

POST-ELECTION BRIEFING: IMPROVING PUBLIC UNDERSTANDING OF STATISTICS AND DATA

RSS manifesto ask

A year-on-year increase in the number of qualified maths teachers in schools including by: expanding scholarship schemes for recruitment; guaranteeing 35 hours of subject-related CPD annually for STEM teachers; and reviewing teachers' salaries.

Summary

There are [well-known issues with teacher recruitment, training and retention](#). We are facing a shortage of secondary school teachers and recruitment targets are not being met in key subjects including maths. Issues include pay, wellbeing and a lack of opportunity for professional development.

As part of the Council for the Mathematical Sciences, we call for a year-on-year increase in maths teachers, by expanding scholarship schemes and guaranteeing subject-related CPD. Scholarship schemes have been demonstrated to boost recruitment (in a step to increase competitiveness against the variety of highly-paid alternative professions for STEM graduates) and subject-related CPD boosts teacher wellbeing and confidence, providing opportunities for progression and supporting retention. In addition, we call for a review of teachers' salaries – to ensure competitiveness across the levels – to support both recruitment and retention.

What's the problem?

Teacher pay has been [decreasing in real terms](#) for over ten years. This is in contrast to pay in the private sector and is especially an issue for STEM subjects such as maths where recent graduates have a wide range of alternative highly-paid options. Competitive salary continues to be an issue once teachers are in post, as does a lack of opportunity for progression, impeding retention.

This shortage of maths teachers has negative impacts on the teaching of maths, statistics, and data. Under-qualified teachers may end up teaching subjects (or parts of subjects) that they do not feel confident to teach. Teachers who are overworked and are not enthusiastic about what they are teaching will be less able to inspire and equip their students with the relevant knowledge and skills. A shortage of teachers confident in statistics leads to fewer schools offering this subject.



The shortage of maths teachers is especially important given the recently-launched [Curriculum and Assessment Review](#) and the welcome opportunity to improve the teaching and assessment of maths, statistics and data. Improvements are needed and will require a healthy workforce of qualified teachers. At the RSS a key goal of ours is to [support public understanding and engagement](#), beginning from school-age, and this includes considering how to support and upskill teachers.

How to fix it

To reduce the number of unqualified maths teachers who are teaching the subject, the government should aim to increase the number of qualified maths teachers (those with a maths degree (or other degree with a high level of mathematical content)). As part of the Council for the Mathematical Sciences – and outlined in the [Maths Manifesto](#) – we call for a year-on-year increase in the number of qualified maths teachers, by expanding scholarship schemes for recruitment and guaranteeing 35 hours of subject-related CPD annually (as also called for in the Royal Society's [Manifesto for Science](#)).

There is evidence that scholarships – such as [those introduced recently](#) for shortage subjects – [improve teacher recruitment](#). We call for scholarship schemes to be expanded for shortage subjects with competitive job markets, including maths, to increase entrance into the profession.

CPD is [important for](#) teachers' confidence and helps sustain retention, enabling teachers to seek opportunities for progression (eg increasing status and pay). CPD that is high-quality and relevant to teacher's specific subject (rather than focusing on general activities eg leadership) has been reported to be [particularly valuable](#). We call for 35 hours of subject-related CPD to be ring-fenced annually to provide teachers with these opportunities and sustain retention.

In addition to the above, we call for a review of maths teachers' salaries across the levels, to support both recruitment and retention. The [recent uplift to starting salary for subjects including maths](#) is a good starting point, but this will need to be reviewed over time in relation to inflation and private sector salaries, and consideration of progression should also be taken into account.

