sex; preferring applicants from particular single-sex schools, if such preferences limit opportunity for members of the other sex; ranking applicants separately by gender; applying limits on or otherwise controlling the proportion of male and female students admitted; and using an admissions test or other criterion that adversely and disproportionately affects applicants of one sex, unless the educational institution

123. *Gratz v. Bollinger*, 539 U.S. 244 (2003) (undergraduate admissions); *Gutter v. Bollinger*, 539 U.S. 306 (2003) (law school admissions).

124. Peter Schmidt and Jeffrey R. Young, *MIT and Princeton Open 2 Summer Programs to Students of All Races*, CHRON. HIGHER EDUC., Feb. 21, 2003, at A31. See also Roger Clegg, *Time Has Not Favored Racial Preferences*, CHRON. HIGHER EDUC., Jan. 14, 2005, at B10 (asserting that the demise of racially exclusive programs at elite educational institutions "makes it much more difficult for other institutions to claim any necessity for" similar programs on their campuses).

125. 34 C.F.R. § 106.71 (2004).

126. *Id.* § 106.23.

127. *Id.* §§ 106.3, 106.23.

can show both that the test or other criterion validly predicts student success and that no suitable gender-neutral alternative test or criterion is available.¹²⁸ An educational institution may not inquire into or treat applicants differently on the basis of the student's marital or parental status, but may inquire into an applicant's gender if it uses the information for something like roommate assignments and not as a means of discriminating in the admissions process.

Public elementary and secondary schools may not exclude girls (or boys) from particular educational institutions or programs, unless girls (or boys) have equivalent access to comparable programs.¹²⁹ This regulation does not, however, extend to public colleges and universities. Rather, in those cases that have challenged the male-only admissions policies of public institutions, such as those brought against The Citadel¹³⁰ and Virginia Military Institute,¹³¹ courts have relied on the Equal Protection Clause of the Fourteenth Amendment in deciding to require the admission of women to both all-male colleges. Additionally, it should be noted that nothing in this particular regulation applies to private educational institutions of any kind.

If the under-representation of women in a particular college or university results from an under-representation of women in the applicant pool, an educational institution could, consistent with Title IX, engage in targeted efforts to encourage more women to apply. But an educational institution could not remedy the under-representation of women by lowering admissions standards for female applicants only. Such an action would violate Title IX not only because it treats males and females differently by establishing separate admissions standards, but also because it does not address the cause of the under-representation—that is, the lower number of female applicants.¹³²

*Johnson v. Board of Regents of the University System of Georgia*¹³³ addressed

128. 34 C.F.R. §§ 106.21–106.22 (2004). These regulations comport with the Supreme Court's decision in *Grutter v. Bollinger*, 539 U.S. 306 (2003), which addressed the use of race in the law school admissions process. The *Grutter* Court held that student body diversity constituted a compelling state interest, and discussed the means by which a state-funded law school could use race in the admissions process. *Id.* at 328, 334. An educational institution may not: fill its class with diverse candidates through the use of quotas; prefer one applicant over the other solely on the basis of a protected characteristic such as race; assess applicants separately and differently on the basis of race; or use race in an inflexible, mechanical manner. *Id.* at 334–38. An educational institution need not, however, exhaust every conceivable race-neutral alternative method of achieving its goals. *Id.* at 339. Rather, it must engage in a serious and good-faith consideration of workable race-neutral alternatives. *Id.*

129. 34 C.F.R. § 106.35.

130. *See United States v. Jones*, 136 F.3d 342 (4th Cir. 1998) (challenging men-only admissions policy of state funded military university in absence of comparable program for women).

131. *See United States v. Virginia*, 518 U.S. 515 (1996) (challenging men-only admissions policy of state funded military university in absence of comparable program for women).

132. *See Grutter v. Bollinger*, 539 U.S. 306, 334–35 (2003) (discussing the use of quotas and considering different groups of applicants separately in the admissions process).

133. 106 F. Supp. 2d 1362 (S.D. Ga. 2000), *aff'd*, 263 F.3d 1234 (11th Cir. 2001). For a more thorough discussion of this case, see Catherine Pieronek, *Discrimination Against Students in Higher Education*, 28 J.C. & U.L. 387, 407–09, 422–27 (2002), and Catherine Pieronek, *Discrimination Against Students in Higher Education*, 29 J.C. & U.L. 359, 382–87 (2003).

the issue of whether a university could use gender and race as factors in admissions decisions.¹³⁴ In *Johnson*, three white female applicants who were denied admission to the University of Georgia (UGA) challenged UGA's admissions system as a violation of both Title IX and Title VI because it gave preferences to male students and to minority students who were under-represented in UGA's student body.¹³⁵ The plaintiffs contended that UGA's admissions system effectively lowered the admissions threshold for male and minority applicants.¹³⁶

Prior to 1999, UGA used a three-step admissions-decision system that awarded points based on particular criteria and established cut-off levels for admission at each step of the process.¹³⁷ The first step awarded points only for academic credentials.¹³⁸ Those not admitted at the first moved on to the second step, which gave points to those who satisfied a secondary set of criteria, such as being male or a member of an ethnic minority group.¹³⁹ Those not admitted at the second step moved on to the third step, which involved individual review of applications to identify other factors that could work in an applicant's favor.¹⁴⁰

UGA abandoned its preferences scheme for male applicants in 1999, shortly after the plaintiffs filed their case. Thus, the case proceeded only on the issue of preferences granted toward minority students. Nevertheless, because of the similarities between Title IX and Title VI enforcement, the United States District Court for the Southern District of Georgia did discuss the use of gender preferences along with its discussion of racial preferences in admissions.¹⁴¹ Following the rationale expressed by the Fifth Circuit in *Hopwood v. Texas*,¹⁴² the district court stated that strict scrutiny applied to racial classifications and, consequently, to racial discrimination claims brought under Title VI.¹⁴³ The court then concluded that strict scrutiny must apply to a gender discrimination claim brought under Title IX as well, because "analysis of the two statutes is substantially the same."¹⁴⁴ Moreover, the district court then added, "Because Title

134. 106 F. Supp. 2d at 1363.

135. *Id.* at 1365.

136. *Id.* at 1365–66.

137. *Id.* at 1366.

138. *Id.*

139. *Id.*

140. *Id.*

141. *Id.* at 1366–67.

142. 236 F.3d 256 (5th Cir. 2000).

143. *Johnson*, 106 F. Supp. 2d at 1367.

144. *Id.* (quoting *Franklin v. Gwinnett County Pub. Schs.*, 911 F.2d 617, 619 (11th Cir. 1990), *rev'd on other grounds*, 503 U.S. 60 (1992)). *See also* *Jeldness v. Pearce*, 30 F.3d 1220, 1227 (9th Cir. 1994) (discussing whether courts should examine claims of gender discrimination brought under Title IX under the strict-scrutiny standard used to evaluate claims of racial discrimination brought under Title VI, or whether courts should apply the intermediate-scrutiny standard used to evaluate gender discrimination claims brought under the Equal Protection Clause). In *Jeldness*, the Ninth Circuit explained that "decisions finding Title VI to be coextensive with the Equal Protection Clause were based largely on the legislative history of Title VI (passed in 1964), which is not necessarily analogous to the legislative history of Title IX (passed in 1972)." *Id.* at 1227. The appellate court concluded that Title IX's legislative history did not derive from the Equal Protection Clause, but rather, from Title VI. *Id.* Thus, "[b]ecause Title IX and Title VI use the same language, they should, as a matter of statutory interpretation,

IX and Title VI use the same language, they should . . . be read to require the same levels of protection and equality.”¹⁴⁵

Thus, in following through with its analogy between racial discrimination under Title VI and gender discrimination under Title IX,¹⁴⁶ the district court determined that UGA had to offer a compelling governmental interest to justify its use of gender classifications in order for its admissions program to survive strict scrutiny.¹⁴⁷ The court also agreed with the Fifth Circuit’s finding in *Hopwood* that “student body diversity” did not constitute a compelling governmental interest—a decision that does, however, contradict the later decision of the United States Supreme Court in the University of Michigan cases.¹⁴⁸ In the absence of any other compelling rationale offered by UGA, the district court declared impermissible UGA’s use of gender as an admissions criterion.¹⁴⁹

On appeal, the United States Court of Appeals for the Eleventh Circuit addressed only the charges of racial discrimination under Title VI. The appellate court declined to address whether “student body diversity” constituted a compelling state interest, concluding instead that, even if UGA could prove a compelling state interest in student body diversity, it had not narrowly tailored its admissions program to achieve that interest.¹⁵⁰ The court explained that the narrow-tailoring requirement served to ensure that “the chosen means ‘fit’ . . . th[e] compelling goal so closely that there is little or no possibility that the motive for the classification was illegitimate racial prejudice or stereotype.”¹⁵¹ Noting that UGA bore the burden of proof on the matter of narrow-tailoring, the court indicated that, “[t]o withstand summary judgment . . . [UGA] must show that a reasonable factfinder could conclude that there is sufficient record evidence supporting its claim that its freshman admissions process is narrowly tailored to

be read to require the same levels of protection and equality.” *Id.* See generally *United States v. Virginia*, 518 U.S. 515 (1996) (applying strict scrutiny to a case of gender discrimination in admission to a public, all-male military institute, thus casting doubt on whether actions that discriminate on the basis of gender should ever receive intermediate scrutiny).

145. *Johnson*, 106 F. Supp. 2d at 1367 (quoting *Jeldness*, 30 F.3d at 1227; *Klinger v. Department of Corrections*, 107 F.3d 609, 614 (8th Cir. 1997)).

146. *Id.* at 1375–76.

147. *Id.* at 1367.

148. *Id.* at 1372. In *Grutter v. Bollinger*, the United States Supreme Court expressly held that “student body diversity” can be a compelling governmental interest. 539 U.S. 306, 328–33 (2003). Because of the mechanical way in which UGA used race and gender in its admissions process, the university might have satisfied the compelling governmental interest requirement, but likely would have failed the concomitant narrow-tailoring requirement as the appellate court ultimately concluded. *Id.* at 333–39. Interestingly, even after the *Grutter* decision established less restrictive requirements for the use of race than the Eleventh Circuit established in *Johnson*, UGA still has not decided whether to return to using racial preferences in admissions. Jeffrey Selingo, *Michigan: Who Really Won?*, CHRON. HIGHER EDUC., Feb. 14, 2005, at A21. The Texas public universities sued in *Hopwood*, on the other hand, quickly returned to including race, along with a number of other personal characteristics, in their evaluation of students during the admission process. *Id.* at A23.

149. See *Johnson*, 106 F. Supp. 2d at 1376.

150. *Johnson v. Bd. of Regents of the Univ. Sys. of Ga.*, 263 F.3d 1234, 1237 (11th Cir. 2001).

151. *Id.* at 1251 (quoting *City of Richmond v. J.A. Croson Co.*, 488 U.S. 469, 493 (1989)).

achieve its goal of student body diversity.”¹⁵²

The Eleventh Circuit cited *United States v. Paradise*¹⁵³ for five factors to consider when evaluating narrow-tailoring:

- (1) the efficacy of alternative race-neutral policies, (2) the planned duration of the policy, (3) the relationship between the numerical goal and the percentage of minority group members in the relevant population or work force, (4) the flexibility of the policy, including the provision of waivers if the goal cannot be met, and (5) the burden of the policy on innocent third parties.¹⁵⁴

The *Johnson* court altered these factors somewhat to “take better account of the unique issues raised by the use of race to achieve diversity in university admissions,”¹⁵⁵ and then identified four significant points to consider in such a narrow-tailoring analysis:

- (1) whether the policy uses race in a rigid or mechanical way that does not take sufficient account of the different contributions to diversity that individual candidates may offer; (2) whether the policy fully and fairly takes account of race-neutral factors which may contribute to a diverse student body; (3) whether the policy gives an arbitrary or disproportionate benefit to members of the favored racial groups; and (4) whether the school has genuinely considered, and rejected as inadequate, race-neutral alternatives for creating student body diversity.¹⁵⁶

The *Johnson* court thus omitted the second of the *Paradise* factors, which dealt with duration, stating that, if “student body diversity [is] a compelling interest . . . then the duration of the race-conscious policy may not be an important consideration.”¹⁵⁷ The court distinguished “duration” with regard to a motive centered on achieving “diversity” from “duration” with regard to a motive centered on “remedying the present effects of past discrimination,” because the latter should have a definable stopping point while the former may not.¹⁵⁸ Later in its opinion, however, the appellate court indicated that UGA likely would fail on a “duration” factor as well, because “[t]here is no evidence that UGA envisions an end to its practice of mechanically awarding preferential treatment to non-white applicants”¹⁵⁹ After evaluating UGA’s admissions policies under all four of these factors, the Eleventh Circuit concluded that the university had not narrowly

152. *Id.*

153. 480 U.S. 149 (1987).

154. *Johnson*, 263 F.3d at 1252 (quoting *Tuttle v. Arlington County Sch. Bd.*, 195 F.3d 698, 706 (4th Cir. 1999) (citing *United States v. Paradise*, 480 U.S. 149, 171(1987))).

155. 263 F.2d at 1252.

156. *Id.* at 1253. Although these criteria use language different than that used by the *Grutter* Court, these criteria provide substantially the same guidance. See *Grutter v. Bollinger*, 539 U.S. 306, 333–39 (2003).

157. *Johnson*, 263 F.3d at 1252.

158. *Id.*

159. *Id.* at 1261.

tailored its admissions process.¹⁶⁰

Johnson provides one example of how to understand the “appropriate circumstances”¹⁶¹ that allow the use of gender-based preferences in actions undertaken to remedy the under-representation of students of one gender in an educational program or activity. Courts cannot approve the use of one set of admissions criteria for men and another for women, as originally employed by UGA, nor can courts sanction a rigid or mechanical quota system for admissions.¹⁶² Courts may, however, approve of an admissions system that takes into account either demonstrated or perceived aptitude for, or interest in, science or engineering when deciding between a male applicant and a female applicant. Courts might also approve of outreach programs that encourage young women to apply to STEM programs.¹⁶³ The four factors spelled out by the Eleventh Circuit in *Johnson* provide a good starting point for crafting any program aimed at attracting more women to STEM disciplines.¹⁶⁴

b. Existing Students—Educational Programs and Activities

Title IX requires that “no person shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any academic, extracurricular, research, occupational training, or other education program or activity operated by [an educational institution that] received Federal financial assistance.”¹⁶⁵ The law also prohibits educational institutions from “provid[ing] any course or otherwise carry[ing] out any of its education program[s] or activit[ies] separately on the basis of sex, or require or refuse participation therein by any of its student on such basis”¹⁶⁶

Many campuses now have programs targeted toward retaining women in

160. *Id.* at 1260.

161. 34 C.F.R. § 106.3 (2004).

162. *See generally* *Grutter v. Bollinger*, 539 U.S. 306, 334 (2003) (holding that, in order to be narrowly tailored, “a race-conscious admissions program cannot use a quota system”).

163. In an effort to remedy a 41% male versus 59% female imbalance on its campus, for example, Santa Clara University targets special mailings to high school boys and has current students make phone calls encouraging boys who have been admitted to the university to attend. Peter Y. Hong, *A Growing Gender Gap Tests College Admissions*, LOS ANGELES TIMES, Nov. 21, 2004, at A1. The university does not engage in similar activities targeted toward high school girls. *Id.* The university further insists that it has kept admissions standards the same for both male and female applicants. *Id.* Such a program might pass scrutiny under Title IX, because it does not apply different admissions standards to male and female applicants, but only aims to encourage more applications from male students and to convince admitted male students to matriculate.

164. Even with this guidance, however, educational institutions should proceed cautiously. Although the *Grutter* Court allowed the use of preferences, it “did not endorse a single admissions method” in its opinion. Selingo, *supra* note 148, at A23. One commentator opined that, in *Grutter* and *Gratz*, the Court “imposed conditions that are neither pellucid nor self-executing, and colleges and universities must now figure out how to apply them to a great many practices that reflect the pluralism of American higher education.” Martin Michaelson, *Affirmative Action Has a Future*, CHRON. HIGHER EDUC., Feb. 11, 2005, at B17.

165. 34 C.F.R. § 106.31 (2004).

166. *Id.* § 106.34.

engineering and the sciences.¹⁶⁷ In an educational environment increasingly hostile to preferences of any kind, such programs may face scrutiny. As with admissions efforts targeted toward particular populations, however, the survival of such programs depends on whether an educational institution can articulate pedagogically sound reasons for offering such services separately or differently to female students. To survive judicial or administrative scrutiny, an educational institution must also provide comparable services to male students with similar needs. Some researchers have suggested, for example, that women and men learn computer programming differently.¹⁶⁸ It may seem logical, then, to offer a separate programming class for women to accommodate this different learning style. But before offering such an option, the educational institution should consider whether all students might benefit from access to alternative teaching methods.¹⁶⁹ While certain changes might, in fact, benefit female students more, offering these alternative experiences to all students may help to improve the overall educational experience while also ensuring that such actions survive Title IX scrutiny.

*Gossett v. Oklahoma ex rel. Board of Regents for Langston University*¹⁷⁰ illustrates the sort of academic activities that might violate Title IX. Marty Gossett had successfully completed his first semester in Langston University's nursing program and had enrolled in his second semester in the fall of 1994.¹⁷¹ He did well in all of his classes, except for one taught by two female instructors.¹⁷² Despite seeking help from these instructors, Mr. Gossett received a "D" in the class, which precipitated his dismissal from the nursing program.¹⁷³ After he had unsuccessfully appealed the grade and the dismissal, he filed a complaint under Title IX alleging gender discrimination, contending that the instructors did not give him "the same help, counseling, and opportunities to improve his performance as provided to women nursing students."¹⁷⁴ He specifically alleged that the instructors routinely allowed female students, but not male students, to take a grade of "Incomplete" and to have extra time to improve their grades.¹⁷⁵

The United States District Court for the Northern District of Oklahoma granted Langston University's motion for summary judgment.¹⁷⁶ The court rejected as insufficient all of the evidence Mr. Gossett presented to establish that the university's decision to terminate him because of his "D" merely formed a pretext

167. See generally IRENE F. GOODMAN ET AL., FINAL REPORT OF THE WOMEN'S EXPERIENCE IN COLLEGE ENGINEERING PROJECT (2002) (studying the effectiveness of a number of women's engineering programs across the country). Researchers have been studying the issue of women in science and engineering since the 1960s. *Id.* at 5.

168. MARGOLIS & FISHER, *supra* note 5, at 109-43.

169. *Id.*

170. 245 F.3d 1172 (10th Cir. 2001).

171. *Id.* at 1175-76.

172. *Id.* at 1176.

173. *Id.* at 1175-76.

174. *Id.* at 1176.

175. *Id.* at 1177.

176. *Id.* at 1175.

for gender-based discrimination.¹⁷⁷ Mr. Gossett presented undisputed evidence that, of the twenty-four students in the class for which he received a “D,” all nineteen women passed but three of the five men failed.¹⁷⁸ He offered an affidavit of a female nursing student who indicated that a different instructor in another course had given her the opportunity to change her “D” by completing seven additional weeks of course work.¹⁷⁹ He also offered the statement of a former nursing instructor who “described a pattern of discrimination at the school directed at male students in general and Mr. Gossett in particular.”¹⁸⁰

On appeal, the United States Court of Appeals for the Tenth Circuit reversed and remanded the case for further proceedings, finding that the proffered evidence raised questions of fact regarding the alleged institution-wide discrimination against male nursing students.¹⁸¹ The statement of the woman in the other course, as well as the statement of the former instructor, did not necessarily relate to the discrimination that Mr. Gossett allegedly experienced in the course for which he received a “D.”¹⁸² Nevertheless, the appellate court concluded that these statements could support Mr. Gossett’s allegations of institutional discrimination against male nursing students.¹⁸³

*Bucklen v. Rensselaer Polytechnic Institute*¹⁸⁴ presents a similar challenge to an educational institution’s practices under Title IX. Vincent Bucklen, a graduate student in and teaching assistant at Rensselaer Polytechnic Institute (RPI), failed his preliminary Ph.D. program examination three times and was told to withdraw from the program.¹⁸⁵ The dean of students informed Mr. Bucklen that he could not take the exam a fourth time, and refused Mr. Bucklen’s request to reconsider that decision.¹⁸⁶ Mr. Bucklen filed suit under Title IX, alleging that RPI had discriminated against him on the basis of his gender because the school had accommodated a similarly struggling female Ph.D. candidate by allowing her to take the oral portion of the exam in a written format because she was too nervous to perform well on the oral portion.¹⁸⁷ Mr. Bucklen contended that, “had he been a female, [RPI] would have given him the opportunity to take the examination in writing, would have given him a different committee on the third examination, or would have permitted him to take a course to make up for any deficiencies in his understanding of the materials.”¹⁸⁸ The United States District Court for the Northern District of New York found Mr. Bucklen’s allegations of gender-based discrimination under Title IX sufficient to survive RPI’s motion to dismiss.¹⁸⁹

177. *Id.* at 1178–79.

178. *Id.* at 1177.

179. *Id.*

180. *Id.* at 1178–79.

181. *Id.* at 1181.

182. *Id.* at 1179–81.

183. *Id.* at 1177–80.

184. 166 F. Supp. 2d 721 (N.D.N.Y. 2001).

185. *Id.* at 722.

186. *Id.* at 722–23.

187. *Id.* at 723.

188. *Id.* at 726.

189. *Id.*

Similarly, in *Curto v. Smith*,¹⁹⁰ Patricia Curto, a female veterinary student who twice failed a foundational course in animal anatomy and subsequently was dismissed from the College of Veterinary Medicine at Cornell University,¹⁹¹ filed a Title IX complaint against Cornell based on the fact that all four of the students expelled from the class of 2002 were women, while two male students in that class with similar academic deficiencies were not expelled.¹⁹² On Cornell's motion to dismiss, the United States District Court for the Northern District of New York found that these simple allegations might be sufficient to state a claim under Title IX, but ordered Ms. Curto to "file an amended complaint setting forth her Title IX claim *with particularity*."¹⁹³ Thus, such disparate treatment may form the basis of a Title IX claim, but assertions of such disparate treatment without particular supporting evidence may not sustain such a claim.¹⁹⁴

Although Title IX does impose some restrictions on what occurs in the academic environment, it has no effect on academic freedom in the classroom. Instead, the regulations preserve academic freedom by making clear that nothing requires, prohibits or abridges the use of particular textbooks or curricular materials, even if those materials might include content that otherwise could be considered discriminatory.¹⁹⁵

Educational institutions must also ensure that materials used for student skills-assessment and counseling do not direct a substantially disproportionate number of women (or men) to a particular program, course of study or classification. A disproportionately high enrollment of male students in an honors math class does not, in itself, violate Title IX. But such disparity may violate Title IX if it results, for example, from counselors routinely steering female students away from such courses or from educators restricting enrollment solely on the basis of SAT math scores, which may unfairly and unnecessarily disadvantage women.¹⁹⁶

190. 248 F. Supp. 2d 132 (N.D.N.Y. 2003).

191. *Id.* at 136.

192. *Id.* at 144.

193. *Id.* (emphasis added).

194. *But see Swierkiewicz v. Sorema*, 534 U.S. 506, 512–13 (2002) (holding that the requirements for establishing a prima facie case of discrimination do not apply to the pleadings stage of the case). In *Swierkiewicz*, the United States Court of Appeals for the Second Circuit had affirmed the district court's decision to dismiss a Title VII employment discrimination case because the plaintiff's pleadings did not provide direct evidence of discrimination, and because the pleadings did not set out a prima facie case under the standards set in *McDonnell Douglas Corp. v. Green*, 411 U.S. 792 (1973). *Swierkiewicz v. Sorema*, No. 00-9010, 2001 WL 246077, at *2 (2d Cir. March 12, 2001). In reversing the appellate court's decision, the Supreme Court explained that discovery could uncover the direct facts and evidence necessary to support a discrimination claim. *Swierkiewicz*, 534 U.S. at 511–12. The Court found it inappropriate to dismiss such a case at the pleadings stage, unless the court clearly could not grant relief under any facts consistent with the allegations. *Id.* at 512.

195. 34 C.F.R. § 106.42 (2004).

196. While women, on average, have lower SAT math scores (501) than men (537), women are more likely to have taken four years of math in high school (55% of women versus 45% of men) and may have a better mathematics background for college that standardized test scores alone cannot reveal. Hong, *supra* note 163, at A33 (citing statistics provided by The College Board). Moreover, at least one researcher has found that "among women and men taking the same advanced math courses in college, women with somewhat lower SAT scores often do better

The regulations also address gender discrimination outside the classroom. Ensuring Title IX compliance in each of these areas helps to improve the campus climate for all students, and may help to attract and retain female students. An educational institution may not discriminate in: extracurricular programs and other benefits, including financial aid awards;¹⁹⁷ health and insurance benefits and services;¹⁹⁸ and athletic participation opportunities.¹⁹⁹ And although the regulations allow single-sex housing, educational institutions must ensure that men and women have access to campus housing, including single-sex residences, of similar quantity and quality, with similar rules and regulations, for comparable fees.²⁰⁰

An educational institution may not treat students differently based on whether a student is married or is a parent, and must treat pregnancy the same as any other temporary disability when providing medical benefits and services, approving leaves of absence, and seeking physician's certification of a student's physical and emotional ability to continue in or return to academic and extracurricular activities.²⁰¹

Title IX's nondiscrimination requirements extend beyond the campus when students must participate in a program or activity sponsored by another entity.²⁰² Thus, an engineering program that requires students to take a co-op assignment,²⁰³ or a medical school or teaching program that requires students to engage in an outside practicum, must undertake reasonable efforts to advise the co-op employer or practicum site of its Title IX obligations and must secure the employer's compliance with those obligations. On an initial level, the educational institution may secure compliance simply by requiring the co-op employer to sign a statement agreeing to abide by Title IX's nondiscrimination requirements. If the employer does not adhere to this agreement, however, the educational institution may have to take steps to remedy the situation, even if it becomes necessary to terminate the co-op relationship to protect students from any form of gender discrimination, including sexual harassment.

In order for a student to prevail on a Title IX claim against an educational institution for discriminatory conduct by an outside entity such as a co-op employer, however, the educational institution must have notice of the conduct and must have failed to act to stop the discrimination. *Crandell v. New York College of Osteopathic Medicine*²⁰⁴ illustrates this rule in the sexual harassment context.

than men with higher scores. The SATs turn out to underpredict female and overpredict male performance . . . [for] reasons [that] remain mysterious." Angier & Chang, *supra* note 5, at A1 (internal quotations omitted).

197. 34 C.F.R. § 106.37 (2004).

198. *Id.* § 106.39.

199. *Id.* § 106.41.

200. *Id.* § 106.32.

201. *Id.* § 106.40.

202. *Id.* § 106.31(d).

203. In engineering programs, a co-op assignment typically involves a semester away from campus working in the engineering environment. Some engineering programs require a semester or more in a co-op as a graduation requirement.

204. 87 F. Supp. 2d 304 (S.D.N.Y. 2000).

Colleen Crandell brought a Title IX claim against her medical school, the New York College of Osteopathic Medicine (NYCOM), citing seven incidents in which various professors or other supervisors throughout her medical school career had made inappropriate comments or unwelcome advances, or had engaged in inappropriate or unwelcome physical contact with her.²⁰⁵ Unfortunately, she had reported only one of the seven incidents to NYCOM, claiming that she feared recrimination if she had reported the other incidents.²⁰⁶ The United States District Court for the Southern District of New York granted NYCOM's motion for summary judgment on all but the one reported incident, citing *Gebser* for the requirement that an educational institution can be held liable for sexual harassment under Title IX only if the educational institution had notice of the offending conduct.²⁰⁷

Similarly, an educational institution must make sure that outside employers who use campus facilities to recruit students for employment also abide by relevant nondiscrimination laws in their recruitment and employment practices.²⁰⁸ The educational institution may, for example, require employers to sign a statement agreeing not to engage in gender discrimination. But when faced with evidence of gender discrimination, the educational institution may have to take steps to remedy the situation, even if it becomes necessary to bar the employer from the use of campus facilities or services for the employer's recruitment activities.

3. Employment Practices

Twelve regulations identify obligations imposed by Title IX on educational institutions regarding employment practices. As with the regulations relevant to students, these regulations contain the general admonition that educational institutions may not engage in gender discrimination in either the hiring process or in providing employment benefits.²⁰⁹

Title IX does nothing to alter an educational institution's obligations to comply with other federal laws, such as Title VII.²¹⁰ But Title IX may impact certain institutional obligations under state or local law, because Title IX supersedes state and local laws that prohibit or limit employment for members of one sex but not the other.²¹¹ In particular, Title IX requires that educational institutions that provide any compensation, service, or benefit to members of one sex pursuant to requirements imposed by state or local law also provide that same compensation, service, or benefit to members of the other sex. While a state initiative like California's Proposition 209 or Washington's Initiative 200 may prohibit certain practices that favor under-represented groups,²¹² Title IX requires equitable hiring

205. *Id.* at 321. The court did believe that all of the conduct of which Dr. Crandell complained, if proven to have occurred, would have constituted sexual harassment.

206. *Id.* at 307–11.

207. *Id.* at 306–07 (citing *Gebser v. Lago Vista Indep. Sch. Dist.*, 524 U.S. 274 (1998)).

208. 34 C.F.R. § 106.38 (2004).

209. *Id.* § 106.51.

210. *Id.* § 106.6.

211. *Id.* § 106.58.

212. California's Proposition 209, approved by voters in 1996, amended the state

practices and may permit affirmative action to remedy inequities such as a persistent under-representation of women on the faculty.

As with student recruitment and retention, an under-representation of female employees and faculty, by itself, does not violate Title IX, because such an imbalance might result from factors beyond the control of the educational institution, such as an under-representation of women among Ph.D. recipients in certain disciplines or from the personal choices that individual women make. No federal law can remediate the effects of the personal choices made by individuals during the hiring process. But certain hiring and employment practices, including perhaps those that lead faculty candidates to consider less prestigious employment, may violate Title IX if they affect men and women differently. Colleges and universities must not discriminate in their recruiting practices, and must provide equitable salaries, benefits, and other conditions of employment including workload and opportunities for advancement. Moreover, colleges and universities must eliminate any other informal practices or cultural conditions that may impair the full integration of women into the community.

a. Pre-Employment Practices

Educational institutions may not discriminate on the basis of gender in hiring, even if members of one sex have limited employment opportunities in any occupation or profession.²¹³ The regulations also encourage educational institutions to review recruiting practices to ensure that an over-representation of male faculty, for example, does not result from recruiting activities that violate Title IX by excluding viable female candidates.²¹⁴ Thus, the historical and persistent under-representation of women among engineering Ph.D. recipients does not relieve an educational institution of its Title IX obligations to try to recruit female faculty. Furthermore, if certain recruiting activities result in an over-representation of men among faculty candidates, the educational institution should review and, where possible, change its recruiting practices. If, for example, a physics department routinely looks to only a few graduate physics programs when hiring new faculty, such a practice could violate Title IX if those graduate physics programs limit the availability of female candidates by failing to provide an appropriate environment for female students to engage in and complete their doctoral course work and research.²¹⁵

constitution and prohibits state and local agencies, including public universities, from using racial or gender preferences. See CAL. CONST. art. I, § 31(a) (approved Nov. 5, 1996) (codifying Proposition 209). Washington's Initiative 200, approved by voters in 1998, imposes similar constraints. See WASH. REV. CODE §§ 49.60.010–020 (West 2002). See Robert O'Neil, *At Last, Guidance Seems Likely on Affirmative Action*, CHRON. HIGHER EDUC., Dec. 13, 2002, at B20.

213. 34 C.F.R. § 106.7 (2004).

214. *Id.* §§ 106.51, 106.53.

215. See Wilson, *supra* note 27, at A9, which offers one possible explanation for the under-representation of women in the upper ranks of some Ph.D. programs and discusses how this could impact faculty recruiting:

One possible reason is that graduate students' success depends heavily on their relationships with their advisers. And male professors—particularly in male-dominated disciplines like economics—may be less comfortable with female students.

Educational institutions may restrict hiring to members of one sex only in two circumstances: (1) when DED-OCR makes a finding that the educational institution has engaged in discriminatory hiring practices and then requires certain remedies including targeted recruiting of members of the disadvantaged sex;²¹⁶ or (2) when gender is a bona fide occupational qualification, such as when hiring the director of a single-sex campus residence or the attendant for a single-sex locker room.²¹⁷

How should an educational institution approach a hiring decision, for example, for a position established to recruit and retain women in an engineering program? Despite the fact that such programs focus on the unique needs of women students, the actual job description and responsibilities must control whether the educational institution may limit itself to recruiting and hiring women. If the responsibilities consist mainly of administrative functions such as managing a budget, scheduling tutoring sessions, and providing other institutional support, a man probably could perform such duties as well as a woman. On the other hand, if the director's responsibilities include serving as a role model in the absence of sufficient female faculty members to fill that role, gender may be a bona fide occupational qualification for that position.

An educational institution may not use employment tests or other criteria that have a disproportionately adverse affect on members of one sex, unless such tests or other criteria validly predict successful job performance and unless no gender-neutral alternatives exist.²¹⁸ The regulations also prohibit pre-employment inquiries into an applicant's marital status or pregnancy status, but allow an employer to ask about an applicant's gender, as long as the information does not facilitate discrimination in the hiring process.²¹⁹

b. Employment Benefits

An educational institution must treat male and female employees comparably in all of the benefits and conditions of employment, including: compensation, particularly for similarly situated employees who perform similar functions; seniority status, promotions, and tenure opportunities; and fringe benefits such as insurance or retirement plans. An educational institution may not discriminate on the basis of marital or parental status, and must treat pregnancy as a temporary disability in regard to leaves-of-absence and other medical benefits.²²⁰

As with other aspects of Title IX, determining institutional compliance requires

“If you are a working woman, your male adviser may have spent less time working with you on your dissertation and believed less in your potential,” says [a] female economist. “They promote their female students less, so by the end of the Ph.D. you see women disproportionately in the bottom half of the class.” In turn, when it comes time to recommend Ph.D. candidates for jobs at top-notch institutions, male professors automatically think of their male students.

Id.

216. 34 C.F.R. § 106.53.

217. *Id.* §§ 106.59, 106.61.

218. *Id.* § 106.52.

219. *Id.* §§ 106.57, 106.60.

220. *Id.* §§ 106.54–106.57.

looking beyond simple statistics to understand whether certain apparent inequities result from institutional discrimination or from other, allowable, factors. Cases involving the compensation of athletic coaches explain most clearly the factors that may or may not justify differing levels of compensation and employment conditions. In *Stanley v. University of Southern California*,²²¹ for example, the university's female coach of its women's basketball team, Marianne Stanley, filed a lawsuit that charged that the university had violated Title IX by paying her less than it paid the male basketball coach of the men's team, George Raveling, even though the two had ostensibly similar responsibilities in that both coached collegiate basketball teams.²²² In affirming the district court's grant of summary judgment in favor of the university, the appellate court took note of Mr. Raveling's "markedly superior experiences."²²³ He had fourteen more years experience as a coach, had twice been selected PAC-10 and national coach of the year, had written books on basketball, had coached the U.S. Men's Olympic Basketball Team, and had fund-raising responsibilities that Ms. Stanley did not have.²²⁴ He also faced greater public and media scrutiny than Ms. Stanley faced, and he generated more revenue than she did for the university.²²⁵ Thus, while faculty members who bear similar teaching and research responsibilities may feel entitled to identical pay, a faculty member who brings to the institution certain benefits—such as renown in a particular field or a well-funded array of research projects—may legitimately command a higher salary.

On the other hand, simply comparing pay rates for similarly situated employees may mask actually discriminatory practices. Female assistant professors may earn higher average salaries than male assistant professors either because of their value to the institution or, quite possibly, because they remain at that low rank longer than male assistant professors and thus earn higher salaries as a consequence of longer-than-average time-in-rank.²²⁶ A review of equitable employment practices, therefore, should address the reasons for salary discrepancies to determine whether apparently equitable salary distributions might mask other underlying discriminatory practices.

The 2004 GAO Report suggests, for example, that "salary and rank differences between men and women can largely be explained by work patterns and choices,"²²⁷ rather than by discriminatory conduct on the part of the educational institution. The report notes that perhaps as much as 90% or more of the discrepancy between the salaries paid to male and female faculty members can be explained "by differences in experience, work patterns, seniority, and education levels."²²⁸ The study listed a number of differences between male and female

221. 178 F.3d 1069 (9th Cir. 1999).

222. *Id.* at 1072–73.

223. *Id.* at 1077 (internal quotation marks omitted).

224. *Id.* at 1075.

225. *Id.* at 1074–77.

226. See generally VALIAN, *supra* note 5, ch. 11 (discussing the factors that can affect an analysis of salary equity). See also GAO Report, *supra* note 32, at 21 (exploring factors that contribute to salary differentials between male and female professors).

227. GAO Report, *supra* note 32, at 21.

228. *Id.* (citing NAT'L CTR. FOR EDUC. STATISTICS, GENDER AND RACIAL/ETHNIC

faculty, including:

- women more often taught as their primary responsibility, while men more often conducted research as their primary responsibility;
- women less often held a first professional degree or Ph.D.;
- women more often worked part-time, trading off career advancement or higher earnings for a job that offers flexibility to manage work and family responsibilities;
- women typically had less experience than men, and were more likely to be assistant or associate, rather than full, professors;
- women were more likely than men to seek teaching positions at two-year institutions or small four-year institutions rather than research institutions.²²⁹

While these differences may result from personal choices, they may also result from external pressures imposed by the educational institution. The GAO Report pointed out, for example, that some female faculty members faced tremendous challenges in “juggling family life with a tenure track faculty position.”²³⁰ Others “felt discouraged from pursuing a tenure track university position because the biological clock and the tenure clock tend to tick simultaneously.”²³¹ Still others “observed the long hours and difficult work of professors at research universities in the sciences and felt they could not perform well while also devoting time to family responsibilities.”²³²

NSF survey data, too, points to family pressures as a significant influence on the career choices of female Ph.D. recipients. Of those who received doctoral degrees in engineering in 1996–97 and 1997–98, women, to a greater extent than men, felt that they had to limit their job searches because of personal factors: 62.1% of women, compared to 29.2% of men, felt that their job search was limited “a great deal” or “somewhat” by their spouse’s career or employment;²³³ 41.5% of women, compared to 36.5% of men, cited limitations due to family responsibilities; and 41.3% of women, compared to 34.5% of men, cited a desire not to relocate.²³⁴

DIFFERENCES IN SALARY AND OTHER CHARACTERISTICS OF POSTSECONDARY FACULTY: FALL 1998 (2002)).

229. *Id.* at 21–23.

230. *See id.* at 22.

231. *Id.* at 22–23.

232. *Id.* at 23. A recent article in the *Chronicle of Higher Education* supports these findings: “Young women . . . may be opting out of research-university jobs for personal reasons. Many would-be female scholars, particularly in the sciences, seem to believe that children and a hard-charging research career don’t mix.” Wilson, *supra* note 27, at A12.

233. Interestingly, 42% of female engineering faculty in the United States have spouses who also work in higher education, while 31% have spouses who work in for-profit industry. COMM. ON WOMEN IN SCI. AND ENG’G, GLOBAL AND POL’Y AFFAIRS, NAT’L RESEARCH COUNCIL, FEMALE ENGINEERING FACULTY AT U.S. INSTITUTIONS: A DATA PROFILE, 12 (2001). Eighty percent have spouses who also completed a degree in science or engineering. *Id.*

234. NSF Diversity Report, *supra* note 9, at 286. The *Chronicle* also pointed out that some female graduate students, “[s]ensing the difficulties and frustrations faced by their female mentors . . . ‘self-select out’ of academic careers.” Wilson, *supra* note 27, at A12. Female scholars also tend to advance more slowly than their male counterparts. “For each year after securing a tenure-track job [at a research university] . . . male assistant professors are 23 percent more likely than

Personal choices may explain away some of the salary and rank differentials between male and female faculty members, as the GAO Report asserts.²³⁵ On the other hand, institutional pressures and an inhospitable climate ultimately may inform those personal choices.²³⁶ While the former does not violate Title IX, the latter might.

Apart from salary inequities, disparate employment *conditions* may also violate Title IX. In *Legoff v. Trustees of Boston University*,²³⁷ for example, a woman who served as head coach of Boston University's softball team and assistant coach of its field hockey team alleged that the university discriminated against her by paying her less than it paid to its male coaches and by requiring her, but not any of the male coaches, to coach two teams.²³⁸ Moreover, after she was terminated from her position, the university split her job into two separate positions.²³⁹ The United States District Court for the District of Massachusetts found these allegations sufficient to survive the university's motion for summary judgment.²⁴⁰

Certain practices in academia may similarly discriminate against women even if they persist for historical, rather than discriminatory, reasons. In the days of an all-male engineering faculty, relegating the newest faculty members to working in the worst offices or labs, or to teaching difficult courses such as large, required lectures full of first-year students, may have served as a sort of rite-of-passage into the academy. But assigning new female faculty members to undesirable offices or labs, or giving them unreasonable teaching loads, may constitute a Title IX violation if such practices limit the ability of new female faculty members to integrate fully with their colleagues,²⁴¹ to engage in meaningful research or to have an adequate chance for success in the classroom.

Sometimes, inequities in the conditions of employment may exist because of efforts to improve the position of women in the academic community. No matter how well intentioned, though, such inequities violate Title IX when they impair the ability of female faculty to achieve promotion and tenure at a rate comparable to their male peers. The few female faculty in the mathematics department, for example, may have more responsibilities than their male colleagues with respect to departmental or university committees. Although the participation of female

their female counterparts to earn tenure. And for each year after earning tenure, male professors are 35 percent more likely than their female colleagues to be named full professors." *Id.* And, as indicated by a 2003–04 survey conducted by the AAUP, male assistant professors at doctoral universities earn \$5,727 more per year than their female colleagues; male associate professors earn \$4,837 more; and male full professors earn \$9,471 more. AAUP, *Don't Blame Faculty for High Tuition: The Annual Report on the Economic Status of the Profession*, ACADEME, Mar.–Apr. 2004, at Table 5.

235. GAO Report, *supra* note 32, at 21.

236. Wilson, *supra* note 27, at A12.

237. 23 F. Supp. 2d 120 (D. Mass. 1998).

238. *Id.* at 123.

239. *Id.* at 124.

240. *Id.* at 123–24.

241. The inability to integrate fully into a faculty can have an adverse effect on a tenure decision, particularly if collegiality is among the qualities evaluated during the tenure process. See, e.g., Gregory M. Heiser, "Because the Stakes are So Small": Collegiality, Polemic and Professionalism in Academic Employment Decisions, 52 U. KAN. L. REV. 385 (2004).

faculty on various committees may help to improve the environment for all female faculty on the campus, those particular female faculty members tasked with additional committee responsibilities may find it difficult to complete the research necessary to achieve a positive promotion or tenure decision. Educational institutions must understand the impact such assignments can have on the research portfolios of a small segment of the faculty and adjust evaluation systems accordingly—perhaps by giving appropriate credit in the promotion and tenure process for service on such committees.

In an engineering program, female faculty may have the responsibility of advising female undergraduate students, who certainly could benefit from same-gender mentoring. But if 20% of the students are female and only 10% of the faculty members are female, as is typically the case in engineering, this creates a disproportionately heavy advising burden on female faculty members. While obviously well intentioned with regard to the benefits of such advising for female students, such policies likely violate Title IX in that they treat female and male faculty members differently because of their gender.

II. THE GAO REPORT TO CONGRESS

The cases discussed in Part I.C describe the sorts of Title IX violations that individuals can bring to the attention of funding agencies or to the courts. Such cases arise when educational institutions have not performed their obligations under the law, and typically represent the extreme circumstances in which the aggrieved individual and the educational institution cannot resolve their differences in any other way. While such cases provide interesting examples that help to define the contours of Title IX enforcement, they exist at the margins of Title IX compliance efforts.

The regulations discussed in Part I.C, on the other hand, provide the details of the funding contract between federal funding agencies and recipient institutions. These regulations spell out what both must do to comply with the law. Rather than tinkering at the margins of Title IX enforcement, as court cases do, these regulations define the substance of Title IX compliance and enforcement. The GAO Report examines whether and how federal funding agencies have met these basic Title IX obligations to ensure that women can achieve true equity in STEM education.

The GAO reviewed the Title IX compliance and enforcement procedures in place at the four federal agencies that provide grants for STEM-based education and research. As noted in the introduction to this article, the GAO undertook this study “[b]ecause of increased interest about women’s access to mathematics, engineering, and science, which receive billions of dollars in federal assistance.”²⁴² The report addressed three questions:

- (1) How do the DED, the Department of Energy (DOE), NASA, and the NSF ensure that federal grant recipient institutions comply with Title IX in STEM fields?
- (2) What do the data show about women’s participation in STEM

242. GAO Report, *supra* note 32, at 1.

fields?

- (3) What promising practices exist to promote the participation of women in STEM fields?²⁴³

This section discusses the GAO's findings, particularly with regard to questions (1) and (3); with regard to question (2), the Introduction covers the data about female student participation in STEM fields, and the discussion in Part I.C.3 provides additional information about the progress of female faculty in STEM fields.

- A. How do federal agencies ensure that federal grant recipient institutions comply with Title IX in STEM fields?

Combined, DED, DOE, NASA and NSF—called the “four federal science agencies”²⁴⁴ in the GAO Report—awarded almost \$5 billion in grants for the sciences in fiscal year 2003.²⁴⁵ These programs encompassed not only scientific and technological research, but also outreach programs targeted toward K-12 schools, higher education and private industry, and scholarships and fellowships awarded to students pursuing education in areas of “national need,” including biology, chemistry, computer and information science, engineering, geological science, mathematics, and physics.²⁴⁶

Title IX requires that each federal granting agency ensure that funding recipients comply with its nondiscrimination provisions:

Each Federal department and agency which is empowered to extend Federal financial assistance to any education program or activity, by way of grant, loan, or contract other than a contract of insurance or guaranty, *is authorized and directed* to effectuate the provisions of [20 U.S.C. §] 1681 with respect to such program or activity by issuing rules, regulations, or orders of general applicability which shall be consistent with achievement of the objectives of the statute authorizing the financial assistance in connection with which the action is taken.²⁴⁷

The GAO Report describes the four primary types of activities that federal funding agencies must undertake to ensure compliance with Title IX: (1) investigating and resolving complaints filed by individuals who allegedly suffered discrimination by grant recipients; (2) requiring statements of Title IX compliance assurance from grant recipients; (3) providing grant recipients with technical assistance in regard to Title IX compliance; and (4) conducting periodic compliance reviews of grant recipients.²⁴⁸ Additionally, as required, federal funding agencies must work with noncompliant recipient institutions to find a way to remedy any problems uncovered in the course of a compliance review or complaint investigation.²⁴⁹

243. *Id.*

244. *Id.*

245. *Id.* at 34–35.

246. *Id.* at 7.

247. 20 U.S.C. § 1682 (2000) (emphasis added).

248. GAO Report, *supra* note 32, at 9, Table 1.

249. *Id.* at 4–5, 9.

The GAO Report indicates that all four federal science agencies have satisfied responsibility (3) by providing grant recipients with technical assistance in regard to Title IX compliance.²⁵⁰ This, however, represents the limit of consistency among all four federal science agencies with respect to Title IX compliance efforts.

The GAO Report notes that all four federal science agencies do satisfy responsibility (2) by requiring statements of assurance from recipients indicating that their programs and activities comply with Title IX and other civil rights laws as part of the grant application process.²⁵¹ But such statements often take the form of a pro forma promise included in a grant proposal that the recipient institution has met or intends to meet its obligations under Title IX.²⁵² While as enforceable as a contract, this approach has some deficiencies, precisely because of its pro

250. *Id.* at 9, 11.

251. *Id.*

252. NASA's nondiscrimination clause, for example, merely states the following:

The Organization, corporation, firm, or other organization on whose behalf this assurance is signed, hereinafter called "Applicant"

HEREBY AGREES THAT it will comply with Title VI of the Civil Rights Act of 1964 (P.L. 88-352), Title IX of the Education Amendments of 1972 (20 U.S.C. 1690 *et seq.*), Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and the Age Discrimination Act of 1975 (42 U.S.C. 16101 *et seq.*) and all requirements imposed by or pursuant to the Regulation of the National Aeronautics and Space Administration (14 CFR Part 1250) (hereinafter called "NASA") issued pursuant to these laws, to the end that in accordance with these laws and regulations, no person in the United States shall, on the basis of race, color, national origin, sex, handicapped condition, or age be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity for which the Applicant receives federal financial assistance from NASA; and HEREBY GIVE ASSURANCE THAT it will immediately take any measure necessary to effectuate this agreement.

If any real property or structure thereon is provided or improved with the aid of federal financial assistance extended to the Applicant by NASA, this assurance shall obligate the Applicant, or in the case of any transfer of which federal financial assistance is extended or for another purpose involving the provision of similar services or benefits. If any personal property is so provided, this assurance shall obligate the Applicant for the period during which it retains ownership or possession of the property. In all other cases, this assurance shall obligate the Applicant for the period during which the federal financial assistance is extended to it by NASA.

THIS ASSURANCE is given in consideration of and for the purpose of obtaining any and all federal grants, loans, contract, property, discounts or other federal financial assistance extended after the date hereof to the Applicant by NASA, including installation payments after such date on account of applications for federal financial assistance which were approved before such date. The Applicant recognizes and agrees that such federal financial assistance will be extended in reliance on the representations and agreements made in this assurance, and that the United States shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the Applicant, its successors, transferees, and assignees, and the person or persons whose signatures appear below are authorized to sign on behalf of the Applicant.

forma nature. For example, as noted in Part I.C.1.b, the regulations impose several affirmative duties on grant recipients. Educational institutions must, first, assure granting agencies that their programs and activities comply with Title IX;²⁵³ second, designate at least one employee to coordinate Title IX compliance efforts;²⁵⁴ third, establish a Title IX grievance procedure;²⁵⁵ and fourth, disseminate information regarding Title IX nondiscrimination policies.²⁵⁶ According to the GAO Report, despite receiving these pro forma assurances, the four federal science agencies could not determine whether recipient institutions had, in fact, met these specific obligations because nothing requires educational institutions to track or report this information.²⁵⁷ Moreover, upon reviewing the Title IX compliance status of selected recipient institutions, DED “found several instances in which [recipients] had not adopted or published complaint procedures,”²⁵⁸ for example. And the report points out that even those recipient institutions that have adopted or published complaint procedures might not have a system in place to track and identify resolutions to complaints. Of the seven research universities interviewed for the GAO Report, all indicated that they had an internal process to handle Title IX complaints, but “a few were unable to provide . . . actual numbers because they do not keep these data.”²⁵⁹ Thus, the system of requiring assurances in the form of a pro forma statement in a grant proposal might not suffice to satisfy a federal funding agency’s statutory obligations.

With regard to responsibility (1), investigating and resolving complaints filed against grant recipients, the report notes that federal funding agencies may refer Title IX complaints to DED-OCR, which “plays a key role in ensuring compliance with Title IX because it has primary responsibility to investigate most types of complaints at educational institutions, including complaints referred from other federal agencies.”²⁶⁰ In fact, DOE, NASA, and NSF, as a matter of policy, refer gender-discrimination complaints involving educational institutions to DED-OCR for investigation,²⁶¹ while DED conducts its own investigations and resolves complaints.²⁶² Since 1993, DED has received over 3,300 Title IX complaints

253. 34 C.F.R. § 106.4 (2004).

254. *Id.* § 106.8.

255. *Id.*

256. *Id.* § 106.9.

257. GAO Report, *supra* note 32, at 10.

258. *Id.* In response, DED issued a “[D]ear Colleague” letter in April 2004 reminding recipient institutions “of their Title IX requirements to establish and publicize complaint procedures.” *Id.*

259. *Id.*

260. *Id.* at 6.

261. *Id.* at 2, 9. *See also id.* at 40–48 (text of letters by DOE, NASA and NSG to GAO explaining their procedures for handling complaints). It is also useful to recall here that most federal agencies adopted Title IX compliance regulations in 2000, twenty-five years after DED issued its original Title IX regulations. *See supra* notes 98–104 and accompanying text. DOE issued its own set of regulations in 1980, but then adopted the common rule in 2001. GAO Report, *supra* note 32, at 5, n.5. NASA and NSF had not issued any regulations prior to adopting the common rule in 2000. *Id.*

262. GAO Report, *supra* note 32, at 9.

against higher education institutions.²⁶³ Although DED cannot determine how many complaints were referred by DOE, NASA, and NSF,²⁶⁴ these agencies indicated to GAO interviewers that they actually received “very few” Title IX complaints each year.²⁶⁵

The apparently small number of complaints filed with DOE, NASA, and NSF may occur, in part, because of “a lack of awareness that Title IX covers academics,”²⁶⁶ as a result of failures on the part of educational institutions to establish or disseminate the required policies and procedures and, unfortunately, as a result of the attention paid to Title IX in the athletics context. As the GAO Report notes, “scientists and students at most schools [indicated] that they thought Title IX covered only sports and did not know [that] the law also encompassed academic issues.”²⁶⁷ The government and educational institutions can remedy this misunderstanding through education.

Unfortunately, however, education alone may not solve the problem of underreporting of violations. The report also suggests that the small number of Title IX complaints may also result from personal decisions not to file legitimate complaints because of a fear of retribution coupled with concerns that resolving a Title IX complaint would detract from time spent on research.²⁶⁸ This problem does not have an easy solution, especially given that the federal courts have split on the issue of whether Title IX allows complaints based on retribution or retaliation. Whether or not Title IX protects complainants from such retaliation depends on the forthcoming decision of the United States Supreme Court hearing an appeal in *Jackson v. Birmingham Board of Education*.²⁶⁹

With regard to item (4), periodic compliance reviews, the GAO Report points out that, of the four federal science agencies, only DED has conducted any periodic compliance reviews, which the report describes as “an agency-initiated assessment of grantees to determine if they are complying with the law.”²⁷⁰ Since 1993, however, DED has conducted only seventeen Title IX compliance reviews at colleges and universities, and only three of those seventeen have focused on gender equity in the sciences.²⁷¹

DED had agreed to perform compliance reviews on behalf of the other three federal science agencies, but has not yet conducted any—a situation unlikely to change anytime soon.²⁷² Recognizing DED’s limitations in this regard, NASA

263. *Id.*

264. This number excludes complaints regarding equity in athletics. *Id.*

265. *Id.* at 10.

266. *Id.* at 11.

267. *Id.*

268. *Id.*

269. 309 F.3d 1333 (11th Cir. 2002), *rev'd*, 544 U.S. ____, No. 02-1672 (Mar. 29, 2005). See Epilogue, *infra* notes 373–376 and accompanying text.

270. GAO Report, *supra* note 32, at 8.

271. *Id.* at 11.

272. *Id.* at 9. Moreover, DED has such agreements with seventeen other federal agencies, not only for Title IX, but also for other civil rights laws including Title VI and Section 504 of the Rehabilitation Act of 1973. *Id.* at 12. DED has, however, indicated that “performing compliance reviews for other agencies was never feasible” and “has informed those agencies that it could not

“has begun to take steps toward ensuring that compliance reviews are conducted on their [recipients].”²⁷³ The agency is in the process of developing a compliance review program, has requested compliance information from recipients and has initiated a review of the information provided to determine Title IX compliance, to identify problem areas, and to identify recipient institutions that should receive on-site compliance reviews.²⁷⁴

Neither DOE nor NSF has conducted any compliance reviews to-date, and the report indicates that neither agency has a plan to engage in that process.²⁷⁵ While DOE has instructed field-office staff on how to conduct compliance reviews, no field office has yet conducted a review, “primarily due to resource constraints.”²⁷⁶ And, due to a lack of funding and staff, NSF has no plans to develop a compliance review program.²⁷⁷

As the above information indicates, this lack of monitoring by the agencies has occurred, “in part, because agencies have not effectively coordinated the implementation of compliance reviews and, according to agency officials [because of] a shortage of resources to conduct the reviews.”²⁷⁸ In other words, the funding agencies have not fulfilled their obligations under the statute because they could not coordinate compliance reviews of individual institutions among themselves, and because they lacked sufficient funding to engage in such reviews.

On the issue of funding, the GAO Report states that DED officials have set a goal of “us[ing twenty] percent of their budget for both outreach and reviews of compliance with federal laws.”²⁷⁹ However, DED typically uses only about 15% of its budget for such activities.²⁸⁰ Moreover, the agency indicated that the three reviews of science grantees that it conducted in 1994 and 1995 actually occurred only because of congressional interest.²⁸¹ And while DED had planned to conduct over fifty compliance reviews in 2004 related to special education and accommodations for the disabled, the agency had no similar plan to conduct any compliance reviews involving Title IX.²⁸²

On the issue of agency coordination, the United States Department of Justice (DOJ) engages in three activities to coordinate agency compliance with Title IX: providing technical assistance to agencies with questions about compliance activities or requirements; brokering agreements between DED and various agencies to carry out complaint investigations and compliance reviews; and requiring agencies to submit annual reports on compliance activities.²⁸³ But the GAO Report points out that, while DOJ knew that DOE, NASA, and NSF were not

conduct these reviews for them.” *Id.* at 12, n.6.

273. *Id.* at 12.

274. *Id.*

275. *Id.*

276. *Id.*

277. *Id.*

278. *Id.* at 8.

279. *Id.* at 11.

280. *Id.*

281. *Id.* at 11–12.

282. *Id.*

283. *Id.* at 13.

conducting compliance reviews due to limited resources, DOJ did not know that DED had not adhered to its agreement with those three agencies to conduct reviews for them.²⁸⁴ DOJ has no legal authority to force federal funding agencies to conduct Title IX compliance reviews, however, and can only issue periodic reminders to the agencies of the need to comply with the law.²⁸⁵

The question at the beginning of this section asked, “How do federal agencies ensure that federal grant recipient institutions comply with Title IX in STEM fields?” Unfortunately, the GAO Report provides an unsatisfying, but unavoidable, answer: they do not. But the report also indicates that NASA, alone among the four federal science agencies, has undertaken some concrete steps to begin a compliance review process that ensures that recipient institutions comply with Title IX, and goes on to recommend that DOE and NSF also engage in that process.²⁸⁶

B. What promising practices exist to foster greater participation by women in STEM fields?

Outside of the realm of Title IX enforcement and compliance reviews, the GAO Report highlights “several examples of grant-making agencies that have instituted policies and practices designed to foster greater participation by women in the sciences.”²⁸⁷ The report divided these practices into three general categories, each discussed separately in the sections that follow.

1. NSF Considers How Proposals Aim to Encourage Greater Participation of Women in STEM-Based Research Grants

In its grant proposal evaluation process, NSF judges individual proposals on more than just the intellectual merits of the proposed activity. NSF proposal reviewers also evaluate the broader societal impacts of a proposed activity, which may include efforts directed at promoting teaching, incorporating K-12 outreach, broadening the participation of under-represented groups, and enhancing the research infrastructure through key partnerships and mentoring relationships, particularly for under-represented students.²⁸⁸ As a result, many NSF projects now include elements that attempt to inspire younger students to pursue education in the STEM disciplines. The GAO Report noted these positive impacts, but also cautioned that “the effects of implementing the [societal impact] criterion have yet to be fully evaluated.”²⁸⁹ Citing a 2001 National Academy of Public Administration finding that “NSF does not have adequate data to track changes or improvements to encourage greater participation by underrepresented minority researchers,”²⁹⁰ the GAO Report takes a “wait-and-see” approach to evaluating the

284. *Id.*

285. *Id.*

286. *Id.* at 28.

287. *Id.* at 24.

288. *Id.* at 24–25.

289. *Id.* at 24.

290. *Id.* at 25.

long-term merits of NSF's approach to funding decisions. This inability to track changes or improvements does present a serious problem, though, because it limits NSF's ability to prove that such proposal requirements achieve the desired goal of encouraging more members of under-represented groups to study in STEM disciplines.

2. Colleges and Universities Seek to Relieve Some of the Pressures for Women Beginning Tenure-Track Careers

As discussed in Part I.C.3.b, the GAO Report indicates that female faculty members may choose less demanding employment to allow them to balance the competing demands of work and family.²⁹¹ To counter this trend, the GAO Report found that some colleges and universities have instituted policies to extend the tenure clock by a semester or a year when an untenured faculty member has a child.²⁹² As the report noted, "Allowing junior faculty to 'stop the clock' relieves some of the pressure on junior faculty seeking tenure."²⁹³

Yet, even this female-friendly (or, more precisely, mother-friendly) policy comes with several pitfalls. Some colleges and universities may apply this policy to male and female faculty members alike. The GAO Report pointed out, however, that, "often male professors do not play as large a role as women in caring for newborns and can use the extra year to add to their research and publication portfolios,"²⁹⁴ thus putting similarly situated female faculty members at a further disadvantage. Or, even though the institution may have an established parental leave policy, some departments might not implement that policy. Furthermore, some female faculty members may choose not to ask for the leave because of fears that such a request may ultimately work against them in the tenure process.²⁹⁵

Although the GAO Report noted the benefits of family-leave policies, it also pointed out that, "when one is involved in scientific research, pressure remains to produce results."²⁹⁶ A faculty member might not have to appear in a classroom several times a week, but still must run a research laboratory. That individual must still "organize the work, supervise graduate students working on the projects, and

291. *Id.* at 21–23.

292. *Id.* at 25. Many colleges and universities, however, still give only six to eight weeks of paid maternity leave.

293. *Id.*

294. *Id.* This phenomenon occurs not just in academia, but also in industry. STEM-oriented Georgia Tech recently conducted a survey of graduates from the Classes of 1994 through 1997 and found that, among those with children under eleven years old, 90% of men depended on their wives for child care, while only 57% of women depended on their husbands for child care. See Donna Llewellyn, et al., *Alternate Pathways to Success*, 2004 ASEE Annual Conf. and Exposition, Washington D.C. (2004) (on file with author).

295. GAO Report, *supra* note 32, at 25. Not only might colleagues in the faculty member's own department view such leaves as evidence of a lack of commitment on the part of the faculty member, but outside tenure reviewers, who might not be aware of the institution's leave policy, may criticize the resulting gaps in a tenure applicant's resume. *Id.* at 25–26.

296. *Id.* at 26.

also advise students on their academic course work and projects.”²⁹⁷ And, as with the policies that stop the tenure clock, such relief from teaching duties “may benefit male faculty more than female faculty,”²⁹⁸ because male faculty typically have less involvement in caring for newborns or ailing family members.

With the help of NSF ADVANCE grants,²⁹⁹ some colleges and universities have found creative ways to help ease the burdens on those with child-care or other serious family responsibilities. The University of Washington, for example, has used NSF ADVANCE funds to establish a Transitional Support Program (TSP) that, among other things, provides financial support to faculty members who need to care for newborns or ailing family members, or to cope with personal illness.³⁰⁰ TSP provides funds to allow faculty members to develop distance-learning courses that they can teach while on leave, or to fund ongoing research activities in the faculty member’s absence.³⁰¹ The confidential TSP grant application process identifies faculty members—both male and female—who need such support to balance the needs of family and career.³⁰² This program provides a good example of a flexible way to support the faculty members who need time off for serious personal reasons. The application process, too, helps to identify those faculty members who truly need the time off, thus mitigating the inequities inherent in the blanket family-leave policies discussed above.

3. Colleges and Universities Seek to Expand the Recruiting Pool for STEM Careers and to Make Those Positions More Attractive to Women

The GAO Report lists several practices that colleges and universities have instituted to increase the recruiting pool and to improve hiring success for female faculty in the STEM disciplines: providing on-site child care; establishing an inclusive hiring process; evaluating the status of women faculty on a periodic basis; addressing social-climate issues; funding additional education for existing employees; and establishing flexible work schedules.³⁰³ Each practice does have the potential for positive impacts on the status of female faculty, but each also presents some problems: on-site child care might not accommodate sick children; a hiring process might encompass a wide search area, but if female candidates are not available because they have not graduated from an appropriate Ph.D. program,

297. *Id.*

298. *Id.*

299. NSF awards ADVANCE grants to colleges and universities for the purpose of effecting institutional transformations that work toward fuller participation of women faculty in science and engineering. See generally NSF, *NSF Announces Institutional Transformation Awards Under “ADVANCE,”* available at <http://www.nsf.gov/od/lpa/news/press/01/pr0179.htm> (Oct. 9, 2001) (describing NSF ADVANCE grants and the first set of programs supported by those grants).

300. See generally UNIV. OF WASH. CTR. FOR INST. CHANGE, *UWADVANCE*, at <http://www.engr.washington.edu/advance/> (last visited Feb. 24, 2005) (detailing the University of Washington’s initiatives in this regard).

301. *Id.*

302. *Id.*

303. GAO Report, *supra* note 32, at 26–27.

such efforts will not succeed; a periodic survey may reveal salary inequities, but might also explain away any differences by pointing to the personal choices women make without simultaneously addressing the conditions of employment or climate issues that make such decisions necessary or even inevitable.

C. Key Conclusions from the GAO Report

The GAO Report itself best summarizes the state of Title IX compliance and enforcement in STEM disciplines:

Our review of federal science agencies' oversight for Title IX suggests that much of the leverage afforded by this law lies underutilized in the science arena, even as several billion dollars are spent each year on federal science grants. Although [DOE], NASA, and NSF have carried out most of the activities required of them under Title IX, the impact of their work may be limited without compliance reviews of [grant recipients] and their practices. Given the general lack of knowledge and familiarity with the reach of Title IX and the disincentives for filing complaints against superiors, investigations of complaints alone by federal agencies are not enough to judge if discrimination exists. Without making full use of all compliance activities available, agencies lack a complete picture of federal [grant recipient] efforts to address occurrences of sex discrimination. On the other hand, a more aggressive exercise of oversight on the part of agencies that wield enormous influence in the world of science funding—[DOE], NASA, and NSF—would provide an opportunity to strengthen the goal of Title IX and enable this legislation to better achieve intended results.³⁰⁴

Clearly, the GAO Report contemplates a more active role for the four federal science agencies in ensuring that the original goals of Title IX are achieved in the STEM disciplines. The report goes on to recommend that NASA continue to implement its new compliance review process, and that DOE and NSF also periodically conduct compliance reviews of grant recipients.³⁰⁵

One concern about the report, however, is that it tends to attribute the differences between the progress of male and female faculty and students to the personal choices of individuals. The report states, for example, that “[s]everal recent studies show that salary and rank differences between men and women can largely be explained by work patterns and choices.”³⁰⁶ The report then explains that “some women trade off career advancement or higher earnings for a job that offers flexibility to manage work and family responsibilities,”³⁰⁷ noting that women faculty had indicated that “juggling family life with a tenure track faculty position was extremely challenging.”³⁰⁸ The report does acknowledge that “the variability in men’s and women’s participation in the sciences may result from

304. *Id.* at 28.

305. *Id.*

306. *Id.* at 21.

307. *Id.* at 22.

308. *Id.*

discrimination in the workplace or subtler discrimination about what types of career or job choices women can make.”³⁰⁹ Nevertheless, when the report states that “91 percent of the discrepancy between men’s and women’s faculty salaries could be explained by differences in experience, work patterns, seniority, and education levels,”³¹⁰ it leaves the impression that workplace discrimination contributes very little to any actual differences between men and women. It fails to explore how some of the personal choices result from working conditions that negatively affect women to a greater extent than men.³¹¹

III. CONCLUSIONS REGARDING TITLE IX COMPLIANCE AND ENFORCEMENT IN THE STEM DISCIPLINES

When Congress enacted Title IX in 1972, it intended that the law would help women to achieve equal access to all aspects of education at all levels. Over the last three decades, women have made tremendous progress in higher education, now comprising nearly 60% of all bachelor’s and master’s degree recipients,³¹² nearly half of all Ph.D. and first professional degree recipients,³¹³ and more than 40% of all student-athletes at National Collegiate Athletic Association (NCAA) member institutions.³¹⁴ Nevertheless, while the proportion of women studying in STEM fields has grown tremendously since 1972, women still comprise a distinct minority of those studying in STEM fields at all levels, particularly in engineering and in some natural-sciences fields such as physics.³¹⁵ Undoubtedly, some of this under-representation occurs because of the personal choices women make to satisfy their own educational interests. But some of these choices may also result from pressures within the academy itself, including: an existing predominance of male faculty in a particular discipline, which can affect both the success of female graduate students and the hiring of female faculty within that discipline; “toxic atmospheres” within particular academic disciplines; incredible pressure to engage in research competing with the demands of family life; and biases in the hiring process.³¹⁶ One researcher described the subtle nature of this type of discrimination: “[M]ost women don’t perceive themselves as having experienced discrimination. What’s happening now is below everybody’s radar screen.”³¹⁷

Certainly, Title IX cannot remedy the under-representation that results from personal choices. But, by focusing Title IX compliance efforts on those institutional policies or practices that negatively, and perhaps imperceptibly,

309. *Id.* at 23.

310. *Id.* at 21.

311. *But see* Wilson, *supra* note 27, at A8, for a more thorough, albeit qualitative, assessment of this aspect of the gender-equity-in-STEM problem.

312. NSF Report, *supra* note 6, at 10, Table 2; 17, Table 9.

313. *Id.* at 33, Table 25.

314. NCAA, 1982–2003 SPORTS SPONSORSHIP AND PARTICIPATION REPORT 34 (2004). *See generally* U.S. DEP’T OF EDUC., OPEN TO ALL: TITLE IX AT THIRTY 13 (2003) (report of the presidential commission convened to discuss the current state of Title IX enforcement with regard to athletics).

315. *See supra* notes 5–25 and accompanying text.

316. *See* Wilson, *supra* note 27, at A8.

317. *Id.* at A9.

impact those personal choices, Title IX can assure that, at a minimum, the academic environment is hospitable to the inclusion of women who choose to pursue a particular discipline.

By what practical means can Title IX effect the desired change? The history of Title IX enforcement points out four approaches to compliance, each of which has had some effectiveness in achieving gender equity for women: compliance reviews by funding agencies; lawsuits by private plaintiffs; reporting requirements ordered by Congress through legislation; and institutional self-assessment. The first three approaches all have negative implications for educational institutions, as each occurs as a result of some alleged misconduct by the educational institution. The results of these contentious proceedings may force an educational institution to adopt an unsatisfying approach to Title IX compliance. Only by active self-assessment can educational institutions control the manner in which they work to achieve true gender equity. This section of the article summarizes the implications of these various methods of Title IX compliance.

A. Compliance Reviews by Federal Funding Agencies

As discussed in Part II, striving for Title IX compliance by relying on compliance reviews by funding agencies has the pitfalls noted throughout the GAO Report. Most significantly, the four federal science agencies claim that they lack the necessary funding to conduct compliance reviews at educational institutions that receive federal funds.³¹⁸ While DED responds to complaints, and the other federal science agencies forward their complaints to DED for review, agency-initiated compliance reviews almost never occur.

Prior to the issuance of the GAO Report, NASA—alone among the four agencies—had stepped up its efforts to verify whether grant recipients comply with the law. As described in its response letter to the GAO Report, NASA “has taken steps to reactivate its previously dormant Title IX compliance program.”³¹⁹ In fiscal year 2003, NASA began a “desk audit review of grantee compliance with Title IX regulatory provisions,”³²⁰ and in June 2003 published a “Notice of Request for Information” inviting public comment on NASA’s plans to request from 917 grant recipients information on Title IX compliance.³²¹ Finally, in December 2003, NASA issued a letter:

to all . . . grant recipients requesting information on whether the recipient had, pursuant to Title IX requirements: (1) designated an employee to act as the “Title IX coordinator;” (2) adopted and published internal grievance procedures to promptly and equitably resolve complaints alleging discrimination on the basis of sex in its education programs or activities; (3) taken specific steps to regularly and consistently notify the public, *i.e.*, participants, employees, applicants, etc., that it does not discriminate on the basis of sex in the

318. GAO Report, *supra* note 32, at 11–12.

319. *Id.* at 46.

320. *Id.*

321. *Id.* (citing Notice of Request for Information, 68 Fed. Reg. 37,866 (June 25, 2003)).

operation of its education programs and activities; and (4) conducted a self-evaluation to evaluate current policies and practices and the effects of such policies and practices on the admission and treatment of students, and the employment of academic and non-academic personnel working in connection with the recipient education program or activity.³²²

NASA also indicated that it was in the process of “reviewing the grant recipient responses to systematically identify grant recipient compliance, identify problem areas, and assist in the targeting of recipients for possible onsite compliance reviews.”³²³ Clearly, at least with regard to the \$58.3 million in taxpayer money that NASA spends on STEM-related research,³²⁴ NASA has now started to become proactive in the area of Title IX compliance.

DOE, which in 2003 provided just over \$1 billion in STEM-related grants,³²⁵ has also taken some steps in the right direction by training its field officers and by monitoring their Title IX compliance efforts. Nevertheless, in its response letter to the GAO Report, DOE acknowledged that, as of July 2004, no field office had yet conducted a compliance review at a grant recipient due to staffing and funding shortages.³²⁶

NSF, which in 2003 granted \$3.6 billion to educational institutions,³²⁷ indicated in its response letter to the GAO Report that it plans to continue on its current course, with no new initiatives directed toward ensuring Title IX compliance at grant recipients.³²⁸ NSF indicated that it will continue to rely on DED to conduct compliance reviews on its behalf, despite the fact that DED has not conducted any such reviews to date, a policy not likely to change anytime soon.³²⁹ NSF also intends to continue to rely on DED to investigate Title IX complaints involving educational institutions, and on the Equal Employment Opportunity Commission to investigate Title IX complaints involving employment discrimination.³³⁰ NSF also noted that it discharges its other responsibilities under Title IX by notifying grant recipients that they must comply with the law and by requiring appropriate, although likely pro forma, assurances from those recipients.³³¹

DED, which provided \$129 million in STEM-related grants in 2003,³³² recounted its Title IX compliance efforts to-date in its response letter to the GAO Report.³³³ In thirty-two years, DED has conducted only three reviews of gender

322. *Id.*

323. *Id.*

324. *Id.* at 34 (detailing obligations for fiscal year 2003). This is the smallest amount expended by any of the four federal science agencies.

325. *Id.*

326. *Id.* at 43.

327. *Id.* This is by far the largest amount expended by any of the four federal science agencies.

328. *Id.* at 47–48.

329. *Id.*

330. *Id.*

331. *Id.*

332. *Id.* at 35.

333. *Id.* at 40–41.

equity in STEM education at the college or university level, although it has also conducted twelve such reviews at the secondary-school level to address the issue of getting more female students into the STEM “pipeline.”³³⁴ DED also indicated that the seventeen other non-athletics Title IX compliance reviews it conducted on issues including sexual harassment, grievance procedures, due process and support services, while not directly applicable to STEM education, nonetheless benefited all female students, faculty and employees at those institutions.³³⁵ Furthermore, to the extent that DED does have funding to conduct compliance reviews, and even has some agreements in place with the other federal science agencies to conduct reviews on their behalf, the agency appears to have decided to concentrate its civil-rights compliance reviews on different areas of the law in response to congressional concerns, rather than on a comprehensive review of how grant recipients comply with all civil-rights statutes.³³⁶

Quite simply, the responsible federal agencies have not adhered to their requirements under Title IX. Taxpayers, therefore, cannot depend on these agencies to initiate the compliance reviews that could lead to improved gender equity in STEM education. If these agencies suddenly decided to alter course, however, and aggressively pursue the required compliance reviews, the ramifications for educational institutions could be significant. If the agency identifies a Title IX violation, it has the authority, subject to a right of appeal, to impose specific remedial actions on an educational institution.³³⁷ Such remedies might not comport with the institutional mission and might have a negative impact on the educational institution that far outweighs the positive changes such a remedial scheme might bring about.

B. Lawsuits by Private Plaintiffs

The dearth of Title IX equity-in-academics cases likely results from the fact that students and employees (including faculty) lack awareness of the reach of Title IX or fear the consequences of initiating such actions. As the GAO Report states:

[S]cientists and students at most schools we visited told us that they thought Title IX covered only sports and did not know the law also encompassed academic issues. Also, others suggested they would be unlikely to file a complaint for fear of retribution from supervisors or colleagues [because] filing a complaint could hinder their ability to attain tenure [and] would take time away from their research.³³⁸

Despite the fact that Title IX functions differently in the athletic and academic realms, lawsuits filed in the athletics context provide some examples of how courts might order an educational institution to engage in particular activities to come into compliance with Title IX. It is important to note that these types of Title IX

334. *Id.*

335. *Id.*

336. *Id.* (discussing DED’s plans to conduct compliance reviews related to disability issues in 2004).

337. *Id.*

338. *Id.* at 11.

lawsuits usually arise when female student-athletes perceive that the educational institution has treated them inequitably and has not tried to remedy the inequities in an acceptable manner. Cases that make it to court arise from a conflict, rather than from a genuine desire to achieve common goals. In fact, in stating their cases, each side establishes positions diametrically opposed to one another, making compromise difficult, at best. In the athletics realm, courts have typically resolved these conflicts in favor of the student-athlete. Furthermore, court-imposed remedies can be intrusive. The decade-long case involving Brown University illustrates these pitfalls to litigation.³³⁹ Instead of keeping two women's teams at university-funded varsity status, which cost \$62,000 annually in 1992,³⁴⁰ Brown chose to enter into expensive and protracted litigation to preserve the right to manage its own athletic program, which, by all accounts, was among the best in the nation in terms of the opportunities it provided for female student-athletes.³⁴¹ In the end, however, Brown had to enter into a settlement that required precise management of the male-female ratio of participation opportunities.³⁴² Moreover, the litigation had its costs. Under Title IX's fee-shifting provision, the plaintiffs made a claim for \$1.4 million in fees, costs and interest³⁴³—not to mention the money that Brown spent on defending itself. Additionally, Brown has experienced a decade's worth of negative publicity because of this lengthy and contentious case.

Nevertheless, litigation occurs because it achieves success for plaintiffs. In the 1971–72 academic year, immediately prior to the enactment of Title IX, women comprised approximately 15% of all college athletes.³⁴⁴ By the 1991–92 academic year, immediately before *Cohen v. Brown University* and other litigation driven by groups such as the American Association of University Women, the Women's Sports Foundation and the National Women's Law Center (NWLC),³⁴⁵ women

339. *Cohen v. Brown Univ.*, 809 F. Supp. 978 (D.R.I. 1992), *aff'd*, 991 F.2d 888 (1st Cir. 1993) (preliminary injunction), and 879 F. Supp. 185 (D.R.I. 1995), *aff'd in part, rev'd in part*, 101 F.3d 155 (1st Cir. 1996), *cert. denied*, 520 U.S. 1186 (1997) (trial on the merits).

340. *Cohen*, 809 F. Supp. at 981.

341. Since becoming a coeducational institution in 1971:

Brown . . . had created an exemplary array of sports opportunities for its female students. Brown women had 15 sports teams to choose from, almost twice the average of 8.3 for other NCAA Division I schools. Only one school, Harvard, had a broader and more generous women's athletic program.

JESSICA GAVORA, *TILTING THE PLAYING FIELD: SCHOOLS, SPORTS, SEX AND TITLE IX* 70 (2002).

342. Jim Naughton, *Judge Approves Settlement of Brown U.'s Title IX Case*, CHRON. HIGHER EDUC., July 3, 1998, at A31. In particular, Brown must:

insure that the proportion of female athletes at the institution remains within 3.5 percentage points of female undergraduates. [If] Brown decides to eliminate a women's sport, or institute a men's sport, it must insure that the proportion of female athletes at the institution is within 2.25 percentage points of the proportion of female undergraduates.

Id.

343. *Id.*

344. 44 Fed. Reg. 71,413, 71,419 (Dec. 11, 1979). Fifteen percent corresponds to 31,852 female student-athletes.

345. See, e.g., GAVORA, *supra* note 341, at 49 (describing how these organizations set out to

comprised 34% of all student-athletes at NCAA member institutions.³⁴⁶ In the 2002–03 academic year, women comprised 43% of all student-athletes at NCAA member institutions.³⁴⁷ Thus, in the two decades before active Title IX enforcement began, the number of female student-athletes more than tripled, from 31,852 to 96,469, for an average growth of 3,231 new athletic participation opportunities each year.³⁴⁸ In the following decade, the number of female student-athletes nearly doubled again, to 160,650, for an average growth of 6,418 new athletic participation opportunities each year, nearly double the previous annual growth rate.³⁴⁹

Litigation not only achieves direct results for the plaintiffs, but it can cause other educational institutions to engage in litigation-averse behavior that may have other undesirable consequences. The slew of cases challenging cuts to men's athletic programs resulted from actions on the part of educational institutions to trim budgets while insulating themselves from Title IX liability.³⁵⁰ Rather than making difficult budgetary decisions that affect both men's and women's teams, these educational institutions instead chose to limit the opportunities available to men to avoid lawsuits by women. While the courts do not necessarily endorse these decisions, the courts also recognize that the educational institutions have the right to make these decisions, regardless of whether men ultimately suffer in the pursuit of equitable treatment for women.

C. Legislative Oversight

In the absence of appropriate (not to mention, statutorily required) oversight on the part of federal funding agencies, Congress could step in and dictate the form of reporting required by educational institutions to back up the pro forma assurances contained in funding contracts.³⁵¹ Congress has already acted in this manner in the athletics realm by passing the 1994 Equity in Athletics Disclosure Act (EADA).³⁵² The EADA requires educational institutions to make available to “students, potential students, and the public . . . financial, [participation,] and other information [concerning the institutions’] women’s and men’s intercollegiate

cultivate clients to test Title IX in the athletics realm in the early 1990s).

346. NCAA, *supra* note 314, at 33–34. Thirty-four percent represents 96,469 female student-athletes out of a total of 282,516. *Id.* at 34.

347. *Id.* at 63–66. Forty-two percent represents 160,650 female student-athletes out of a total of 377,641. *Id.* at 64.

348. *Id.* at 33–34. *See* 44 Fed. Reg. at 71,419.

349. NCAA, *supra* note 314, at 64. The actual rate of growth may be even higher than this, as these numbers count participation opportunities only at NCAA member institutions. On the other hand, the actual rate of growth may be slower, because these numbers do not take into account the growth in the number of NCAA member institutions over the last three decades.

350. *See, e.g.,* Miami Univ. Wrestling Club v. Miami Univ., 302 F.3d 608 (6th Cir. 2002); Kelley v. Bd. of Trustees, Univ. of Ill., 35 F.3d 265 (7th Cir. 1994); Boulahanis v. Bd. of Regents, Ill. State Univ., 198 F.3d 633 (7th Cir. 1999); Chalenor v. Univ. of N.D., 291 F.3d 1042 (8th Cir. 2002); Neal v. Bd. of Trustees of the Cal. State Univs., 198 F.3d 763 (9th Cir. 1999).

351. *See, e.g.,* NASA, *supra* note 252, at E-2.

352. Pub. L. 103-382, § 360B, 108 Stat. 3518, 3969 (codified in scattered sections of 20 U.S.C.).

athletic programs.”³⁵³ Such reports must include the following:

- (1) the number of full-time male and female undergraduate students at the college or university;
- (2) the number of participants on varsity teams;
- (3) operating expenses by team;
- (4) the number of coaches and assistant coaches by team;
- (5) the total amount of athletically related student aid;
- (6) the ratio of aid given to male versus female student-athletes;
- (7) recruiting expenditures on male versus female student-athletes;
- (8) total annual revenues; and
- (9) salaries of coaches and assistant coaches.³⁵⁴

In developing the regulations needed to effectuate the legislation, the Secretary of Education stated:

The EADA is a “sunshine” law designed to make prospective students and prospective student athletes . . . aware of the commitments of an institution to providing equitable athletic opportunities for its men and women students In enacting the EADA, Congress expected that knowledge of an institution’s expenditures for women’s and men’s athletic programs would help prospective students and prospective student athletes make informed judgments about the commitments of a given institution of higher education to providing equitable athletic benefits to its men and women students.³⁵⁵

Thus, Congress enacted the EADA based on a belief that greater visibility of how an educational institution treats male and female student-athletes in all aspects of an athletic program can help to foster awareness of the state of gender equity in the program at a particular educational institution. Presumably, educational institutions that report unflattering data might also take steps to improve their athletic programs.

Could EADA-like legislation have a similar impact on gender equity in STEM education? Perhaps it could. Such a requirement might make educational institutions more accountable for their choices in hiring faculty, supporting graduate students, and providing other resources that help women to integrate into the STEM curriculum. It might also foster self-examination and lead to better practices that support female students in STEM disciplines. On the other hand, a legislative mandate for reporting according to rigid, mechanical standards might simply encourage efforts to make the reported numbers look better rather than to create meaningful change. It also might discourage innovative efforts to attract more under-represented students to STEM education, particularly if such efforts

353. 60 Fed. Reg. 6940-01 (Feb. 3, 1995) (to be codified at 34 C.F.R. pt. 668).

354. *Id.*

355. *Id.* (internal quotation marks, omissions, and citations omitted).

would not directly impact the reported numbers.

Furthermore, relying on requirements of EADA-like legislation to track the state of gender equity for women does nothing to address the quality of a particular educational experience. A look at the 2003–04 EADA disclosure form for the University of Notre Dame points out some of the problems with using this reporting scheme as a method of verifying Title IX compliance.³⁵⁶ Looking only at the percentages of participation opportunities and financial aid expenditures shows how such statistical measures leave some questions unanswered. Notre Dame sponsors thirteen varsity teams each for men and women.³⁵⁷ Women comprise 46.6% of the undergraduate student body and 43.3% of student-athletes, and receive 41.1% of athletically related student financial aid.³⁵⁸ These numbers look reasonably equitable, particularly given the university's stated plans for continually improving athletic programs for all varsity student-athletes in a variety of ways including improving facilities and fully funding all allowable athletic scholarships.³⁵⁹ Yet, these numbers say nothing about the quality of the athletics experience for men and women.

The statistics for men's football and women's rowing—the two largest teams—point out areas of potential inequity. In 2003–04 men's football had 109 student-athletes, one full-time head coach and eleven full-time assistant coaches, and spent \$15,671 per student-athlete.³⁶⁰ On the other hand, women's rowing had eighty-two student-athletes, one full-time head coach and two full-time assistant coaches, and spent \$1,659 per student-athlete.³⁶¹ With regard to the inequities in coaching staffs, it might make sense for football to have a large number of full-time coaches, given the various positions on offense and defense, each of which requires the development of specific and different skills. Rowing, on the other hand, requires less diversity of skill. Yet, it is impossible to believe that a team with one full-time coach per twenty-seven student-athletes (women's rowing) can provide the same quality of athletics experience as that of a team with one full-time coach per nine student-athletes (football). With regard to expenditures, it might make sense to spend nine times as much on football as on rowing, because football uses more expensive equipment, has more coaches, travels farther for competitions and requires extensive support for home-game operations. Moreover, the sport brings in 70.1% of all athletics revenues while consuming only 26.4% of all athletics expenditures.³⁶² Yet again, it is impossible to believe that a team that spends one-tenth of what another team spends per-player can provide an equivalently strong experience. Finally, these numbers hide the fact that, based on NCAA bylaws, football can offer up to eighty-five full scholarships, while rowing can offer only

356. See UNIV. OF NOTRE DAME, EADA REPORT, at <http://www.nd.edu/athletics/disclosure.shtml> (2004).

357. UNIV. OF NOTRE DAME, 2004 EADA TABLES, Table 1, at http://www.nd.edu/athletics/EADA04_A.pdf (2004).

358. *Id.* at Table 6.

359. *Id.*

360. *Id.* at Tables 1, 3a, 3b, 4.

361. *Id.*

362. *Id.* at Table 10.

twenty, even though both teams have a large number of players.³⁶³

On the other hand, simply because two teams (for example, men's and women's basketball) might operate under similar constraints such as coaching-staff size, funding, per-player expenditures, and NCAA scholarship limits does not mean that both teams provide equivalent experiences. These statistics do not address whether both teams have equivalent access to similar practice facilities and times, whether the educational institution has looked for (and hired) equivalently strong coaches for both sports, or whether the coaches have appropriately used the available scholarship money.

The point of these examples is not that an educational institution might be able to justify apparent inequities in an athletics program, such as that between men's football and women's rowing, or that numbers that look comparable might hide other inequities. Rather, the point of these examples is to show that relying only on such numbers to confirm Title IX compliance can mask the questions that need to be asked to determine whether a particular program provides truly equitable opportunities for men and women.

Creating an athletics-like reporting system for academics, requiring annual reports of the numbers of students involved in a particular degree program, would similarly mask a number of qualitative factors. Do female students receive an appropriate amount of attention from faculty advisors?³⁶⁴ Do faculty members write equivalently strong letters of recommendation for their male and female students?³⁶⁵ Do faculty members equivalently promote their male and female students for further study or employment?³⁶⁶

Moreover, reporting and publicizing such numbers tends to encourage thinking in terms of proportionality, even when none is required.³⁶⁷ Would a physics

363. NCAA, 2004–05 NCAA DIV. I MANUAL, Bylaws 15.5.3.1.2, 15.5.5.1 at 205, 206 (2004).

364. The *Chronicle* reports that “male professors—particularly in male-dominated disciplines like economics—may be less comfortable with female students.” Wilson, *supra* note 27, at A9. The article goes on to say that male professors may spend less time working with female students on their dissertations and may promote their female students less. *Id.* By the end of the Ph.D. process, a disproportionately high number of women end up in the bottom half of their class. *Id.*

365. The *Chronicle* reports that “[l]etters of recommendation written for women are likely to be weaker than those written for men . . . and they are apt to describe women as ‘reliable, responsible, and meticulous,’ while men are called ‘brilliant and original.’” *Id.*

366. Again, the *Chronicle* points out that, “when it comes time to recommend Ph.D. candidates for jobs at top-notch institutions male professors automatically think of their male students,” given the greater amount of time male faculty members tend to spend with their male graduate students. *Id.*

367. For example, on the thirtieth anniversary of Title IX, in 2002, the NWLC published a list of thirty athletics programs that did not comply with Title IX in the area of athletic financial assistance, because they deviate from strict proportionality by anywhere from four to seventeen percentage points. NWLC, *30 Colleges and Universities Challenged by NWLC for Athletic Scholarship Violations under Title IX of the Education Amendments of 1972*, available at <http://www.nwlc.org/pdf/30Schools.pdf> (June 18, 2002). The list included the University of Notre Dame, which, in 2000–01, had allocated 38% of financial aid to female student-athletes, who comprised 44% of student-athletes. *Id.* When questioned about Notre Dame's inclusion on the list, an NWLC representative said simply, “The numbers speak for themselves.” Eric Hansen,

program deny an opportunity to a well-qualified male applicant in order not to worsen an existing gender imbalance in the program? Might a nursing program think twice about dismissing an objectively incompetent male student for similar reasons? Neither students nor taxpayers are served when educational institutions make decisions for reasons other than the academic integrity of their programs. Colleges and universities have long thought for themselves about their academic requirements and should, therefore, also think for themselves about the ways in which they can demonstrate equity in STEM education before the government, on behalf of federal taxpayers, demands that educational institutions engage in such reporting.

D. Self-Evaluation

With the recent attention given to this under-representation by Congress, the GAO and, more recently, the NWLC,³⁶⁸ colleges and universities now may face new pressures to prove that their programs and activities in the STEM disciplines comply with the requirements of Title IX. Given the pitfalls of the other three approaches to Title IX compliance, educational institutions should consider carefully whether to engage in a process of self-evaluation to determine how female students and faculty fare in STEM disciplines.

This approach to Title IX compliance has several significant advantages. When an educational institution does its own investigation, it can set out the parameters for the discussion of gender-equity in STEM disciplines, consistent with the educational institution's own mission and goals. It eliminates the contentiousness that can accompany a federal agency-initiated investigation or a private lawsuit. And, it sets the stage for meaningful compliance with both the spirit and letter of the law. A self-evaluation can help to identify those institutional policies or habits that have led to an under-representation of women in the STEM disciplines, enabling the educational institution to make changes consistent with its own objectives while also bringing the institution into compliance with Title IX.

Governmental compliance reviews, litigation, and statutory reporting requirements put an educational institution on the defensive, having to explain itself to those who challenge its policies and practices. Self-evaluation, on the other hand, puts the educational institution in charge, allowing it to decide for itself

Title IX Study Findings Surprise ND Officials, SOUTH BEND TRIBUNE, June 21, 2002, at B1.

The regulations, however, allow for deviations from a strict proportionality requirement under certain conditions, such as when a coach decides for competitive purposes not to use all of the scholarships allocated to a team, or when a new team allocates scholarships in a manner that reserves some funds for future years. *See* 44 Fed. Reg. 71,413, 71,415 (Dec. 11, 1979). Both of these circumstances applied to Notre Dame that year: the women's basketball coach had used fewer than all fifteen of her available scholarships, and Notre Dame had established a new women's team in 1998, which had not yet allocated its full complement of scholarships. The numbers, clearly, do not "speak for themselves."

368. *See, e.g.*, NWLC., *Women's Groups Launch National Letter-Writing Campaign Demanding that Universities Break Down Barriers to Women in the Sciences*, available at <http://www.nwlc.org/details.cfm?id=2056§ion=newsroom> (Nov. 18, 2004); NWLC, *Women in the Sciences: Left Out, Left Behind*, available at <http://www.womensprerogative.org/womeninsciences/> (last visited Feb. 24, 2005).

the best way to achieve gender equity in academics.

CONCLUSION

The GAO's recommendation that the four federal science agencies step up their efforts in Title IX enforcement and compliance at colleges and universities may be just the beginning of renewed interest in gender equity in the academic realm, or it may become just one more governmental report gathering dust on a shelf. The outcome depends on how the four federal science agencies view their responsibilities with regard to Title IX, as well as on the availability of funding to discharge those responsibilities. The letters each of the agencies submitted in response to the GAO Report, included in Appendices VII through X of the report,³⁶⁹ point out the significant differences—in fact, the inconsistencies—in the approach each agency plans to take to discharge its responsibilities as a federal funding agency subject to Title IX. One consistent theme that has emerged, however, is that lack of funding and lack of agency coordination have impeded progress in this regard.

Educational institutions, too, have responsibilities under Title IX and must provide assurances to funding agencies that their programs and activities do not discriminate on the basis of gender. But according to the GAO Report, other than assenting to the pro forma language contained in funding proposals, colleges and universities have not undertaken any efforts to provide evidence that supports the assertions in the language of these nondiscrimination compliance assurances.

Individuals who have suffered discrimination in their STEM educational experiences may take Title IX compliance and enforcement into their own hands either through a complaint to the relevant funding agency or through a lawsuit. But a lack of knowledge of individual rights under Title IX, coupled with a fear of retaliation among those aware of their rights,³⁷⁰ may mean that inequity in STEM education will continue, unchallenged, for the near future. The lack of available cases to illustrate the key points brought out in this article underscores this fact. Nevertheless, the new interest in this subject by organizations such as the NWLC may provide the impetus for filing such cases, in the same way that the NWLC and other organizations jump-started Title IX enforcement efforts in the athletics context in the early 1990s.³⁷¹

The next phase of this effort to bring more women into STEM disciplines could also rest in the hands of Congress. The GAO Report may bring about a new congressional awareness of the lack of Title IX compliance and enforcement efforts on the part of agencies that depend on federal funds for their operating budgets. This may inspire some legislators to craft a law similar to the EADA to facilitate public reporting of efforts toward educating and hiring more women in STEM disciplines. And although such reporting requirements have limited utility in that they convey only the results of the gender-equity process, they serve an important public function in identifying those institutions that have demonstrated a

369. GAO Report, *supra* note 32, at 40–48.

370. *Id.* at 10–11.

371. See GAVORA, *supra* note 341, at 49.

commitment to gender equity in STEM disciplines.

If colleges and universities do not try to solve the issue of under-representation of women in STEM disciplines through their own initiatives, they run the risk that the government, either through enforcement actions or through judicial decisions, will do it for them. On the other hand, by engaging in a self-evaluation process and disseminating those results, educational institutions can help to re-frame the debate in a manner that will achieve much-needed progress in this critical area of educational development.

Senator Wyden expressed his continuing concern over the under-representation of women in STEM disciplines during the January 2005 hearings to confirm Margaret Spellings as the new Secretary of Education:

The potential of Title IX is enormous. Enforcing it in academic fields could revolutionize the study and application of math and science in our country.

Educators of good conscience should not wait for a Federal reprimand to comply with a Federal law that benefits all of us. Title IX ought to be a guiding principle in hiring, tenure, scholarships, and lab space for all scholars on all the academic campuses around our country. Title IX can finally give women studying science a fair shake where they have not gotten one before. . . .

. . . I formally call on . . . Margaret Spellings[] to work to ensure that girls and women in our federally funded schools do not suffer discrimination in math and the sciences. [It] is an issue of economics, and it is also an issue of national security. 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 [is] the second biggest threat to our national security. . . .

. . . America [cannot] meet its national security needs if it is not giving women a fair shake as it relates to opportunity in math and science. . . . I call on the new Education Secretary . . . to take this message of economic fairness and national security to heart.

The remarks that [Harvard University President] Dr. Summers has made [positing that the lack of women in STEM careers results from innate differences between men and women] . . . have generated a new and important discussion about this issue. As the Senate confirms a new Education Secretary, I believe there is no better time to return our attention to the issue of how this body can advance opportunities for women in math and science, not by writing any new laws but by enforcing the laws on the books.³⁷²

The time may be right for Congress and DED to tackle the issue of the under-representation of women in STEM disciplines. Colleges and universities should

372. 151 CONG. REC. S91-92 (daily ed. Jan. 20, 2005) (statement of Sen. Wyden) (referring to remarks made by Harvard University President Lawrence H. Summers in January 2005). *See also* Bombardieri, *supra* note 5, at A1 (reporting on President Summers' remarks).

work to shape the debate, rather than react to its outcome.

EPILOGUE

As this article went to press, the United States Supreme Court announced its decision in *Jackson v. Birmingham Board of Education*³⁷³ that "the private right of action implied by Title IX encompasses claims of retaliation,"³⁷⁴ overturning the decision of the United States Court of Appeals for the Eleventh Circuit,³⁷⁵ which had affirmed the decision of the United States District Court for the Northern District of Alabama to dismiss a Title IX claim based on retaliation against an employee who complained about inequities in a high school athletic program.³⁷⁶ It remains to be seen whether this decision will provide the necessary safety net for faculty and students to file Title IX complaints about gender discrimination in STEM programs.

373. 544 U.S. ____, No. 02-1672 (Mar. 29, 2005).

374. *Id.*, slip op. at 1.

375. 309 F.3d 1333 (11th Cir. 2002). *See supra* note 269 and accompanying text.

376. *Jackson*, No. 02-1672, slip op. at 1.