

Teacher Education and Gender Equity: The Unfinished Revolution

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Girls are destined to lag behind boys in math and science because of their female brain structure.

Boys thrive on didactic instruction, strict discipline, and high-stakes competition.

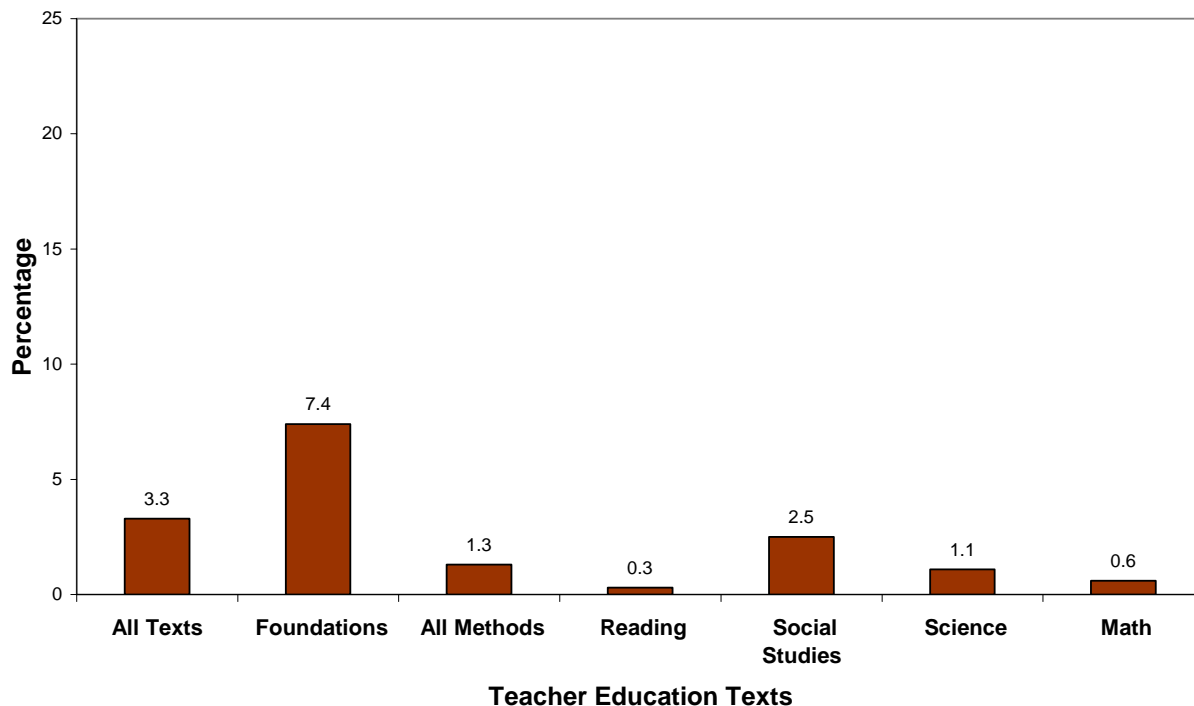
Boys and girls learn best in single-sex classrooms and schools.

There is no shortage of advice on how best to teach girls and boys. No shortage, that is, unless you happen to be looking in teacher education textbooks. Reading these texts you will rarely, if ever, learn that boys face special problems in reading, or that girls encounter similar challenges in physics and technology. But turn on a television talk show, browse through the pages of some popular books or flip through your local newspaper, and you will find an endless list of gender-related teaching ideas. In fact, the teaching suggestions that open this article come from popular books and articles, a problematic list of ideas generously sprinkled with conventional wisdom. From brain research to raging adolescent hormones, educators are being deluged with recommendations on how best to teach girls and boys. The Bush administration has authorized millions of dollars for the creation of single sex schools and classes, even as it cuts back on research funds to determine what strategies actually work. Is this single sex school initiative sound educational policy, or a politically motivated effort to turn back the clock on gender equity? As we mark the thirtieth anniversary of Title IX, it is time to look more critically at gender, schools, and teacher preparation. How can we best teach girls and boys?

We recently completed a content analysis of twenty-three leading teacher education texts to determine what they had to say about gender and education. All texts were published between 1998 and 2001, and included five areas: Introductory/ Foundations in Education, and the methods texts in Reading, Social Studies, Science and Math. The line-by-line analysis (co-rater reliability was at 90 percent or

higher) evaluated the inclusion and treatment of gender issues ranging from the experiences and contributions of women (even mentioning a woman's name) to exploring strategies to eliminate sex-role stereotyping. What did we find? Despite decades of research documenting gender bias in education, and the creation of resources to respond to such bias, these twenty-three teacher education texts devote only about three percent of their space to gender. In some texts, gender is not even on the radar screen. (See Figure 1)

Coverage of Gender as Percentage of Text Content



Foundations of Education, Title IX and the Backlash

Twenty years ago, teacher education texts devoted less than one percent of content to the contributions and experiences of women, and discussions of Title IX and gender were rare (Sadker & Sadker, 1980). Today, in the seven introductory/foundations books we analyzed, gender issues comprise 7.4% of content, a marked improvement. Unfortunately, many current texts provide limited, fragmented, and even inaccurate information on gender in education.

Introductory texts chronicle key events and figures in the education. For example, *Becoming a Teacher* (2001) includes a chapter entitled “Ideas and Events that Shaped Education in the United States.” While the chapter includes noted female educators Emma Willard, Margarethe Schurz, Elizabeth Palmer Peabody, Susan Blow, Ella Flagg Young, Catherine Goggin, Margaret Haley, and Jane Addams, it manages to discuss their work in all of three sentences. Such cursory treatment is in stark contrast to the rest of this chapter, where it takes 26 pages to detail the contributions of male educators

These introductory texts often include interesting boxed-off inserts that reflect gender dimensions of schooling. For example, *Introduction to the Foundations of American Education* (1999) includes a Professional Dilemma insert “What If There Are Only a Few Girls in the Calculus Class?” (p. 88). Readers are encouraged to confront their assumptions regarding the math and science abilities of females and males. In *Teaching in America* (2000) one such special feature profiles “Emma Hart Willard’s Plan for the Education of Women” and her pioneering vision to establish the Troy School (p. 381). These inserts provide valuable information, but they do so at a cost, since they separate gender issues from the main text. Such isolation teaches the subtle lesson that these topics are outside the mainstream, and of less importance.

On June 23, 2002, Title IX, the law prohibiting sex discrimination in public and private schools receiving federal funds, celebrated its thirtieth anniversary. Before Title IX, high schools typically sex segregated classes: girls took home economics, boys took shop; while boys were encouraged to take math and science courses, girls were dissuaded or even prevented from enrolling in those courses. Only one percent of high school athletes were girls. If any girl became pregnant, she was expelled (NCWGE, 2002). It was not a pretty picture. Today, female enrollment in science and mathematics courses has increased dramatically, and the gender gap in college enrollments has reversed. On high school playing fields, more than 40% of athletes are girls (NCWGE, 2002). In our study, all seven foundations texts included coverage of Title IX, an important change from twenty years ago when only one in four foundations texts mentioned this law (Sadker & Sadker, 1980).

While today's teacher education texts describe Title IX, they fail to capture its breadth. The texts discuss athletics, but fail to mention that the law applies to recruitment, admissions, educational programs and activities, course offerings and access, counseling, financial aid, employment assistance, facilities and housing, health and insurance benefits, marital and parental status, scholarships, and sexual harassment. Sexual harassment, also prohibited by Title IX, continues to be widespread in schools with four out of five students, girls *and* boys, report being harassed (AAUW, 2001). Only two texts, *Teachers, Schools, and Society* (2000) and *Foundations of Education* (2000), capture the role of Title IX beyond athletics. Also missing from many of these books is a discussion of the costly gender gap that streams girls into low-paying occupations such as cosmetology while boys are trained in more lucrative vocations such as auto mechanics or technology (U.S. Department of Education, 2000).

Are attempts to level the educational playing field for girls harmful to boys? Is education a "zero sum game" where helping one group must come at the expense of another? This polarizing political ideology--known as the Backlash--blames the academic problems of boys on efforts to ensure equal educational opportunities for girls, and several recent textbooks now include this argument. In *Becoming a Teacher* (2001), the problems and progress of females are covered in three-quarters of a page. More than twice that amount is devoted to the Backlash (pp. 279-281). The textbook quotes authors and publications that blame "misguided feminists" for the reading difficulties that boys face, and call for dismantling Title IX. The text also discounts the gender gap in standardized tests, such as the SAT and GRE. Many of the sources included in this Backlash discussion have been roundly criticized for factual inaccuracies and lack of peer review, yet they now are presented in mainstream textbooks.

Make no mistake: boys' merit our attention. Boys lag behind females in reading and writing, account for two-thirds of all students served in special education, have a higher drop out rate, are less likely to attend college, and receive lower report card grades (U.S. Department of Education, 1999, 2002). Yet, these Backlash arguments create a false opposition between girls and boys, suggesting that helping one must come at the expense of the other. The need to confront gender stereotypes is as important to a boy who dreams of becoming an elementary teacher as it is for a girl who wants to be an engineer.

Methods Texts: Missing the Boat

In *Failing at Fairness* (1995), gender bias is described as “a syntax of sexism so elusive that most teachers and students were completely unaware of its influence” (p.2). Unfortunately, current methods textbooks are unlikely to prepare teachers for subtle, and not-so-subtle, gender bias challenges. The sixteen methods texts we analyzed devote just 1.3 percent of their content to gender issues. One math and two reading texts offer no gender coverage at all. Since the Bush administration’s *Leave No Child Behind Act* holds schools accountable for test scores particularly in reading and math, the omission of gender in these methods texts can be particularly costly.

Although gender has been a central reading issue for both girls and boys, the four reading texts analyzed devote only 0.3 percent of content space to gender, the lowest percentage of any category in our study. While significant research exists concerning gender bias in basal readers and children's literature, you would not learn it from these reading methods texts. In current basal readers, male characters outnumber females two to one (Witt, 1996), and Caldecott books tell more male-centered stories (61%) than female (39%) (Davis & McDaniel, 1999). Although female characters do appear in newer roles such as doctors, lawyers, and scientists, stereotypes persist. Females are often the passive observers, watching their active brothers at work and at play, and focused on domestic life (Davis & McDaniel, 1999; Witt, 1996). Boys remain in the traditional role as well, unlikely to nurture or stray from typical male careers (Evans & Davies, 2000). Not one reading methods text analyzed offers a strategy for confronting such stereotypes.

For decades, males have consistently lagged behind females in reading and writing performance, areas they consider “anti-boy” (Gates, 1961; U.S. Department of Education, 2002). Why do boys perform poorly in reading? What can teachers do to close this gender gap? These texts do not raise, much less answer, these questions.

The six social studies texts provide more space on the topic of gender than any other methods area (2.5 % of their content space). Yet, serious problems persist, for future teachers are given few solid strategies to "rediscover" women in history. For example, in *Elementary and Middle School Social*

Studies: An Interdisciplinary Instruction Approach (2001), ten group-project ideas are suggested for a unit on the Civil War. Only one includes females, and linguistic bias and stereotypes compromise even that suggestion: "Have a Civil War reenactor come to class in uniform and discuss the segment of the Civil War with which *he* (italics added) is most familiar. Women often followed the troops" (p. 337). In this excerpt, *he* sends the message that the period was about men, while confirming a second class role for women, an afterthought even in the choice of actors. This era in American history involved serious social and economic reforms, with important female voices on and beyond the battlefield. However, these voices are silenced, with the result that both boys and girls will likely lower their opinions about the contributions of women in America's story. Such one-gendered accounts help explain why high school students have no problem naming important men in American history, but find it difficult to name even five important women. (Sadker & Sadker, 1995, p.71).

Back in 1978, Mary Budd Rowe's *Teaching Science as Continuous Inquiry* announced that just being female was "A Special Handicap" in science. The text informed readers that girls "know less, do less, explore less, and are prone to be more superstitious than boys" (p. 68). Today, science and math methods texts avoid such overt and harmful stereotypes, yet give minimal coverage to gender issues (1.1 percent in science, and 0.6 percent in math). None of the science texts mention female scientists. Only one math text includes a female pioneer, whose contributions are given passing mention: "*Incidentally*, (italics added) the first woman mathematician we hear of in ancient time is Hypatia (ca. 410), who wrote commentaries on the work of Diophantus" (Posamentier & Stepelman, 1999, p.201). This one-line acknowledgement is prefaced by a detailed analysis of the work of seventeen male mathematicians.

In elementary school, both males and females agree that they like and understand math and science. By the 12th grade, however, females report less positive attitudes and consider them harder subjects than do boys (U.S. Department of Education, 2000). Males continue to receive higher math and science scores on the NAEP, SAT and AP tests (U.S. Department of Education, 2002). These math and science methods books provide little hope of leveling the playing field, or helping teachers increase female participation in physics, engineering, and computer science.

What Educators Can Do

While teacher education textbooks offer few specific resources to promote gender fairness, there are steps that teachers and teacher educators can take to create more equitable and effective learning. In curriculum, for example, teaching students to recognize common forms of bias can pay rich learning dividends. Following is a framework for assessing curricular bias. Since these forms of bias exist from picture books to college texts and apply not only to gender, but to many groups, mastering this framework offers a useful lesson to students of all ages.

A Baker's Half Dozen: Seven Forms of Bias in Curriculum Materials

1. Invisibility: *What You Don't See Makes a Lasting Impression*

Textbooks published prior to the 1960s largely omitted African Americans, Latinos, and Asian Americans, and many of today's textbooks continue to give minimal treatment to women, those with disabilities, gays and lesbians, and others.

2. Stereotyping: *Glib Shortcuts*

Perhaps the most familiar form of bias is the stereotype, which assigns a rigid set of characteristics to all members of a group, denying individual attributes and differences. Stereotypes cast males as active, assertive, and curious, while portraying females as dependable, conforming and obedient.

3. Imbalance and Selectivity: *A Tale Half Told*

Curriculum sometimes presents only one interpretation of an issue, situation, or group of people, simplifying and distorting complex issues by omitting different perspectives. A description of women being *given* the vote omits the work, sacrifices, and physical abuse suffered by women who *won* the vote.

4. Unreality: *Rose Colored Glasses*

Textbooks have gained a sort of notoriety for glossing over unpleasant facts and controversial events. When discussions of racial discrimination or sexual harassment are dismissed as remnants of a bygone day, students are being treated to *unreality*.

5. Fragmentation and Isolation: *An Interesting Sideshow*

Many of today's texts include special inserts or even chapters highlighting certain topics. "What If He

Has Two Mommies?" or "Ten Women Achievers in Science" are examples of such fragmentation. Such isolation presents these groups and topics as peripheral, less important than the main narrative.

6. Linguistic Bias: *Words Count*

Language can be a powerful conveyor of bias, in both blatant and subtle forms. The exclusive use of masculine terms and pronouns, ranging from our *forefathers*, *mankind*, and *businessman* to the generic *he*, denies the full participation and recognition of women.

7. Cosmetic Bias: *Shiny Covers*

Cosmetic bias offers an "illusion of equity" to teachers and students who may casually *flip* the pages of a textbook. Beyond the attractive covers, photos, or posters that prominently feature all members of diverse groups, bias persists. Examples include a science textbook that features a glossy pullout of female scientists, but precious little narrative of the scientific contributions of women.

These concepts can be helpful in countering bias in books, from elementary school through teacher education. Here are just a few suggestions:

1. Ask students to review school textbooks and identify each of these seven forms. Then ask them to suggest ways to remove the bias and create more equitable textbooks.
2. Extend this activity by asking students to identify these forms of bias in magazines, television programming, and on the Internet.
3. Such bias can impact many different groups. Find examples that negatively impact males, or people of color, or the poor. Suggest ways to overcome the bias.
4. Ask students to identify how these seven forms emerge in instructional interactions. For example, teachers *stereotype* when males are asked to help with physical classroom tasks, or *fragment* by studying women only during "Women's History Month."

These strategies offer only one approach to countering the gender bias still so prevalent in teacher education texts. Until publishers and authors discuss relevant gender issues and the strategies needed to eliminate gender bias, it will be up to the creativity and commitment of teachers to fill in the missing pages.

Teacher Education Textbooks Content Analyzed

Foundations of Education

Johnson, James A., Dupuis, Victor L., Musial, Diann, Hall, Gene E., & Gollnick, Donna M. (1999).

Introduction to the Foundations of American Education. (11th edition). Needham Heights, MA: Allyn and Bacon.

Morrison, George S. (2000). *Teaching in America*. (2nd edition). Needham Heights, MA: Allyn and Bacon.

McNergney, Robert F., & Herbert, Joanne M. (2001). *Foundations of Education: The Challenge of Professional Practice*. (3rd edition). Needham Heights, MA: Allyn and Bacon.

Ornstein, Allan C. & Levine, Daniel U. (2000). *Foundations of Education*. (7th edition). Boston, MA: Houghton Mifflin Company.

Parkay, Forrest W. & Hardcastle Stanford, Beverly. (2001). *Becoming a teacher*. (5th edition). Needham Heights, MA: Allyn and Bacon.

Ryan, Kevin & Cooper, James C. (2000). *Those Who Can, Teach*. (9th edition). Boston: Houghton Mifflin Company.

Sadker, Myra & Sadker, David. (2000). *Teachers, Schools, and Society*. (5th Edition). New York: McGraw-Hill.

Reading Methods Texts

Burns, Paul, Roe, Betty, & Ross, Elinor. (1999). *Teaching Reading in Today's Elementary Schools*. (7th edition). Boston: Houghton Mifflin Company.

Cunningham, Patricia M., Arthur Moore, Sharon, Cunningham, James W., & Moore, David. (2000). *Reading and Writing in Elementary Classrooms: Strategies and Observations*. Fourth Edition. New York: Addison Wesley Longman.

Heilman, Arthur W., Blair, Timothy R., & Rupley, William H. (1998). *Principles and Practices of Teaching Reading*. (9th edition). Upper Saddle, NJ: Prentice-Hall.

Reutzel, D. Ray & Cooter, Robert, Jr. (2000). *Teaching Children to Read: Putting the Pieces Together*. (3rd edition. Upper Saddle, NJ: Prentice Hall.

Social Studies

Farris, Pamela, J. (2001). *Elementary and Middle School Social Studies: An Interdisciplinary Instruction Approach*. (3rd edition). New York: McGraw-Hill.

Garcia, Jesus, & Michaelis, John. (2001). *Social Studies for Children: A Guide to Basic Instruction*. (12th Edition). Needham Heights, MA: Allyn and Bacon.

Martorella, Peter H. (2001). *Teaching Social Studies in Middle and Secondary Schools*. Third Edition. Upper Saddle, NJ: Prentice Hall.

McEachron, Gail A. (2001). *Self in the World: Elementary and Middle School Social Studies*. (1st edition). New York: McGraw-Hill.

Parker, Walter, C. (2001). *Social Studies in Elementary Education*. (11th edition). Upper Saddle, NJ: Merrill-Prentice Hall.

Savage, Tom V. & Armstrong, David G. (2000). *Effective Teaching in Elementary Social Studies*. (4th edition). Upper Saddle, NJ: Prentice Hall.

Science Methods Texts

Abruscato, Joseph. (2000). *Teaching Children Science: A Discovery Approach*. (5th edition). Boston: Allyn and Bacon.

Carin, Arthur A., & Bass, Joel E. (2001). *Teaching Science as Inquiry*. (9th edition). Upper Saddle River, New Jersey: Merrill-Prentice Hall.

Martin, Ralph, Sexton, Colleen, & Gerlovich, Jack. (2001). *Teaching Science for All Children*. (3rd edition). Needham Heights, MA: Allyn and Bacon.

Math Methods Texts

Posamentier, Alfred S., & Stepelman, Jay. (1999). *Teaching Secondary Mathematics: Techniques and Enrichment Units*. (5th edition). Upper Saddle River, NJ: Merrill- Prentice Hall.

Riedesel, C. Alan & Schwartz, James E. (1999). *Essentials of Elementary Mathematics*. (2nd edition).

Boston: Allyn and Bacon.

Van De Walle, John A. (2001). *Elementary and Middle School Mathematics: Teaching Developmentally*.

(4th edition). New York: Addison Wesley Longman

References

American Association of University Women. (2001). *Hostile Hallways: Bullying, Teasing, and Sexual Harassment in School*. Washington, DC: AAUW.

Davis, A., & McDaniel, T. (1999). You've come a long way, baby--or have you? Research evaluating gender portrayal in recent Caldecott-winning books. *Reading Teacher*, 52, 532-536.

Evans, L, & Davies, K. (2000). No sissy boys here: A content analysis of the representation of masculinity in elementary school reading textbooks. *Sex Roles*, 42, 255-270.

Gates, A. (1961). Sex differences in reading ability. *Elementary School Journal*, 61, 431-434.

National Coalition for Women and Girls in Education. (2002). *Title IX at 30: Report Card on Gender Equity*. Washington, DC: NCWGE.

Rowe, M. B. (1978). *Teaching science as continuous inquiry*. (2nd ed.) New York: McGraw-Hill.

Sadker, M., & Sadker, D. (1980). Sexism in teacher education texts. *Harvard Educational Review*, 50, 36-46.

Sadker, M., & Sadker, D. (1995). *Failing at fairness: How America's schools cheat girls*. New York: Touchstone Press.

United States Department of Education. National Center for Education Statistics. (2002). *Digest of education statistics, 2001*. Washington, DC: Office of Educational Research and Improvement.

United States Department of Education, National Center for Education Statistics (2000). *Trends in educational equity for girls and women*. Washington, DC: U.S. Government Printing Office.

U.S. Department of Education, Office for Civil Rights. (1999). *Elementary and secondary school compliance reports*. Washington, DC: U.S. Government Printing Office.

Witt, S. (1996). Traditional or androgynous: An analysis to determine gender role orientation of basal readers. *Child Study Journal*, 26, 303-318.