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This publication covers the outputs of the Teacher Supply Model (TSM) as well as a brief overview of allocations for initial teacher training (ITT) places in 2020/21. The Teacher Supply Model estimates the number of postgraduate ITT trainees required in future years, and is used by the Department for Education to allocate training places to schools and training providers.

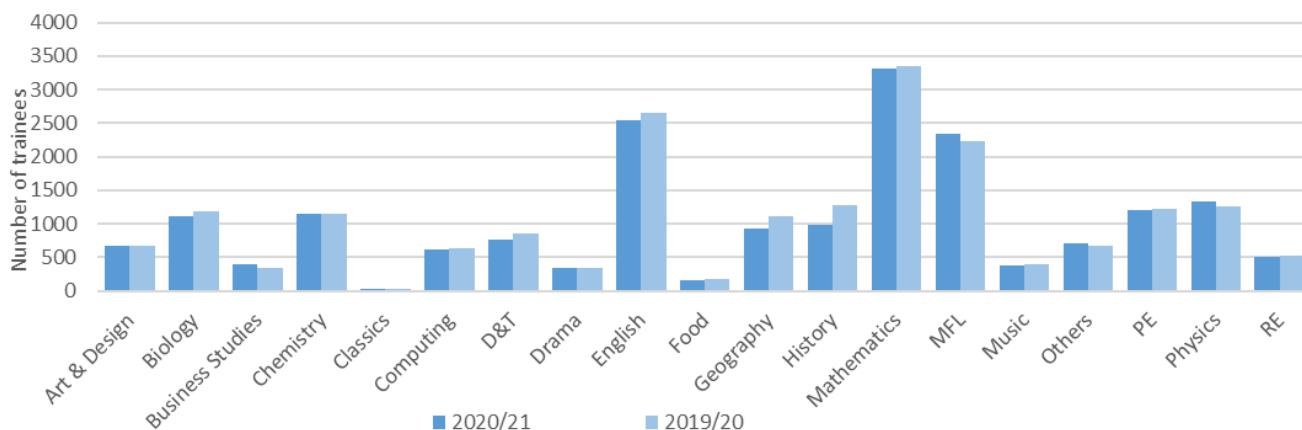
To estimate the number of postgraduate ITT trainees required, the TSM first estimates the overall number of qualified teachers that will be required within state-funded schools in England in future based on projected pupil numbers, curriculum changes, and other factors. Secondly, the TSM estimates the number of new teachers needed to enter the teaching profession each year in future in order to maintain the overall need for teachers. In particular, the model estimates how many of these new teachers in 2021/22 will be: 1) returners to the state sector after a break from teaching; 2) previously qualified but new to the state sector; or 3) newly qualified teachers (NQTs). Lastly, the model then estimates how many trainees are needed to start postgraduate ITT courses in 2020/21 in order to provide the required number of NQTs in 2021/22.

The TSM is used by the Department for Education to monitor recruitment to ITT courses. Recruitment is unlimited in almost all ITT courses this year, except for postgraduate physical education (fee-funded courses only), undergraduate (all courses), and early years (all courses leading to early years teacher status, EYTS), where recruitment is limited by the number of places allocated.

The 2020/21 Teacher Supply Model estimates we need 19,485 ITT trainees in Secondary, 602 trainees fewer than the 2019/20 Teacher Supply Model

Figure 1: TSM outputs for secondary postgraduate ITT trainees¹, 2020/21 and 2019/20

Source: TSM 2020/21



While the TSM estimates a slight fall of 602 fewer ITT trainees being needed for secondary this year, there is variation between subjects, e.g. the requirement for business studies trainees has increased. The most noticeable falls are for history and geography, because the EBacc commitment to increase take-up in these subjects has now been achieved.

Other key drivers of the reduction in trainee numbers consist of the inclusion within the TSM of teachers entering the workforce via the assessment only route, an increase in undergraduate trainee numbers, and changes to the School Workforce Census methodology (see page 3 for more details on all key drivers). Although the TSM outputs for secondary postgraduate trainees have fallen, it is relevant to note that recruitment is unlimited for the majority of subjects. Furthermore, the secondary target for 2020/21 is still higher than the number of trainees recruited in 2018/19 (the most recent year of data). This means that a reduction in the TSM does not necessarily mean a reduction in the number of trainees.

¹ The TSM outputs cover postgraduate ITT trainees across all routes leading to QTS, including Teach First

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About this release

This statistical release covers the outputs of the Teacher Supply Model and provides an overview of initial teacher training allocations.

In this publication

Teacher Supply Model

The Teacher Supply Model (TSM) estimates the number of postgraduate ITT places needed to provide qualified teachers for the state-funded teaching sector in any given year; the 2020/21 TSM estimates how many postgraduate ITT entrants are needed for ITT courses starting in autumn 2020.

Teacher Supply Model: methodological annex

This document provides further information on the data and assumptions used in the TSM, and outlines how to run scenario testing within the model.

Related to this publication

Initial teacher training allocations

In September 2019, we also published a list of allocated places for each limited course that was requested for 2020/21, which can be found [here](#). The accompanying methodology can be found [here](#).

1. Postgraduate ITT places for 2020/21 as estimated by the TSM

The TSM estimates how many trainees are needed to start postgraduate ITT courses in 2020/21. The 2020/21 TSM estimates 1,536 fewer primary trainees, an 11.8% decrease. The TSM also estimates 602 fewer secondary trainees are needed, a 3.0% decrease, but this is not uniform across all subjects. Five subjects have seen an increase in trainees; the largest increase (as a percentage) was for business studies. Fourteen subjects have seen a decrease in place numbers; the largest falls (as a percentage) were for history, geography, and design & technology.

Key drivers for the fall in both the number of primary and secondary ITT trainees required include:

- Improvements in the School Workforce Census methodology have identified that there were a higher number of entrants in previous years that were returners or new to the state-funded sector² than previously thought. As the School Workforce Census is a key input to the TSM, this results in the TSM assuming that a slightly greater proportion of teachers entering the stock in future years will be returners or new to the state-funded sector with a corresponding fall in the proportion that will be NQTs. This reduces ITT requirements slightly.
- There has been an increase in the number of current *undergraduate* trainees. This reduces the need to recruit future *postgraduate* trainees.
- For the first time, this year, the TSM has accounted for NQTs entering service via the assessment only route. This reduces the requirement for postgraduate ITT trainees.

There has been an additional driver for secondary; as GCSE take-up for geography and history³ is now in line with the EBacc⁴ ambition of the Department (75% take-up by 2024), there is no longer a need to over-recruit trainees for these subjects above baseline requirements. This has reduced ITT trainee requirements for both these subjects this year.

The projected number of pupils has had a very slight downward impact on primary this year and a negligible impact on secondary. More information on pupil projections can be found in section 2.b of this document.

It is relevant to note that this year the Department for Education has continued to uncap ITT recruitment to most subjects, allowing organisations that deliver ITT to recruit an unlimited number of trainees for ITT courses starting in autumn 2020. Therefore, in reducing the 2020/21 TSM target, this does not mean there will necessarily be fewer trainees.

² These are teachers that are not NQTs, as they gained QTS more than one year ago, but are entering into the state-funded sector for the first time as a qualified teacher, as recorded within the School Workforce Census.

³ The two subjects combined together make up the humanities pillar of the EBacc.

⁴ English Baccalaureate (EBacc) is a set of subjects at GCSE recommended by the government. It includes students taking English language and literature, maths, the sciences, history or geography, and a language.

The main output from the TSM model is the number of ITT trainees required per subject for 2020/21:

Figure 2: Outputs of the TSM: Estimated number of ITT trainees required⁵, 2020/21 and 2019/20

Coverage: Postgraduate initial teacher training in England

Source: TSM 2020/21 and ITT Census 2018/19

Subject	Number of trainees required for the 2020/21 training year as estimated by the corresponding TSM	Number of trainees required for the 2019/20 training year as estimated by the corresponding TSM	Actual number of trainees in 2018/19 (postgraduate new entrants including forecasts ⁶)
Art & Design	681	668	475
Biology	1,116	1,192	1,815
Business Studies	397 ⁷	348 ⁷	180
Chemistry	1,144	1,152	835
Classics	27	28	60
Computing	621	631	530
Design & Technology	759	849	295 ⁸
Drama	340	347	295
English	2,544	2,654	2,815
Food	160	173	<i>See footnote 8</i>
Geography	929	1,116	1,300
History	982	1,273	1,190
Mathematics	3,307	3,343	2,195
Modern Foreign Languages	2,334	2,241	1,405
Music	385	392	295
Others	713	668	385 ⁹
Physical Education	1,200 ¹⁰	1,222 ¹⁰	1,250
Physics	1,336	1,265	575
Religious Education	510	525	375
Secondary total	19,485	20,087	16,280
Primary	11,467	13,003	12,975
Total	30,952	33,090	29,255

⁵ The TSM outputs cover postgraduate ITT trainees across all routes leading to QTS, including Teach First.

⁶ Source: ITT Census; figures for 2018/19 are provisional and are subject to change. Data extracted on 19 November 2018. Troops to teachers excluded, Teach First are included. Numbers are rounded to the nearest 5.

⁷ Includes economics.

⁸ Design & technology includes food technology and engineering.

⁹ Includes dance, social studies, psychology, and economics.

¹⁰ Includes dance.

2. Methodology used in the Teacher Supply Model

The TSM is a national model covering all state-funded primary (including maintained nurseries attached to schools) and secondary schools, academies, and free schools¹¹ in England. The purpose of the TSM is to provide estimates of the number of entrants to teaching needed through postgraduate ITT.

The 2020/21 TSM estimates how many postgraduate ITT trainees are required to start ITT in the autumn of 2020, to provide sufficient numbers of NQTs in the autumn of 2021. The TSM also accounts for teachers who enter the state-funded school sector via other recruitment routes, such as undergraduate ITT, returning to service from other sectors, or as teachers that are already qualified but new to the state-funded sector. This year we have also accounted for new¹² teachers qualifying via the assessment only route.

2.a Qualified teacher headcount projections

The TSM estimates how many primary and secondary school teachers will be required in state-funded schools in England in the future. Qualified teachers that are working as supply teachers, in special schools or in pupil referral units are considered as teaching in schools *outside* of the scope of this model; this results in a difference in figures for the headcount of qualified teachers in the TSM compared to those in the School Workforce Census.¹³

The model assumes that the overall headcount of qualified teachers would need to grow from 451,980 in 2018/19 to 457,146 in 2022/23 (a 1.1% rise). This increase is driven by an assumed growth for the secondary sector; the model assumes that the headcount of qualified teachers would need to grow from 208,784 to 216,099 (a 3.5% increase). By contrast, the model assumes that the headcount for the primary sector could fall from 243,195 to 241,047 (a 0.9% decrease) in the same period and meet the requirements of a primary pupil population falling in size.

Figure 3: Headcount of qualified teachers in state-funded schools in England, 2012/13 to 2022/23 (figures up to and including 2018/19 are historical figures; figures for 2019/20 and beyond are future estimations made by the 2020/21 TSM)

	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22	2022/23
Primary	225,761	231,193	236,769	240,858	243,284	242,439	243,195	242,914	242,746	241,985	241,047
Secondary	223,507	221,102	219,318	215,397	212,920	209,337	208,784	210,883	212,523	214,253	216,099
Total	449,268	452,295	456,087	456,255	456,204	451,776	451,980	453,798	455,268	456,238	457,146

Source: TSM 2020/21

Entrants to the stock of qualified teachers include: 1) those who are NQTs following completion of their initial teacher training¹⁴; 2) those who are new to the state-funded sector; and 3) those returning to the profession. In 2018/19¹⁵, there were 44,605 FTE¹⁶ qualified entrants to the teacher workforce in state-funded schools, of whom just over half (52.8%) were NQTs. The remainder came from those new to the

¹¹ The TSM does not cover special schools, pupil referral units, early years, independent schools, and further education/sixth-form colleges. Although it does not cover teaching at key stage 5 in standalone sixth-form colleges or further education colleges, it does cover sixth-form teaching in secondary schools in the state-funded sector.

¹² Only teachers that were new to the stock in the state-funded sector through this route were included, i.e. teachers that had already been working as unqualified teachers before completion of their assessment were not included.

¹³ Figures cited in this statistical release may not exactly correspond to similar figures in other publications. This is not an error; the scope of the TSM and the definitions used for certain terms in the model are by necessity different from other publications.

¹⁴ In the 2020/21 TSM, an assumption has been made that 202 teachers will be recruited for MFL via new initiatives.

¹⁵ Using historical data from within the 2019/20 TSM for the latest year available. The latest historical figures in the School Workforce Publication have been revised and will not be the same as those published in 2019/20 TSM.

¹⁶ FTE stands for full-time equivalent and it represents the number of employees if all were working full-time hours.

state-funded sector¹⁷ (10.4%) or those returning to the teaching profession (36.8%). For more information on entrants to the teaching profession, please see table 7a of the [School Workforce Census](#)¹⁸.

2.b Pupil projections

One of the drivers of the future demand for new teachers comes from changes in future pupil numbers. All else being constant, if pupil numbers begin to grow at a faster rate, then teacher numbers would also need to grow at a faster rate to keep up with demand, which would in turn increase the demand for new teachers via ITT. Similarly, if pupil numbers were to fall or to grow at a *slower* rate this would lead to a fall in the demand for teachers, and therefore, for teacher trainees.

The TSM uses future pupil population forecasts by age group for state-funded nursery, primary, and secondary schools from the pupil projections model. These figures differ to those within the pupil projections statistical release due to the specific coverage used by the TSM for modelling purposes, namely differences in both scope and definitions.

The 2020/21 TSM estimates the teacher need for the academic year 2021/22 (and the ITT entrant need in the 2020/21 academic year). We are estimating the teacher need two years into the future, from the point of this publication. Pupil numbers may not be changing at the same rate or in the same direction currently as they will be in two years' time.

The primary pupil population is forecast to fall by 0.6% in 2021/22 from the year before. This fall in primary pupil numbers in 2021/22 has had a downward impact on the need for ITT trainees in the 2020/21 TSM, when compared to the TSM last year.

For secondary, the pupil population is currently forecast to grow by 2.0% in 2021/22, when compared to the year before. This is very similar to the rate of growth for 2020/21. As the year-on-year rates of growth in pupil numbers are very similar for 2020/21 and 2021/22, the TSM assumes that teacher numbers for secondary would also grow at a similar rate in these two academic years. If teacher numbers are assumed to be growing at a very similar rate, ITT requirements delivering NQTs for these two academic years would also stay roughly the same, meaning for this year the pupil projections data for secondary have had a negligible impact on the TSM. The TSM target for secondary is slightly lower this year because of other factors, the negative impact of other drivers as outlined in section 1.

All pupil population figures quoted here are sourced from the 2020/21 TSM and are estimates of pupil numbers for the January of each academic year (so, figures for January 2019 relate to the 2018/19 academic year). For more information on pupil projections, please see: [National pupil projections statistical release](#)¹⁹.

2.c Curriculum and qualification assumptions

In addition to changes in pupil numbers, there are a number of policy changes that are accounted for within the TSM as they affect the estimated demand for new teachers. For the 2020/21 TSM, these only affect secondary subjects.

There were five government policies that required assumptions, all of which were also included in the 2019/20 TSM. The policies are:

¹⁷ Includes new to the state-funded sector, and newly qualified entrants who have deferred entry.

¹⁸ There may be some slight differences between TSM figures and the School Workforce Census publication figures due to differences in definitions, scope, and so on.

¹⁹ As with the School Workforce statistical release, there may be some slight differences between TSM figures and the figures in the Pupil Projections statistical release due to differences in definitions, scope, and so on.

- We expect to see entries in EBacc²⁰ subjects increase up to 75% for GCSE examinations in the summer of 2024 and 90% by 2027 as outlined in the EBacc consultation response published in July 2017. The model makes an estimate of the first stage of this increase up to 75%; the increase up to 90% by 2027 has not been modelled in these estimates.
 - To meet the EBacc target of 75% uptake, uptake in GCSE modern foreign languages must increase, while uptake in other subjects has already reached this target. For the additional modern foreign language (MFL) teachers needed, the model would normally assume that entrants to the teacher stock enter via all entry routes (NQTs, new to state-funded sector, and re-entrants). In this instance, we assume that the extra MFL teacher need will only be sourced from the NQT route and from other, new initiatives (see below). We make this assumption as we expect that the pool of new to state-funded entrants and re-entrants is likely to be limited by the availability of such teachers. We have limited entrants via the new to state-funded sector and re-entrants entrant routes to the estimates for 2017/18 from the School Workforce Census for MFL.
 - Alongside this, there are some new programmes to source additional MFL teachers to meet this demand. We have assumed that 202 teachers will be sourced by these routes in 2021/22 and all subsequent years. They are referred to within the model as teachers that are sourced via 'other, new initiatives'.
- The quantity of key stage 4 (KS4) teaching (as a percentage of the total) dedicated to mathematics will continue to grow; as a result of both the greater importance of mathematics within performance tables and policies such as the Teaching for Mastery programme and the new, expanded GCSEs.
- There will be continued growth in the take-up of post-16 mathematics qualifications (including Core Maths) with corresponding increases in key stage 5 teaching requirements.
- The quantity of KS4 teaching (as a percentage of the total) dedicated to English will continue to grow; as a result of both the greater importance of English (especially English literature) within performance tables and the new, more rigorous GCSEs.
- The quantity of KS4 teaching (as a percentage of the total) dedicated to science (biology, chemistry, and physics) will continue to grow; as a result of both the removal of the core science GCSE option and increasing uptake of triple science.

For more information on these and all other assumptions and how they are reflected in the model, please see the TSM methodological annex that accompanies this publication.

²⁰ English Baccalaureate (EBacc) is a set of subjects at GCSE recommended by the government. It includes students taking English language and literature, maths, the sciences, history or geography, and a language.

3. Allocations and permission to recruit to ITT courses

Every year the Department for Education distributes initial teacher training places to the organisations that deliver ITT: accredited ITT providers and School Direct lead schools.

For the 2020/21 recruitment cycle recruitment to most courses is unlimited, similar to last year. More detail can be found in the [Initial Teacher Training allocations methodology for 2020/21](#). Permission to recruit to ITT courses was granted using two categories:

Allocated category: This category includes postgraduate physical education (fee-funded courses only), undergraduate (all courses) and early years (courses leading to early years teacher status). ITT providers and School Direct lead schools received allocations for these courses, and cannot recruit more trainees than the number of places allocated. The number of places allocated to each ITT course were published in September: [Initial Teacher Training allocations: academic year 2020/21](#).

Unlimited category: This category includes all other mainstream²¹ postgraduate courses. All ITT providers and School Direct lead schools that requested training places in June 2019 were granted permission to recruit. Once permission has been granted for a particular course in the unlimited category, the ITT providers and School Direct lead schools may recruit as many trainees as they wish.

An additional 1,750 places are available to Teach First. This is the same number of places as last year.

In previous years, allocations for each course were published as official statistics alongside the Teacher Supply Model. As most ITT courses now receive unlimited recruitment, the full list of requests and allocations has not been published this year.

²¹ ITT routes leading to Qualified Teacher Status, excluding Teach First.

4. Further information is available

ITT statistics

The ITT Census and ITT Performance Profiles statistical releases provide statistics on numbers, characteristics, completion rates and employment outcomes for initial teacher trainees. The latest data can be found at the link below:

<https://www.gov.uk/government/collections/statistics-teacher-training>

2020/21 ITT allocations and recruitment

More information on the ITT allocations process for 2020/21, including how to request ITT places and the allocations methodology is available at:

<https://www.gov.uk/government/publications/requesting-initial-teacher-training-places-2020-to-2021>

Provisional training places allocated to accredited ITT providers and lead schools for academic year 2020/21, for the subjects that fall in the limited category:

<https://www.gov.uk/government/publications/initial-teacher-training-allocations>

Provisional data on the actual number of ITT trainees recruited for 2020/21 will be published in the ITT Census once trainees start their courses in Autumn 2020:

<https://www.gov.uk/government/collections/statistics-teacher-training>

2019/2020 ITT allocations and recruitment

More information on the ITT allocations process for 2019/2020 is available at:

<https://www.gov.uk/government/publications/initial-teacher-training-itt-requesting-places-2019-to-2020>

Provisional data on the actual number of ITT trainees that were recruited for 2019/2020 will be published in the ITT Census in November 2019 at the link below:

<https://www.gov.uk/government/collections/statistics-teacher-training>

The school workforce

The School Workforce Census statistical release provides the latest information on the composition of the school workforce employed in state-funded schools in England. The latest publication is available at:

<https://www.gov.uk/government/collections/statistics-school-workforce>

Pupil projections

The Pupil Projections statistical release provides national projections for the number of pupils in schools by type of school and age group. The latest publication is available at:

<https://www.gov.uk/government/collections/statistics-pupil-projections>

5. Official Statistics

These are Official Statistics and have been produced in line with the Code of Practice for Official Statistics.

This can be broadly interpreted to mean that the statistics:

- meet identified user needs;
- are well explained and readily accessible;
- are produced according to sound methods, and
- are managed impartially and objectively in the public interest.

Once statistics have been designated as Official Statistics it is a statutory requirement that the Code of Practice shall continue to be observed.

6. Technical information

The TSM methodological annex covers the data used in the model and the assumptions made. There is also guidance on the scenario testing available to users of the model. The methodological annex can be found alongside the model.

7. Get in touch

Media enquiries

Press Office News Desk, Department for Education, Sanctuary Buildings, Great Smith Street, London SW1P 3BT

Tel: 020 7783 8300

Other enquiries/feedback

Please send any queries or feedback regarding Initial Teacher Training data to:

Melissa Cook, Teachers Analysis Division, Department for Education, Bishopsgate House, Feethams, Darlington DL1 5QE

Telephone: 01325 340486

Email: ITTstatistics.publications@education.gov.uk



Department for Education

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