

Correspondence

DEAR EDITOR,

Primary Education in the UK

Now that the issue (can of worms) of UK mathematical attainment has been bravely opened by Ruth Merttens and the editorial team in the pages of the *Mathematical Gazette* [1], I wish to raise some questions with the aim of eliciting further discussion from the wider academic research community.

1. Should primary teachers have a higher level maths qualification than a GCSE pass and a few days training, e.g. Maths (and English for that matter) A level pass? Are there any academic studies into this area?
2. Ruth made reference to the TIMSS survey rankings. It seems to me that the distribution of achievement is also worth commenting on. Why are very few distributions (perhaps none) skewed in the direction of higher mathematical attainment? Why has England got a much broader distribution than the Netherlands? Why do more gifted students apparently have to suffer when the lower end ability range is brought in closer to the mean?
3. I am a member of the largest engineering institution in the UK, the Institution of Engineering and Technology (IET). The question is how do we, as a society, go about attracting more young people, especially girls, into the engineering profession. To my mind primary schools need to take considerable responsibility, in this regard, to help prevent outdated gender stereotypes from subconsciously limiting the future career options of young people.
4. Should students reach a minimum set level in regards to reading, writing and maths, before being allowed to start at a mainstream secondary school? If Ruth is right about the general level of mathematical achievement at primary school, not many children will need to repeat a year or be directed to learning routes based on vocational skills, especially if the right targeted catch-up support is supplied when needed at primary level.

Reference

1. Ruth Merttens, Textbooks from Shanghai and Singapore, A National Debate, *Math. Gaz.* **99** (Nov 2015) pp. 391-401.

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DEAR EDITOR,

Mathematical textbooks

In the reprint of Ruth Merttens' Plenary Lecture [1], much is made of the impossibility of transferring 'lock, stock and barrel' the resources used in other countries to solve the perceived problems with our mathematics education.

What was not discussed is the tradition of involvement by academics in producing school texts: the Russian and Chinese education systems are two exemplars.

Unfortunately, here the 'text book Mafia', the unholy alliance of examination boards and publishers, continues to produce texts without much reference to mathematicians with proven academic credentials. This omission perpetuates a 'dumbing down' of content that underestimates the abilities and enthusiasms of our students.

Text books are important; who writes them is crucial.

Reference

1. Ruth Merttens, Textbooks from Shanghai and Singapore, A National Debate, *Math. Gaz.* **99** (Nov 2015) pp. 391-401.

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