

Secondary mathematics teacher recruitment:

An overview of the landscape across the four nations of the UK

Summary report prepared for the Joint Mathematical Council of the United Kingdom

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Introduction

Teacher shortages are not new, especially in STEM subjects such as mathematics, and are present in many countries. These shortages have impacts on the education of young people where specialist mathematics teachers are not available and impact disproportionately on students in deprived areas. Education, including teacher education, in the UK is a devolved policy area, with the four nations of England, Scotland, Wales and Northern Ireland each responsible for their own education systems. Initial Teacher Education (ITE) is different and operates in a different context in each nation. This summary report seeks to provide an overview of the landscape regarding Initial Teacher Education for secondary mathematics teachers examining:

- the ITE landscape in each nation, their differences and similarities
- trends in recruitment in the four nations
- barriers and enablers for trainee teachers
- why people decide for or against a career in teaching and how they choose a route
- incentives for teacher training

The full report draws on empirical data that was collected through an anonymous survey of teachers and trainee teachers and from interviews with 22 stakeholders comprising teacher educators and others from across the four nations with an interest in ITE. A wide range of recent published reports, academic literature, government documents, web sites and media reports was also drawn on.

Initial Teacher Education in the four nations

There are differences in practices in ITE across the four nations of the UK:

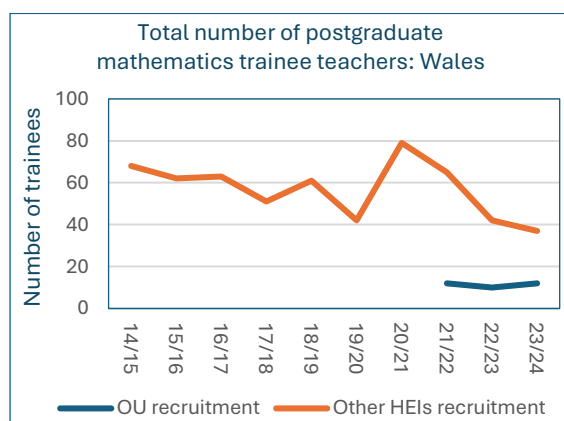
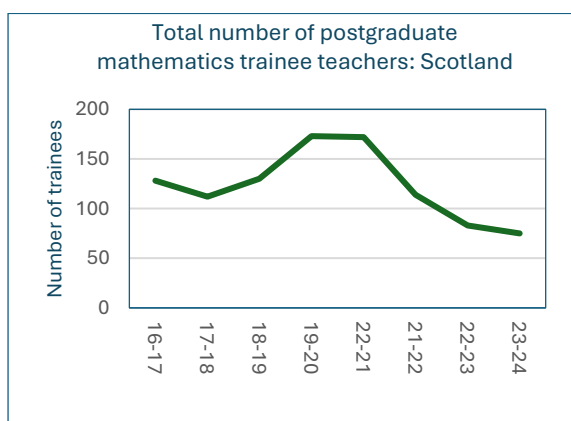
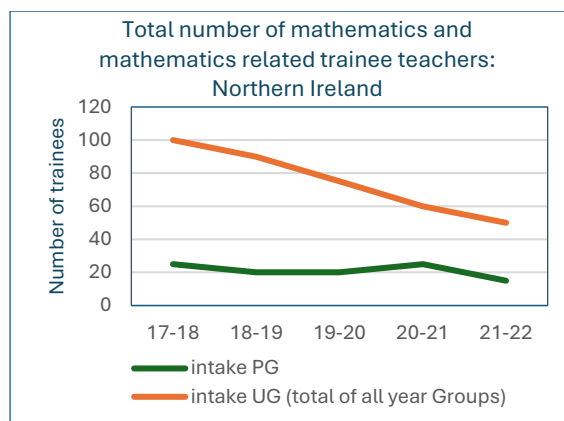
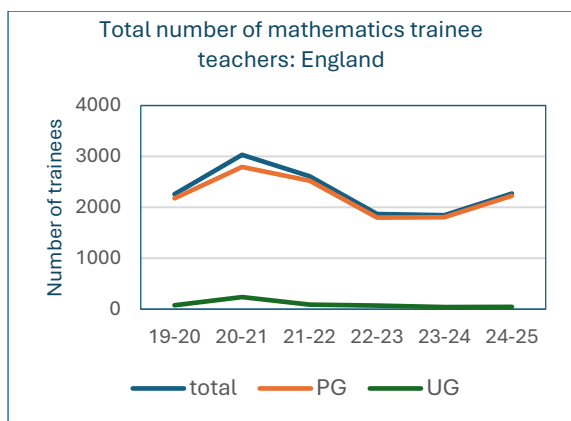
- In England, ITE is characterised by variation, complexity and change. Over the last 10 years the narrative from government regarding ITE has focused on ‘training’, what beginning teachers need to know and need to know how to do, and on training designed and led by schools. This is in contrast to the other three nations where the narrative is around ‘teacher education’ rather than ‘training’.
- Whilst in England there are many routes for ITE delivered by different organisations, in the other three nations all ITE is delivered through universities. In Wales, ITE is only available as a postgraduate programme. Wales is the only one of the smaller three nations where there is a salaried route available for trainee teachers.

- In all four nations the general expectations for subject knowledge for entry to a postgraduate programme to study mathematics are similar. The Welsh government requires providers to adhere strictly to their requirements regarding degree level mathematics, whereas in the other nations providers have more latitude to make their own entry decisions regarding the mathematics subject knowledge needed to teach.
- Postgraduate ITE programmes are of similar length in all four nations, although undergraduate programmes are three years in England (except for Teacher Degree Apprenticeships) and four years in the other nations.
- Pre-ITE subject knowledge enhancement programmes are only available in England.
- Working in partnership with schools is considered essential in all four nations and in all four nations trainee teachers spend a considerable amount of time on school placement and in at least two different schools. Trainee teachers in Scotland on a PGDE spend less time in school compared with the other three nations.
- There is some variation between nations regarding the requirements for mentor support for trainee teachers.
- There is variation in fees across the four nations with home students in Scotland having their fees paid by the Scottish government and lower fees in Northern Ireland for home students.
- The difference in bursaries is notable across the four nations, with Scotland only offering bursaries for career changers, Wales offering a bursary approximately half that of the English bursary and no bursaries available in Northern Ireland.
- In Northern Ireland, Scotland and Wales teachers are required to register with the relevant professional body; there is no such requirement in England.
- You must be qualified to be a teacher in a maintained school but currently in England academy schools and free schools can employ teachers without QTS. In Scotland, primary trained teachers are not permitted to teach examination classes.

Recruitment trends

Whilst shortages of secondary mathematics teachers are long-standing and well-documented in England, it is clear that the other nations are now also facing recruitment challenges.

Recruitment has risen in England and ITE programmes are expected to over-recruit for 2025/26. This has led to the recruitment target being lowered for the following year despite the longstanding shortages and substantial numbers of students in schools being taught by non-specialist teachers. Numbers on undergraduate programmes are very small and slowly decreasing with provision closing. Over 80% of trainee teachers follow fee-funded routes (university-led PGCE or School-Centred Initial Teacher Training) and, over time the proportion studying on university-led programmes has slowly decreased.



Figures for the other nations also show a decline in the recruitment of secondary mathematics trainee teachers. In Northern Ireland, the drop in postgraduate recruitment is attributed to the lucrative job opportunities available in the Belfast area for mathematics graduates in the fields of finance and data analytics. A shortage of secondary mathematics teachers is becoming evident, with rural areas in particular finding recruitment difficult. In Scotland, overall, the number of trainee teachers is decreasing and there are now shortages of mathematics teachers in many areas. Recruitment of trainee teachers and of qualified teachers is strongly influenced by geographical factors. Recruiting secondary school mathematics trainee teachers is challenging, particularly in some areas. In Wales, PGCE programmes are not available in all areas and not at all the universities offering undergraduate programmes in mathematics.

Areas for consideration

All nations:

- promotion of the range of career progression opportunities available in teaching
- more support, time and recognition for school-based mentors
- provision of a wide range of funded subject-specific professional development

England:

- more support for providers, applicants and schools around non-UK applicants
- further funded development of carefully designed Teacher Degree Apprenticeships targeting students who would not otherwise apply to university
- increasing the recruitment target to more realistically reflect shortages in secondary mathematics
- making the bursary available for those with 3rd class degrees

- developing the ECT incentive offer so it is easier for multi-academy trusts to manage and is available more widely

Northern Ireland:

- providing more opportunities to train by offering part time programmes
- offering bursaries for PGCE students
- offering a guarantee of permanent employment for newly qualified teachers
- enhancing the starting salary for teachers

Scotland:

- offering bursaries to those coming straight from university to ITE
- funded programme for primary teachers to qualify to teach secondary mathematics
- improvements to infrastructure in rural areas
- reform of the probationer employment guarantee to better meet the needs of new teachers
- consideration of alternative routes, such as the return of the 'supported induction programme', whilst retaining Scottish distinctives

Wales:

- increasing the bursary to match that available in England
- developing dual subject specialism opportunities
- offering pre-PGCE subject knowledge enhancement
- offering a wider range of routes such as a 'grow your own' programme to support recruitment in mid-Wales

Conclusions

The findings of the full report demonstrate that many of the reasons people do not apply for ITE for secondary mathematics teaching are related to long-standing issues with the teaching profession more widely and are common across all four nations:

- financial considerations
- poor public perceptions of teaching in the media
- high workload and poor work-life balance
- lack of career pathways and professional development opportunities
- lack of opportunities for flexible working and training

Considerations for improving recruitment of trainee teachers of secondary mathematics therefore include:

- promotion of teaching as a career, for example, through the wider use of education and teaching modules in UG degrees and to undergraduates
- using teachers to promote positive images, benefits, skills and opportunities of teaching as a career
- improvements to public image of teaching in and through the media
- expansion of opportunities for flexible working and training to better meet the needs of younger generations
- continuing work on workload reduction and workload management
- subject specialist support for beginning teachers
- development and promotion of career progression opportunities in teaching