

## ***The Mathematical Association's response to Education Committee consultation on teacher supply***

*This response is formed through consultation with members of The Mathematical Association. These members work directly in or with schools and colleges throughout the country. It reflects the situations that members find themselves or colleagues in.*

Through The Mathematical Association's work we meet an extraordinary group of talented and dedicated teachers. They work incredibly long hours often exceeding 60 hours a week during term time and regularly carry out additional work during holidays (and Saturdays), particularly in the run up to high stake exams. Some are preparing and marking work for multiple classes to cover for vacancies, others work in schools where departments have no mathematics leadership. Sadly we do encounter teachers, for whom work is becoming exhausting both mentally and physically, and some are in the process of or considering leaving the profession.

### **Recruitment and Retention of Mathematics specialists**

There is a well-documented shortage of specialist teachers of mathematics particularly in secondary schools and FE colleges. This is already being exacerbated by the need for additional teaching time at GCSE; resit needs and the introduction of Core Maths.

- Schools in all areas of the country struggle to fill mathematics vacancies at all levels, this is not just in schools in challenging circumstances. Experience tells us that even OfSTED graded "Outstanding" schools find it difficult and sometimes impossible to fill general mathematics teacher positions and senior lead positions.
- Schools in challenging circumstances receive no applications, let alone suitable ones.
- Some schools are relying heavily upon overseas trained teachers. These staff are unaccustomed to the English education system and the challenges it poses. Working in schools in difficult circumstances they often do not get the additional support needed and struggle to cope.
- Some schools are relying heavily upon supply staff (often non-specialist). Even when supply staff prepare or mark work (tasks that often fall on the remaining permanent staff), they need to be supported so that this follows the school's schemes of work and marking policies. This puts additional pressure on already stretched departments and can leave classes to coast.
- A vast number of schools rely upon non-specialists to deliver mathematics lessons
- Experience shows us that mathematics teachers are rapidly promoted and teachers in their first couple of years of teaching find themselves responsible for departments of non-specialists in a time of great change. Often these teachers have not yet developed the confidence or skills to be able to carry out this position effectively and last only a short period of time before moving on.

- Results from Teach First are very varied. In our experience many of these teachers are not mathematics specialists but directed to the maths route, they do not have the subject knowledge to successfully deliver content to higher years. In some of the more challenging schools insufficient support leads to disheartened young teachers who leave soon after (or even during) their training years.

### **Developing Specialist Knowledge**

- The MaST (Mathematics specialist teacher) programme was highly effective in developing teachers' understanding of mathematics and its teaching. It also gave teachers the confidence to support colleagues. Since central funding ceased, schools are not participating to the same extent; it represents a large investment of time and money for a school and can lead to qualified teachers leaving for promotion shortly after completion.
- The development of the Mastery program has further exacerbated the fall in MaST applications. Confusion exists between the two programs with senior leaders unclear how the two should work in parallel to support children's learning.
- Secondary and FE level schools are regularly unwilling and unable to release staff to attend professional development. Losing class time with high stake exam classes is not permitted and funding is not available to support attendance to training events. We have experience of even free high quality training events being cancelled due to lack of delegates, not because teachers did not want to attend but because they were not allowed to by their schools.
- SKEs vary in quality and availability. Recent school based trainees complain at the lack of face to face courses and have completed online courses of varying quality.
- Uptake on the new Teacher Subject Specialism training has been very varied. Again some quote cost as being the prohibitive factor, others simply that there is no-one interested in becoming a mathematics teacher.

### **Root causes of turnover**

- Teachers state that mathematics teaching is dominated by accountability. Teachers talk about the lack of flexibility in their time with classes; in order to cover the required materials, and their endless data collection and recording outside lessons.
- Teachers see little benefit for their pupils in the huge data collection process. This is exemplified by the traffic lighting or grading of every single mathematics skill at KS4, on a fortnightly basis in some schools.
- Pupils' disruptive behaviour is regularly quoted by teachers. The lack of support from senior staff and home, and absence of professional development in this area, are all stated as being significant issues.
- Rapid changes that have little time to embed before they are replaced or added to are overloading already stretched staff. Lip service is paid to some; others are given a cursory nod, leading to schemes designed with the best of intentions not being integrated into school life.

- Intrusion by political figures telling the trained professionals how to do their job without any sort of experience or evidence backing their decisions has de-professionalised teaching. It is quoted as being a major negative development.
- Teacher autonomy has been reduced through pressure from management to perform in a certain way to meet sometimes misinterpreted Ofsted guidance.
- Pressure of adding value over a short period of time, the need to show progress in 20 minutes, to have formative commentary in all books and other limitations are becoming ever more stressful, restrictive and frustrating.
- We recognise the efforts that have been made to ensure OfSTED inspection demands are proportionate; nevertheless inspections are still seen (correctly or not) as high pressured, stressful experiences. A large number of teachers do not consider the inspection process as satisfactorily evaluating the quality of education, but instead think the process to be superficial and often counterproductive.
- “Teacher bashing” by parents, politicians and the media adds to an already tense situation. The message that teachers are no longer valued by society is becoming widespread.
- New teachers now joining the profession often start with large debts; a three or four year degree course followed by a year teacher training leaves new starters with £40,000-£50,000 of debt (even taking into account various bursaries). Salaries do not compare to other graduates after the first couple of years and alongside the work load many young teachers are leaving in need of a better work life balance, job satisfaction and pay.
- Stress and anxiety from work pressure is quoted by teachers leaving the profession in all phases of their career, even those still completing their training.

### **Further action that could be taken**

The Mathematical Association recommends the following actions.

#### **Short-term** (within 12 months):

- Carry out an urgent review of accountability processes in high performing jurisdictions, and use the findings to inform improvements in our own inspection regime. Ofsted inspections are, in our experience, damaging the progress of schools especially in schools that have genuinely highly challenging circumstances.
- Prioritise policy changes so only the most important are acted upon. This will ensure that teachers have a better opportunity to develop high quality responses to recent changes.
- Use subject specialists to inspect mathematics departments during inspections. Thus allowing full and detailed analysis of developmental needs resulting in focused feedback.
- Increase training bursaries for mathematics graduates going into Primary teaching, or those accepted for training as Primary mathematics specialists.
- Increase opportunities for subject-specific career progression. Centrally fund lead practitioner roles in both schools and colleges, and of MaST courses for Primary teachers.
- Ensure that at least 2 statutory teacher training days a year for secondary teachers and 1 for primary teachers, are high quality subject-specific days (ACME 2013).

**Medium term** (by the end of this parliament):

- Reduce curriculum and assessment change. As in high performing jurisdictions establish a review cycle of at least 6 years. Thus allowing teachers to embed new pedagogies, curriculums and assessments.
- Evaluate breadth and balance of continuing professional development opportunities. Ensure that not only short-term accountability measures are served but longer term development needs of teachers so that they are able to dig deeply into learners' understanding and develop satisfying ways to work.
- Use incentives to encourage the most talented teachers to those areas where there is greatest national need.
- Make central funds available for high quality professional development that includes national priorities, development of subject-specific expertise, etc.
- Evaluate medium and longer term effect of different routes into ITE. Including impact on teacher retention, resilience and career-long learning.

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