

PISA IN FOCUS 14

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What kinds of careers do boys and girls expect for themselves?

- On average, girls are 11 percentage points more likely than boys to expect to work as legislators, senior officials, managers and professionals.
- Only 5% of girls in OECD countries, on average, expect a career in engineering and computing, while 18% of boys expect a career in these fields.
- In every OECD country, more girls than boys expect a career in health and medicine.

When you think of someone who is an engineer, do you imagine a man or a woman wearing a hardhat? How about when you imagine a teacher standing in front of a class of schoolchildren? If you answer "a man" to the first question, and "a woman" to the second, there's probably a reason. And the reason is simply that more men than women pursue careers in fields such as science, technology, engineering and mathematics, while women are over-represented in the humanities and medical sciences. This type of gender segregation in the labour market is still prevalent in many countries. But will it continue? Girls now do as well as, and often better than, boys in most core school subjects; and proficiency in a subject influences 15-year-olds' thinking about the kind of career they want to pursue. Or does it?

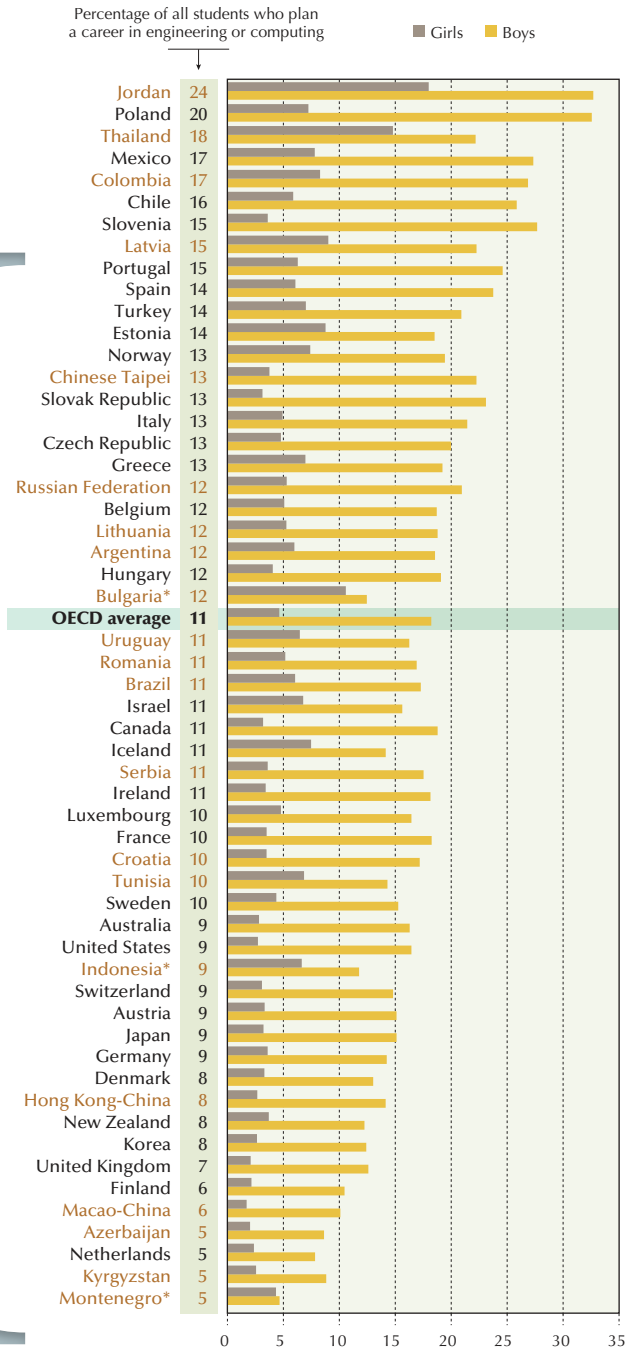
What students want to be when they grow up…

In 2006, PISA asked 15-year-old students what they expect to be doing in early adulthood, around the age of 30. In almost all OECD countries, girls are more ambitious than boys: on average, girls were 11 percentage points more likely than boys to expect to work in high-status careers such as legislators, senior officials, managers and professionals. France, Germany and Japan were the only OECD countries where similar proportions of boys and girls aspired to these careers; while in Switzerland, boys generally held slightly more ambitious expectations than girls. The gender gap in career expectations was particularly wide in Greece and Poland: in these two countries, the proportion of girls expecting to work as legislators, senior officials, managers and professionals was 20 percentage points higher than the proportion of boys expecting to work in those occupations.



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Proportion of boys and girls planning a career in engineering or computing



Note: Countries are ranked in descending order of the percentage of all students who plan a career in engineering or computing (including architecture).
Countries in which gender differences are not statistically significant are shown with an asterix.
Source: OECD, *PISA 2006 Database*.

Not only do boys and girls have different aspirations, in general, they also expect to have careers in very different fields. In 25 OECD countries "a lawyer" is one of the ten careers girls most often cited when asked what they expect to be working as when they're 30; in only ten countries was it one of the ten careers boys most often cited. Similarly, in 20 OECD countries "authors, journalists and other writers" was among the ten careers girls most often expected to pursue, while this career was among the top ten that boys cited in only four OECD countries.

...may have little to do with their proficiency in a given subject.

In recent years, girls in many countries have caught up with or even surpassed boys in science proficiency. Better performance in science or mathematics among girls, however, does not necessarily mean that girls want to pursue all types of science-related careers. In fact, careers in "engineering and computing" still attract relatively few girls. On average among OECD countries, fewer than 5% of girls, but 18% of boys, expected to be working in engineering and computing as young adults. This is remarkable, especially because the definition of computing and engineering includes fields like architecture, which is not particularly associated with either gender.

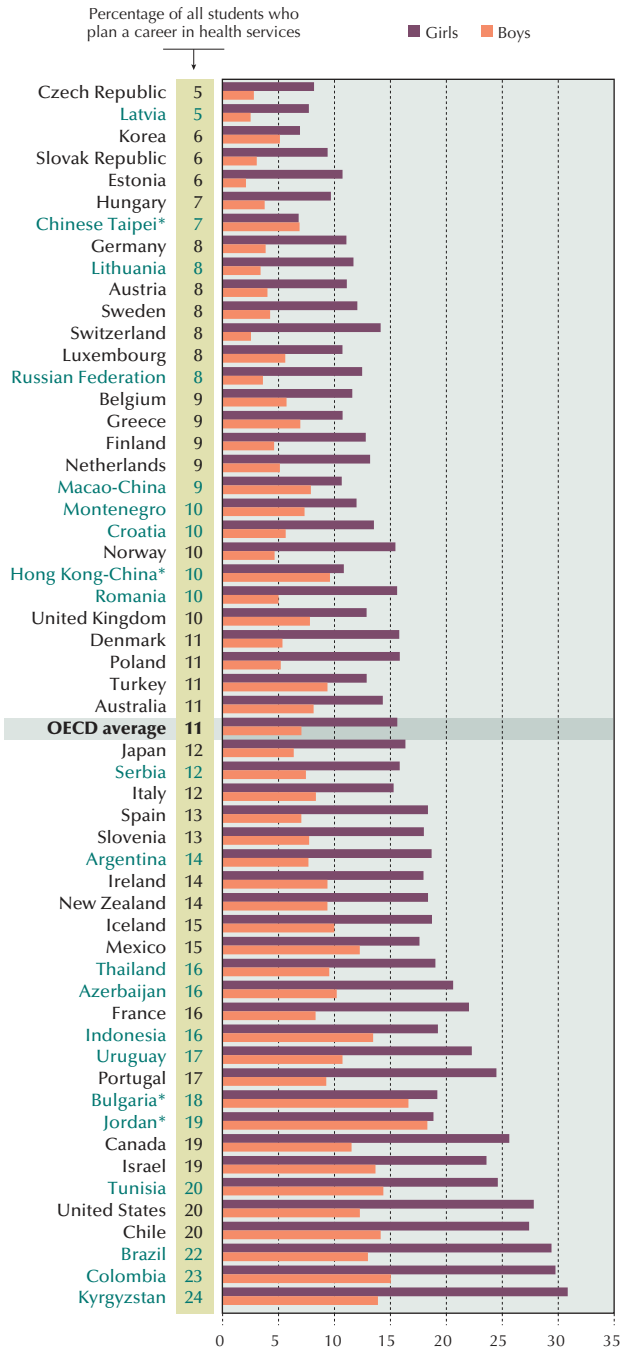
The number of students expecting a career in engineering and computing varied widely among countries, ranging from relatively high proportions in Chile, Mexico, Poland and Slovenia to very low numbers in Finland and the Netherlands. In no OECD country did the number of girls who expected a career in computing and engineering exceed the number of boys contemplating such a career. Moreover, the ratio of boys to girls who wanted to pursue a career in engineering or computing is large in most OECD countries: on average, there were almost four times as many boys as girls who expected to be employed in these fields. Even among the highest-achieving students, career expectations differed between boys and girls; in fact, their expectations mirrored those of their lower-achieving peers. For example, few top-performing girls expected to enter engineering and computing.



Although few girls expected to enter some science careers, such as engineering and computing, in every OECD country more girls than boys reported that they wanted to pursue a career in health services, a science profession with a caring component. This pattern holds even after nurses and midwives are excluded from the list of health-related careers. On average across OECD countries, 16% of girls expected a career in health services, excluding nursing and midwifery, compared to only 7% of boys. This suggests that although girls who are high-achievers in science may not expect to become engineers or computer scientists, they direct their higher ambitions towards achieving the top places in other science-related professions, such as those in the health field.

Gender differences in career aspirations and expectations may be one of the factors that lead to gender-segregated labour markets, which, in turn, can have important adverse consequences for individuals and societies. For example, gender-segregated labour markets are often associated with large differences in wages and working conditions. And just as an absence of women in the labour market is associated with lower economic growth and development, a lack of equal opportunities for men and women to realise their potential in any field of study and work is likely to result in wasted talent and thwarted human potential.

Proportion of boys and girls planning a career in health services



Note: Countries are ranked in ascending order of the percentage of all students who plan a career in health services (excluding nurses and midwives).

Countries in which gender differences are not statistically significant are shown with an asterix.

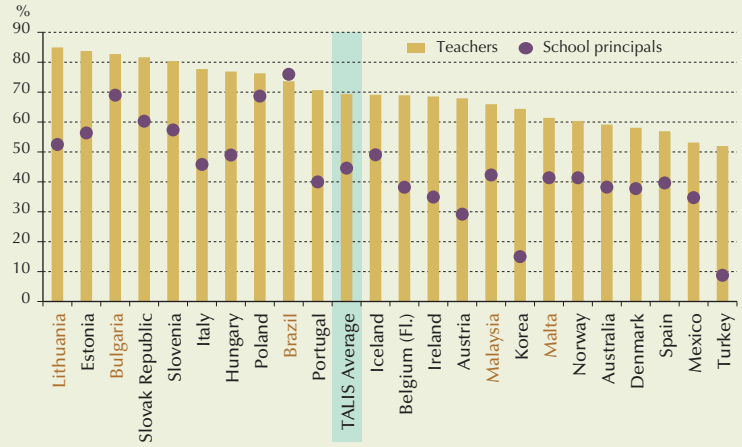
Source: OECD, *PISA 2006 Database*.



One of the most gender-segregated fields is education. Data from the first cycle of the OECD Teaching and Learning International Survey (TALIS 2008) found that, on average among the 23 participating TALIS countries, almost 70% of lower secondary school teachers were women; and in every one of those countries, at least 50% were women. Women were also more likely to teach language arts (79%) and human sciences (57%) rather than teach mathematics and science (49%).

The post of school principal, however, is largely held by men. On average across TALIS countries, less than half of the school principals were women (45%). This suggests that more men than women generally follow this path in their education career, although in Brazil, Poland and, to some extent, Bulgaria, similar proportions of women hold teaching and school-leadership posts.

Distribution of women teachers and school principals in lower secondary education



Note: Countries are ranked in descending order of the percentage of women teachers.
Source: OECD, Teaching and Learning International Survey 2008.

The bottom line: Thanks to girls' great strides in education in recent years, today's 15-year-old girls are, on average, more ambitious than boys. However, boys' and girls' decision to pursue certain careers, and make the most of their potential, is still driven by factors that are not necessarily related to their actual skills.

For more information

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See "Gendered Career Expectations of Students"

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Coming next month
How 'green' are today's 15-year-olds?