

FEMALE CLASSMATES KEY TO WOMEN SUCCEEDING IN SCIENCE SUBJECTS: Evidence from schools in Norway

Women do better in traditionally male-dominated subjects when they are surrounded by female classmates. That is the central finding of research by **Pål Schøne**, **Kristine von Simson** and **Marte Strøm**, to be presented at the annual congress of the European Economic Association in Mannheim in August 2015.

The study analyses high school register data from Norway. It finds that girls benefit from having other girls in their class, as they become better at subjects like maths and science. This effect wears off over time, but still makes them more likely to continue with those subjects further into their educational careers.

Much of the remaining wage gap between genders is because of segregation in the careers that men and women go into, even though women now take more education than men in most OECD countries. Because career choices are often shaped by educational choices, which in turn are shaped early in life, encouraging women to study STEM (science, technology, engineering and maths) subjects makes it easier for them to get high-skilled, high-paying jobs later in life. The authors comment:

‘Educational choices are more affected by the gender split in the classroom than performance. The effects on choices suggest that the reason why girls make more ‘masculine’ choices after being in a class with relatively more girls is not because they perform better in these courses. It points to changes in the importance of ‘femininity’ in forming a self-image or changes in the willingness to compete in male subjects.’

More...

Girls are choosing more male-dominated fields such as mathematics and science, and they perform better in these fields when they are surrounded by female classmates. These are among the findings of research by Pål Schøne, Kristine von Simson and Marte Strøm.

The study, based on high quality register data from Norway, reveals that the gender composition in the classroom has an influence on educational choices and performance in adolescence. Girls benefit from having female classmates: a higher share of female peers increases girls’ performance in mathematics and science.

The effect is immediate, but appears to wear off over time. For boys no such effect is found. The effect of a higher female share is larger for study choices. The more female peers in school, the higher is the likelihood of choosing typical ‘male’ subjects. This holds true for both girls and boys, but the effect is larger for girls.

Women are now taking more education than men in most OECD countries. This has contributed to a convergence in men’s and women’s wages over the last decades. Still, a considerable wage gap persists. Part of this wage gap is closely connected to occupational gender segregation in the labour market, which in turn is strongly linked to educational choices.

The foundation for many of these educational choices is laid early in life. In Norway, as in many other OECD countries, boys to a larger degree choose so-called STEM courses like mathematics and science in upper secondary school, qualifying them for later studies that lead to higher paying occupations. The study investigates one of the reasons behind educational choices in adolescence: the role of peers, and more specifically the gender composition of your fellow peers.

The study makes use of the fact that the gender composition across cohorts within Norwegian lower secondary schools is given by institutional rules and regulations: it is compulsory to finish lower secondary school, all pupils follow the same track and school districts follow geographical areas.

The gender composition of a class is therefore the product of random variation in how many boys and girls are born in the school district that year. This makes it possible to identify causal effects of the female share on school results and educational choices.

One of the key results from this study is that educational choices are more affected by the gender composition in the classroom than performance. More sizeable effects on choices than on performance suggest that the reason why girls make more 'masculine' choices after being in a class with relatively more girls is not primarily because they perform better in these courses. It points to other explanations like changes in the relative importance of 'femininity' in forming a self-image or changes in the willingness to compete in male subjects.

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Girls helping girls: the impact of female peers for grades and educational choices
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