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For Women and Girls, the Common Core Is a Step Toward Greater Equity

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Women and girls continue to benefit from dramatically increased educational opportunities.[1] Due in large part to the success of Title IX of the Education Amendments of 1972, more than half of the associate's, bachelor's, master's, and doctorate degrees awarded by U.S. colleges today are earned by women.[2]

Yet despite this progress, large gender-based disparities and inequities in education and employment persist. In particular, girls of color and girls from low-income backgrounds underperform academically compared with their white, higher-income peers.[3] Girls also often lack access to high-quality, rigorous courses, particularly in science, technology, engineering, and math, or STEM. These courses can benefit girls by better preparing them for college and for careers that pay competitive wages.[4]

The Common Core State Standards represent an important step toward closing achievement gaps and opening the door to higher-paying STEM fields for millions of girls. By establishing uniform and more-rigorous academic standards, the Common Core helps ensure that all students—both girls and boys, regardless of their income levels and backgrounds—are taught to the same high expectations. For example, in New York—an early adopter of the Common Core—last year, black students' scores grew more than 3 percentage points in mathematics, and Hispanic students' math scores increased by more than 4 percentage points.[5]

Educational gaps for girls and students of color

The Common Core State Standards can have an invaluable impact on girls—particularly girls of color.

In kindergarten through 12th grade

There are achievement gaps in math and science between girls and boys; in particular, girls of color significantly lag behind their peers. On the eighth-grade National Assessment of Educational Progress exam, a nationally representative assessment of the knowledge and skills of American students, girls are 20 percent less likely to achieve proficiency in science than boys.[6] Strikingly, 39 percent of white girls are proficient in science, compared with just 9 percent of black girls and 13 percent of Hispanic girls. In math, the gap in proficiency between boys and girls is only 1 percent, but large race-based gaps persist. While 44 percent of white girls reach proficiency in math, just 15 percent of black girls and 20 percent of Hispanic girls reach proficiency.

Girls and students of color take the Advanced Placement, or AP, exam for computer science at lower rates and pass less frequently than boys and white students. About 30,000 students took the most recent AP exam for computer science, which teaches the fundamentals of computer programming.[8] Less than 25 percent of test-takers were girls;[9] only 8 percent were Hispanic, and approximately 3 percent were African American.[10] In Mississippi and Montana, no female, African American, or Hispanic students took the AP exam.[11] In addition, white men passed the exam at a higher rate than women, African Americans, and Hispanics.[12]

Girls are underrepresented among AP test-takers in nearly all STEM fields. In 2013, for each female student that took the Physics C exam, more than 2.5 male students took the same test. Boys took the Physics B exam at a rate of nearly 2-to-1 compared to girls and took the Calculus BC exam at a rate of nearly 1.5-to-1 in the same year.[13]

In higher education

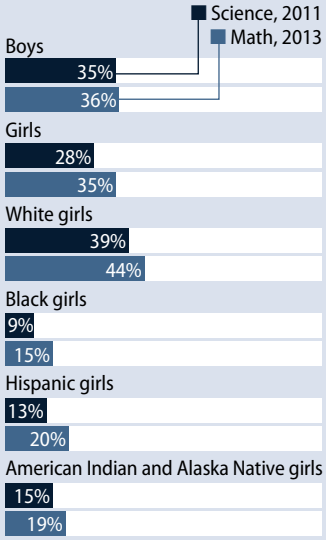
Female students and students of color take more remedial college courses. Thirty-nine percent of female students in their first undergraduate year take a remedial course, compared with 33 percent of boys.[14] Moreover, 31 percent of white first-year students take remedial courses, compared with 43 percent of Hispanic students and 45 percent of black students.

College majors are segregated by gender. Female students are still more likely than male students to major in the social science and health care fields, while men are more likely than women to major in science, math, engineering, and computer and information sciences.[15] Women make up 88 percent of graduates in health care fields and 81 percent of graduates in education. In engineering and engineering technology, however, women make up just 18 percent of graduates; in computer and information sciences, they make up just 19 percent.[16]

FIGURE 1

Eighth-grade National Assessment of Educational Progress exam

Percentage of students at or above proficient



Source: 2011 eighth-grade science assessments were generated using National Center for Education Statistics, "NAEP Data Explorer," available at http://nces.ed.gov/nationsreportcard/naepdata/ (last accessed September 2014). 2013 eighth-grade math assessments were generated using the same source.

The National Assessment of Educational Progress, or NAEP, is a nationally representative assessment of the knowledge and skills of American students. Students are tested periodically in math, reading, science, writing, the arts, civics, economics, geography, U.S. history, and—beginning this year—technology and engineering literacy.7 NAEP exams are administered uniformly across the country and provide a common metric of student performance across states and urban districts. NAEP- and Common Core-aligned assessments are similarly rigorous and evaluate the knowledge and skills students need to be ready for college and the workforce.

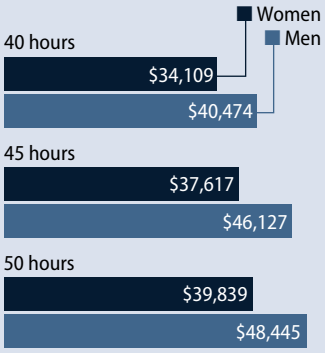
After college and beyond

The pay gap between women and men is established directly after college. In 2009, college-educated women made, on average, 82 percent of men's salaries one year after graduation.[17] While women choose fields that pay less—such as social sciences and teaching instead of engineering and computer science—even after controlling for factors such as college major, occupation, and average hours worked, the wage gap still exists.

Student-loan repayments make up a larger part of women's earnings. Because women earn less than men do after college, student-loan repayments make up a larger part of women's earnings. In 2009, among full-time workers repaying their loans one year after college graduation, 47 percent of women were paying more than 8 percent of their earnings toward student-loan debt; 39 percent of men were doing the same.[18]

FIGURE 2

Average annual earnings one year after college graduation, by hours worked and gender



Source: Christianne Corbett and Catherine Hill, "Graduating to a Pay Gap: The Earnings of Women and Men One Year after College Graduation" (Washington: American Association of University Women, 2012), available at http://www.aauw.org/files/2013/02/graduating-to-a-pay-gap-the-earnings-of-women-and-men-one-year-after-college-graduation.pdf?_ga=1.223972059.1527543555.1389624091.

Conclusion

More engaging and challenging standards build a strong academic foundation for all students. Girls—and in particular, girls of color—have a lot to gain from more-rigorous learning standards that better prepare them for college and career success. By raising the expectations for student learning, the Common Core State Standards allow girls the opportunity to seize STEM learning opportunities while in grade school; to pursue a diverse set of college majors; and to obtain jobs that command higher salaries. The Common Core State Standards can expand on the progress girls have made since Title IX and can have a long-lasting impact on women in society.

Endnotes

1 U.S. Department of Justice, Equal Access to Education: Forty Years of Title IX (2012), available at http://www.justice.gov/crt/about/edu/documents/titleixreport.pdf.

2 National Center for Education Statistics, "Digest of Education Statistics: Table 317," available at http://nces.ed.gov/programs/digest/d12/tables/dt12_317.asp (last accessed October 2014).

3 Analysis is based on data generated using National Center for Education Statistics, "NEAP Data Explorer," available at http://nces.ed.gov/nationsreportcard/naepdata/ (last accessed October 2014).

4 President's Council of Advisors on Science and Technology, Prepare and Inspire: K-12 Education in Science, Technology, Engineering, and Math (STEM) for America's Future (Executive Office of the President, 2010), available at http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast-stemed-report.pdf.

5 New York State Education Department, "State Education Department Releases Grades 3-8 Assessment Results," Press release, August 14, 2014, available at http://www.nysed.gov/Press/Assessments.

6 Eighth-grade science assessments were generated using National Center for Education Statistics, "NAEP Data Explorer," available at http://nces.ed.gov/nationsreportcard/naepdata/ (last accessed September 2014).

7 National Center for Education Statistics, "National Assessment of Educational Progress: NAEP Overview," available at http://nces.ed.gov/nationsreportcard/about/ (last accessed September 2014).

8 College Board, "AP Data — Archived Data 2013, National Report," available at http://research.collegeboard.org/programs/ap/data/archived/2013 (last accessed October 2014).

9 Ibid.

10 Georgia Tech, "Detailed data on pass rates, race, and gender for 2013," available at http://home.cc.gatech.edu/ice-gt/556 (last accessed September 2014).

11 Ibid.

12 College Board, "AP Data — Archived Data 2013, National Report."

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14 Terris Ross and others, "Higher Education: Gaps in Access and Persistence Study" (Washington: National Center for Education Statistics, 2012), available at http://nces.ed.gov/pubs2012/2012046.pdf.

15 Christianne Corbett and Catherine Hill, "Graduating to a Pay Gap: The Earnings of Women and Men One Year after College Graduation" (Washington: American Association of University Women, 2012), available at http://www.aauw.org/files/2013/02/graduating-to-a-pay-gap-the-earnings-of-women-and-men-one-year-after-college-graduation.pdf?_ga=1.223972059.1527543555.1389624091.

16 Ibid.

17 Ibid.

18 Ibid.