Women and the maths problem

Women's underachievement in maths may not be due to their poor self-image in the subject, a new report suggests. Researcher Dr. Gijsbert Stoet at the University of Leeds says that the so-called "stereotype threat" theory — which holds that women perform worse than men because they expect to do badly — "does not stand up to scrutiny".

Earlier research had serious flaws, he says, with improper use of statistical techniques and methodology. Clearly, those who carried out this research need to review their own competence in maths. Stoet believes the gender gap may simply be that men and women have different interests from an early age, and says the answer to getting more women into maths and engineering is probably a matter of motivation.

According to last year's results, even though girls perform as well as boys in their maths GCSEs, 60% of A-levels in the subject are taken by boys, who achieve 60% of grade As.

I am an engineer, who has worked in the chemical industry for most of my working career. When I graduated in the 80, I assumed we were at the start of a new era for women in science: I studied alongside intelligent and motivated women, opportunities seemed aplenty, in-roads had been made.

But 20 years down the line, only 8.7% of British engineers are women, the lowest proportion in Europe, compared with 25% in Sweden. So what has happened?

One of the main problems is that careers in science, technology, engineering and maths (known as Stem) are not sufficiently promoted in schools, with fewer children taking up these subjects at GCSE and A-level. Year in, year out, we are told that Britain has a skills shortage. The general lack of interest among schoolchildren in maths and science subjects, together with the underlying social conditioning that still remains — that science subjects "aren't really for girls" — has led to a double-whammy effect, reducing female entrants even further.

Over the past few years, I have been involved in Stemnet, an organization dedicated to promoting these careers by getting people who work in jobs from biologists to builders to talk to schoolchildren about what they do. It's an attempt to debunk the myth that maths and sciences are too difficult or too boring. I was amazed to see hundreds of schoolboys and girls at a recent event at the Science Museum, presenting a range of experiments and projects they had prepared. And the ones prepares by girls were equally challenging and sophisticated.

I agree with the new study that rather than focusing on the problems of stereotyping, we should devote more time to encouraging girls into science and technology: they clearly respond.

But encouraging schoolgirls into university and careers is not all. As is typical in most sectors, I see a number of female engineers at the entry and midlevels of companies, but precious few at the top. This is a huge waste of talent. It also raises the issue of certain professional inequality and a biased attitude towards women. The report has done well to challenge the myths behind women's underachievement in schools, but more work still needs to be done to address the problem of women's lack of achievement in the workplace. At least in the spheres closely related to science and engineering.

Which of the following statements is NOT true, according to paragraphs 5 and 6?

1) Britain has fewer women engineers than other European countries.
2) The author has worked in engineering for over 20 years.
3) The prospects for women in science are best in Sweden.
4) The author's expectations about women in science have not come true.