



# Academically, girls are streets ahead. So why do boys get paid more in their jobs?

A study of female achievement is fuel for the gender debate

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● Do girls do better than boys at school and at university? That's a question that occupies the minds of many parents and teachers.

The short answer is yes, they do.

Many people think girls are disadvantaged in education in South Africa, and while that might be somewhat true among the very poorest girls, on average girls actually do better than boys.

They learn to read much more quickly than boys do. In South Africa girls also perform better in mathematics.

Looking at large nationally representative surveys from 2011 and 2015 we can see that by Grade 4 girls are a full year of learning ahead of their male peers in reading, despite being in the same grade.

By Grade 5 girls are about 40% of a year of learning ahead of boys in mathematics.

But do these advantages continue into high school and university? That's a question that we tried to address in a paper we released last week.

## Female advantage at each hurdle

To do this we used data from the Higher Education Management Information System to follow the entire matric class of 2008 until 2013, into and through all public universities in the country. There were 112 402 students in our dataset.

Because the Department of Basic Education and the Department of Higher Education and Training collect detailed information on the results of all students we were able to see whether there was a female advantage in matric and at university.

The results are truly remarkable. We found strong evidence of a large female advantage that continues to grow at each hurdle of the higher education process.

To be specific, relative to their male counterparts we found that there were 27% more females who qualified for university, 34% more



Girls learn to read much more quickly than boys do. Picture: SINO MAJANGAZA

who enrolled in university, 56% more who completed an undergraduate qualification and 66% more who attained a bachelor degree.

This happened despite there being roughly equal numbers of boys and girls at the start of school. Because of the richness of the data we can see whether this advantage remains after controlling for various background factors like race, age, socioeconomic status et cetera.

## Achievement across groups

We found that this large female advantage exists for all subgroups of race, age, socioeconomic status, province of origin and institution attended.

But perhaps females choose "easier" fields of study than males – does this explain the advantage?

The short answer is no.

We examined 19 fields of study and found that

females are significantly more likely to get a degree in 12 of them (often by substantial margins), and are significantly less likely to get a degree in five of the 19 fields.

However, this is almost entirely because they do not enter these traditionally "male" programmes rather than due to lower completion rates once they are in.

Only in engineering and computer science do girls do worse than boys once they are accepted to the programme.

## Boys lag in many fields

But while there are these two fields where girls do worse, there are nine in which boys do worse, including health sciences, business studies, natural sciences and psychology.

One of the most interesting findings of the paper was that females are always and everywhere 20%

less likely to drop out than their male counterparts (including in traditionally "male" fields like engineering and computer science), even after controlling for field of study, race, age, socioeconomic status, location or institution.

It is important to recognise that South Africa is not an outlier in this regard. The emergence of a female advantage in education (both at school and at university) is a global trend among middle- and high-income countries.

## Global phenomenon

In the 33 countries that make up the Organisation for Economic Co-operation and Development – mainly a club of rich countries – 58% of bachelor degrees are awarded to women. In South Africa it is 61%.

The question we usually get asked is, why is this the case?

We don't really know yet, but the best international evidence points to the fact that girls have more and better noncognitive skills.

These are things like self-control, self-motivation, dependability, sociability, perceptions of self-worth, locus of control, time preference and delayed gratification.

Other scholars argue that schooling is set up in such a way that it favours girls over boys, and favours the traits that society expects from girls, or those that girls just naturally have more of.

Another conundrum is how it is possible for girls to do better at school and better at university but then worse in the labour market.

Women in South Africa get paid about 15 to 17% less than men do for the exact same work. Again, this is true around the world.

The answers here are also complex and link to some easily observable features of society – like who is expected to care for children – and some less observable features like patriarchal norms and gender discrimination.

What our research shows is that girls in South Africa have a clear advantage at school and at university.

Any conversation about gender equality needs to take into account the disadvantage faced by boys at school and university, but also why this reverses when one moves into the labour market.

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