

Why separate girls and boys at school?

Recent research challenges the prevailing view of gender equality: “equal” means “the same”. One consequence of this belief has been the preference for coeducation over single gender schools. Yet gender stereotypes persist despite gender neutral education. In 1987, only 34% of students in the United States who took the AP Exam in Computer Science were girls. Over the next 25 years, girls did not make advances on that parameter; on the contrary, they actually lost ground. By 2012, only 19% of students in the United States who took the AP Exam in Computer Science were girls. There is mounting evidence that individualized approaches to teaching girls and boys are needed.

According to neuroscientist Larry Cahill, the implicit (but false) assumption that “equal” means “the same” has been deeply harmful, especially to the health of women. For instance, specialists in California discovered that girl-specific warm-ups greatly reduce the number of knee injuries players suffer compared to standard warm-ups.¹ In the introduction to a collection of new research on sex differences, Cahill wrote that “the notion that sex matters fundamentally, powerfully and pervasively for all of neuroscience--not just for reproduction, is an idea whose time indeed has come.”² When schools ignore gender differences, they disadvantage both girls’ and boys’ ability to learn and grow.

How do we create a society that has the courage and wisdom to cherish and celebrate the innate differences between the sexes, while at the same time enabling equal opportunities for every child? This question is key to the work of psychologist and family physician Dr. Leonard Sax who points out that the big differences between girls and boys are not in ability, but in motivation, i.e., not in what they *can* do, but in what they *want* to do.³ Research has shown that girls and boys benefit with different educational approaches and environments since sex differences in children are larger and more important than in adults. Following are a few examples of gender differences based on differences in brain biology noted Dr. Sax.⁴

¹ Detailed information for coaches and P.E. instructors regarding the girl-specific exercises to prevent knee injury, including photographs illustrating the right and wrong way to do each exercise, are online free of charge at this AMA web site: <http://archinte.jamanetwork.com/data/Journals/INTEMED/5746/IWE90034.pdf>.

² Cahill edited a special edition of the *Journal of Neuroscience Research* (2017) that contains 73 scholarly articles on gender differences and is available on line <https://onlinelibrary.wiley.com/toc/10974547/2017/95/1-2>.

³ Sax has developed research based workshops to train teachers on strategies to maximize the success of girls in science and math and boys in literature and art. www.leonardsax.com.

⁴ Leonard Sax, MD, PhD, *Why Gender Matters: What Parents and Teachers Need to Know About the Emerging Science of Sex Differences*, Second Edition, Harmony Books, 2017. As part of his research, Sax visited more than 400 schools over 16 years to observe girl/boy differences in the classroom, and the book includes a wealth of sources.

Gender separation is not a panacea, however. Co-ed schools can also incorporate strategies based on these findings, although successful implementation may come more naturally to classes in which women teach girls and men teach boys.

1. **Hearing:** On average, boys will pay attention best when the teacher speaks about eight decibels louder than what is adequate for girls. Speaking louder comes more naturally to male teachers.
2. **Seeing:** When asked to draw a picture with a box of markers, girls are more likely to draw flowers, trees and pets with lots of color and details. Most boys draw dynamic action scenes with rockets blasting, monsters attacking, or cars crashing using the black marker. When female teachers criticize boys’ efforts as violent or lacking color, they may decide art is for girls. When allowed to be boys, their talents flourish.
3. **Risk:** Boys enjoy risky activities more than girls. However, when girls are required to take a rock climbing or ropes course, they often find new confidence speaking up in class.
4. **Group work:** Girls are more likely to seek the teacher’s help if needed. While boys can raise their status among their peers by being disruptive, a simple strategy allows boys to signal unobtrusively for assistance.
5. **Focus:** Girls’ brains develop faster than boys’ brains. Many five-year-old boys don’t have the patience to sit still for an hour-long lesson or the fine motor skills to write as neatly as girls. Yet they may master complex concepts working on a project outdoors. Of course, as boys and girls get older, sharing a classroom becomes another source of distraction from the content being taught.
6. **Theory vs. real world:** Boys are more interested in number theory “for its own sake” at a much younger age than are girls. Girls are more likely to be intrigued by practical applications. For example, if you count the petals of sunflowers, Shasta daisies, or Delphiniums, the result almost always is a number in a sequence known in math as the Fibonacci series.
7. **Self-esteem:** Paradoxically, girls on average outperform boys in school (based on report card grades) in most subjects and in all age groups yet tend to be excessively critical in judging their performance and abilities. Conversely, boys often have unrealistically high estimates of their accomplishments. It follows that girls and boys often benefit from different teaching styles: girls may need encouragement; some boys, a reality check. Girls only schools also correlate with greater self-confidence in math and science. Although any school can strive to incorporate strategies based on the new gender research, implementation is more intuitive for female teachers of girls and male teachers of boys.
8. **Role models:** Boys need to know that there are a variety of ways to be a boy, as well as what it means to be a courteous and respectful man. Similarly, girls need to know that there are many ways to be a girl, as well as how to become a confident and authentic woman. Teachers of one’s own gender can model what it means to be a gentleman and a lady. Coeducation alone does not teach young people how to socialize successfully. As the headmaster of an all-boys school noted, “a boy does not naturally grow up to be a gentleman. You need a

community of men showing boys how to behave. And that’s what we provide here.”⁵

Paradoxically, gender neutral education favors the learning style of one sex or the other and continues to drive men and women into the usual stereotyped fields. Mature adults do draw on qualities associated with the other sex. But the easiest way to get to that point is to raise children to be confident about being a man or a woman. Research suggests that if we teach boys and girls separately and in sync with their biologically based learning styles, they will perform equally well in all academics, including math. And this is just further proof that, indeed, it is in the best interest of the children and their overall educational success, to teach them separately.

⁵ Ibid. p 309.