Sex segregation in schools detrimental to equality

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Students who attend sex-segregated schools are not necessarily better educated than students who attend coeducational schools, but they are more likely to accept gender stereotypes, according to a team of psychologists.

"This country starts from the premise that educational experiences should be open to all and not segregated in any way," said Lynn S. Liben, Distinguished Professor of Psychology, Human Development and Family Studies, and Education, Penn State. "To justify some kind of segregation there must be scientific evidence that it produces better outcomes."

In the current issue of *Science*, Liben and her colleagues report that there is little concrete evidence to support claims that single-sex schools are a better learning environment.

"Our examination of the existing studies leads us to conclude that there is not scientific evidence for positive effects of single-sex schooling," said Liben. "That's not to say that academic outcomes are definitively worse, but neither are they definitively better. Advantages have not been demonstrated."

Some supporters of single-sex schools claim that brain differences between boys and girls require different teaching styles. But neuroscientists have found few differences between male and female brains, and none has been linked to different learning styles.

When students are segregated by sex, they are not given opportunities to work together to develop the skills needed to interact with each other. When sex segregation occurs in public schools, the students are left to infer reasons for the separation. Are girls not as good as boys in some subjects? Are boys unable to learn in cooperative settings?

In 2010, Liben and her graduate student studied preschool classes to look at effects of gender divisions among the students. She found that after two weeks of teachers using gendered language and divisions -- lining children up by gender and asking boys and girls to post work on separate bulletin boards -- the students showed an increase in gender-stereotyped attitudes toward each other and their choice of toys, and they played less with children of the other sex.

"The choice to fight sexism by changing coeducational practices or segregating by gender has parallels to the fight against racism," the researchers write in the paper. "The preponderance of social science data indicated that racially segregated schools promote racial prejudice and inequality."

Currently most sex-segregated schools are private schools, and are often cited as evidence of the advantages of single-sex schools. However, private schools require admissions testing before students enter. Entrance exams and private school status make using existing single-sex schools as examples problematic when comparing them to public schools.

In 1972 the enactment of Title IX outlawed educational discrimination on the basis of sex. Students were no longer allowed to be excluded from a class because they happened to be male or female -- home economics and wood shop classes were now open to everyone. But in 2006 the U.S. Department of Education reinterpreted Title IX -- public schools are now legally allowed to segregate classes or even entire schools on the

basis of sex, but only if they show that the division is related to important governmental or educational objectives.

Today there is a significant advocacy effort from those who encourage single-sex schools, said Liben. But there is no comparable effort for coeducational schools -- probably because it was the status quo after Title IX.

Liben and her colleagues formed the non-profit organization, the American Council for CoEducational Schooling, in part to help disseminate scientific data relevant to single-sex and coeducational schooling.

"The bottom line is that there is not good scientific evidence for the academic advantages of single-sex schooling," said Liben. "But there is strong evidence for negative consequences of segregating by sex -- the collateral damage of segregating by sex."

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