

Girls make higher grades than boys in all school subjects, analysis finds

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Despite the stereotype that boys do better in math and science, girls have made higher grades than boys throughout their school years for nearly a century, according to a new analysis published by the American Psychological Association.

"Although [gender differences](#) follow essentially stereotypical patterns on achievement tests in which [boys](#) typically score higher on math and science, females have the advantage on [school grades](#) regardless of the material," said lead study author Daniel Voyer, PhD, of the University of New Brunswick, Fredericton, Canada. "School marks reflect learning in the larger social context of the classroom and require effort and persistence over long periods of time, whereas standardized tests assess basic or specialized academic abilities and aptitudes at one point in time without social influences."

Based on research from 1914 through 2011 that spanned more than 30 countries, the study found the differences in grades between girls and boys were largest for language courses and smallest for math and science. The female advantage in school performance in math and science did not become apparent until junior or [middle school](#), according to

the study, published in the APA journal *Psychological Bulletin*. The degree of gender difference in grades increased from elementary to middle school, but decreased between high school and college.

The researchers examined 369 samples from 308 studies, reflecting grades of 538,710 boys and 595,332 girls. Seventy percent of the samples consisted of students from the United States. Other countries or regions represented by more than one sample included Norway, Canada, Turkey, Germany, Taiwan, Malaysia, Israel, New Zealand, Australia, Sweden, Slovakia, United Kingdom Africa and Finland. Countries represented by one sample included Belgium, Czech Republic, Estonia, Mexico, Hong Kong, India, Iran, Jordan, the Netherlands, Portugal, Saudi Arabia, Serbia and Slovenia.

All studies included an evaluation of gender differences in teacher-assigned grades or official grade point averages in elementary, junior/middle or high school, or undergraduate and graduate university. Studies that relied on self-report and those about special populations, such as high-risk or mentored students, were excluded. The studies also looked at variables that might affect the students' grades, such as the country where students attended school, course material, students' ages at the time the grades were obtained, the study date and racial composition of the samples.

The study reveals that recent claims of a "boy crisis," with boys lagging behind girls in school achievement, are not accurate because girls' grades have been consistently higher than boys' across several decades with no significant changes in recent years, the authors wrote.

"The fact that females generally perform better than their male counterparts throughout what is essentially mandatory schooling in most countries

seems to be a well-kept secret, considering how little attention it has received as a global phenomenon," said co-author Susan Voyer, MASC, also of the University of New Brunswick.

As for why girls perform better in school than boys, the authors speculated that social and cultural factors could be among several possible explanations. Parents may assume boys are better at math and science so they might encourage girls to put more effort into their studies, which could lead to the slight advantage girls have in all courses, they wrote. Gender differences in learning styles is another possibility. Previous research has shown [girls](#) tend to study in order to understand the materials, whereas boys emphasize performance, which indicates a focus on the final grades. "Mastery of the subject matter generally produces better marks than performance emphasis, so this could account in part for males' lower marks than females," the authors wrote.

More information: "Gender Differences in Scholastic Achievement: A Meta-Analysis," Daniel Voyer, PhD, and Susan D. Voyer, MASC, University of New Brunswick, *Psychological Bulletin*, online April 28, 2014.

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