



Department  
for Education

# **Guide to the collection and dissemination of school staffing data from the annual November School Workforce Census**

**Quality and methodology information document**

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**June 2018**

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# 1. Summary

The Statistical Publication: ‘School Workforce in England: November 2017’ provides the latest information at national and local level on the number and characteristics of teachers and other school staff that work in state funded schools in England.

The publication summarises the information that was collected via the November 2017 School Workforce Census – the eighth running of the ‘census’ – and links data from other sources including the Database of Teacher Records and the Database of Qualified Teachers.

It covers the following broad themes.

Teacher numbers, characteristics and deployment.	This publication shows the time series of teacher numbers in all state funded schools in England. It provides various breakdowns of teacher numbers; by post held, school type and phase, gender, age, ethnicity, whether they work full/part-time, have Qualified Teacher Status or not etc.
Teacher flows, turnover and retention.	This publication shows the number of qualified entrants to teaching (and whether they are new teachers or returners), their propensity to stay, and the numbers of qualified teachers leaving the teaching profession (e.g. through retirement or leaving early).
Teacher pay.	This publication shows the salaries received (in £5/10 thousand bands) for all teachers and separately for classroom teachers, leadership group teachers, and head teachers. The statistics also provide an age, gender and school type/phase breakdown. Where appropriate, average and median salaries are provided for comparison purposes.
Teacher qualifications and curriculum taught.	<p>This publication provides information on the highest post-A-level qualification held by teachers (by teacher grade and school type/phase).</p> <p>Estimates are also provided, <b>based on a large sample of secondary schools only</b>, which show the number of teachers by subject, teaching at Key Stage 3-5 and the relevant number of hours taught.</p> <p>The publication also provides estimates of the number/percentage of teachers teaching each subject that have relevant post-A-level qualifications in the subject. Similar data is produced showing the number of hours taught by teachers with relevant post-A-level qualifications in the subject.</p>
Teacher vacancies.	This publication shows the number of advertised teaching posts that were either temporarily filled or still vacant in November (start of the academic year). It provides subject level estimates for these posts for secondary schools only.
Teacher sickness absence.	This publication shows the number of teachers that have taken sickness absence in the previous year and in doing so the number of days they were absent.

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Pupil teacher ratios.

Pupil data from the January 2018 school census is used to produce pupil teacher ratios and pupil adult ratios (teachers and all classroom-based support) for each school type/phase.

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Statistics on support staff.

Time series data are also published which show the number of teaching assistants and school support staff employed by all state funded schools. This data shows the numbers by post held and has some limited characteristics data e.g. gender and ethnicity.

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The latest release updates and supersedes the previous statistical release; the full series can be found on [gov.uk](http://gov.uk).

The school workforce census is the main source of information on the numbers, characteristics and deployment of school staff and it is used to inform policy decisions to improve the standard of education in schools. It is also used by other organisations interested in this subject. For example, data on teacher numbers, patterns of working and the Office of Manpower Economics on behalf of the School Teachers Review Body. See [here](#) for further information.

This document aims to provide information on the methodology involved in the production of this data – from collection through to publication – and information relating to the quality of the statistics.

## 2. Data sources

The statistics published in the ‘School Workforce in England’ series of releases are predominantly based on information provided by schools and local authorities as part of the annual School Workforce Census that was introduced in 2010. Tables that show longer time series e.g. teacher/staffing numbers and vacancy counts are constructed from the data sources that existed at the time and the School Workforce Census. The relevant time series therefore have a break between 2009 and 2010.

Prior to 2010, some school workforce data was provided by local authorities as part of the Form 618g return and some by schools as part of the pupil level School Census. Other teacher data were contained in separate exercises, for example, data on teacher pay was collected separately as part of the administration of the Teachers’ Pension Scheme. Data on the curriculum taught in secondary schools was collected by surveys once every four or five years. The final statistical release that brought together workforce statistics from the various different data collections is published in the gov.uk archives [here](#).

The School Workforce Census was introduced to replace these (and other) collections and designed to ensure data was collected consistently and comprehensively by having all key data items in one single, harmonised exercise. This helped improve the quality and consistency of key school workforce statistics vital for monitoring and evaluating the school workforce; and as a benefit helped reduced the data collection/provision burden on schools.

The census collects information on school staff from all state funded schools in England; including local authority (LA) maintained nursery, primary, secondary and special schools, all academy schools (including free schools) and Pupil Referral Units (PRU). It also collects information from LAs on their centrally employed teachers. The census does not collect data from independent schools, non-maintained special schools, sixth form and other further education colleges.

The census collects a broad range of characteristics data, such as gender, age, ethnicity and disability, for all school staff. It also collects contract information such as grade, post or role, qualifications data and salary data. It also collects contract information on the weekly hours worked and pay details of those whose individual level data is collected. The hours worked, together with the full-time weekly hours, are used to calculate whether staff are full or part-time and for part-time staff their full-time equivalence. This calculation takes into account where school staff members have more than one open contract.

The census collects data at the individual level for all types of staff in schools. In particular, for school teachers, it collects individual level data on those in regular employment with a contract of 28 days or longer. This includes contracts that were open on the census date and those that were open but ended during the previous academic year. School teachers that did not have an open contract on the census date are not included in the in-service figures in the publication, however their information is used in the calculation of teacher sickness absence rates (as these relate to the previous 12 months). Teachers that were employed in schools during the census period that do not have a contract of employment that lasts/will last 28 days or longer are included in an aggregate headcount of occasional teachers.

Individual sickness absence records are also collected for all teachers in service during the 12 months prior to the census date. These records are linked to construct the number of incidences of sickness absence and estimate the total number of days lost to teacher sickness absence.

In addition, for a sample of secondary schools (including secondary academy schools), the census collects information on the curriculum taught by teachers to pupils in years 7-13. The curriculum data is only collected from secondary schools that use electronic timetabling software that can produce data in the format required. This means that the

sample size can change each year, see the section on 'Teachers' qualifications and curriculum taught' for further details.

The census also collects school level aggregate counts of teacher vacancies, occasional teachers and support staff employed through an Agency/third party service provider. Local authorities also supply data on the number of educational psychologists they employ. However this will not show the true number of educational psychologists as local authorities do not include educational psychologists where the service has been outsourced or where this provision is been shared with other local authorities.

The data collected as part of the administration of the Teachers' Pension Scheme (known as the Database of Teacher Records, DTR) is used in several places within the publication. The DTR is used to derive statistics on the number of qualified teachers that retire in the latest financial year and the type of retirement. It is also used to derive statistics on the number of qualified teachers that are currently out of service and the number of qualified teachers that have no service history (in state funded schools in England).

The DTR is linked to the teacher data from the School Workforce Census using the unique Teacher Reference Number. This dataset is then linked to the Database of Qualified Teachers which holds information on the date that teachers gained their Qualified Teacher Status – and allows us to determine whether new entrants to teaching are Newly Qualified Entrants. The combined dataset is then used to construct the qualified teacher retention matrix in Table 8. The matrix shows the number of teachers that qualify in a year and the number that enter service within the next year and then shows the percentage of teachers that remain in service in each year afterwards.

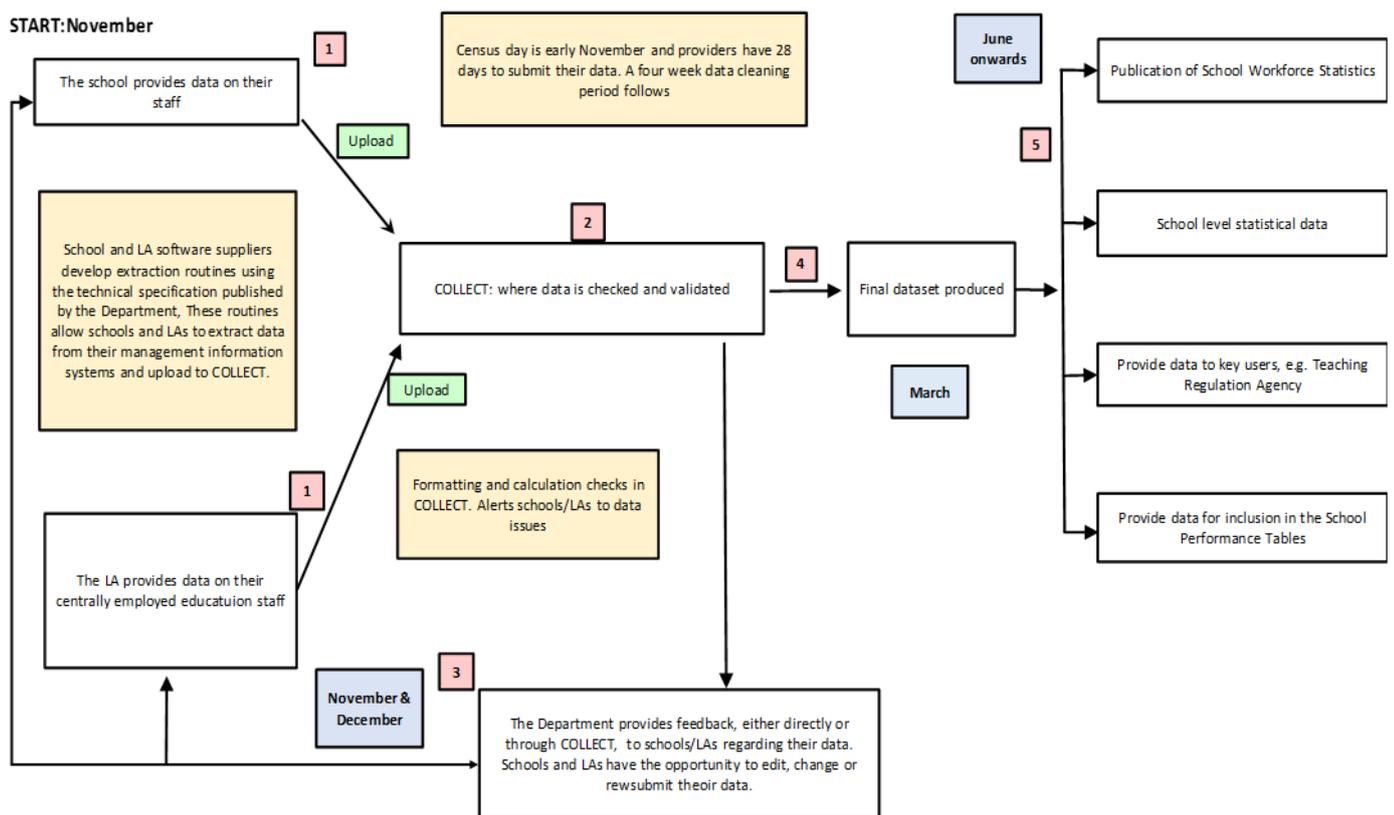
### **3. Data collection, processing and cleaning**

Figure 1 is a process map that shows how the school workforce data flows from schools and local authorities to the Department. It describes the five stages that the data go through and how the Department supports schools and local authorities in their task of providing high quality data. The first four stages are all internal processes. The census data is not used publicly until the final, fifth stage when it is formally published within the publication.

The school workforce data required from both schools and local authorities is determined in advance of the census in such a way that schools and LAs can engage the suppliers of their management information systems (MIS) with sufficient time to incorporate any new data items (or changes to existing data items) into their local systems. The software suppliers build data extraction routines based on the data requirements set out in the technical specification published by the Department. Typically, a near final version of the technical specification is shared with software suppliers around a year before the next

census date. This allows software suppliers the opportunity to see and comment on the data requirement and any changes from the previous year. Their comments and views are taken into account to ensure the Department is asking for data in a way that is straightforward to deliver. A final version of the technical specification is then published for local authorities and software suppliers to see and use. The current technical specification and archived versions are [published here](#).

**Figure 1: Description of the data collection process**



Deadlines are shown in blue boxes. The stages outlined below are indicated by a pink box.

Stage 1: By census, day schools and local authorities should have ensured their management information systems hold accurate details for all their staff in scope of the census. They would then ensure that the information required by the Department (as set out in the published School Workforce Census data requirement) is extracted and uploaded to the Department's COLLECT system. Schools and LAs will have had the opportunity to test out the quality of their data and the data extraction routines provided by their software suppliers by using the familiarisation version of the Department's data collection system, COLLECT. The full list of data items collected by the census can be found in the [guides provided to schools and LAs](#).

Stage 2: Once schools and local authorities have successfully loaded their data onto COLLECT they can review and inspect their data. The COLLECT system has a range of checks that it runs on the data: e.g. simple formatting checks, arithmetic checks and validation rules that specific data items must meet. The checks made within COLLECT are contained within the published guides and specifications.

Software suppliers often build these checks into their data extraction routines and/or management information system (MIS) upgrades. The checks within COLLECT will flag up where the data provided has either failed to meet the standards required (an error) or does not conform to what was expected (a warning). For example, an error would result if no contract information was provided and a warning would result if the date of birth placed the teacher's age as less than 21 or over 90. The validation checks are reviewed and improved each year, for example, checks to identify schools with very large changes in teacher numbers were introduced. This gave schools an opportunity to say whether the change was real or to resubmit if there had been a data input error. This process helps identify where schools initial returns need attention. Checks and guidance have been continually updated and improved to help schools provide better quality data on the pay of teachers (especially part-time teachers) and whether the data submitted includes a pay award for the current year.

Schools and local authorities then check their data - especially the errors and warnings - to ensure the data is correct and accurately reflects the staffing levels at their school at the time of the census. Changes and/or corrections to the data provided can be done either on-line in COLLECT or within the local MIS system (preferred). If the changes are done locally then the data has to be resubmitted to the Department. Once schools and local authorities have resolved their errors and warnings they approve their data – which signals to the Department that the data can move to the next stage.

Stage 3: Once the data has been approved for use by schools and local authorities, the Department runs a further set of checks on the data. These checks look within the data to spot any problem areas, for example, where schools have provided substantial numbers of records that are missing particular data items e.g. staff with no contract information and staff whose pay rate is not credible. The results of these checks are provided as feedback to local authorities to help them work with their schools to ensure a complete set of data exists for all schools in their area.

Throughout the first three stages of the collection, the Department operates a helpdesk which staff at schools and local authorities can contact if they are unsure about any aspect of the School Workforce Census. This is the primary route that academy schools use to discuss their queries regarding the data they are submitting. The helpdesk operated throughout the census period, November to December, and throughout the period immediately afterwards when the majority of the data cleaning takes place – typically December into January. When this process is completed and schools and LAs are happy

with their data (i.e. after they have resolved all the issues raised in the feedback) they authorise the data.

Stage 4: Once all the school and local authority data has been authorised a database is created which allows the Department's statisticians to prepare the information that is to be published. At this stage any data that has been provided and deemed to be out of scope is removed from the dataset e.g. teaching staff on zero hour contracts (likely to be a pool of supply teachers that are regularly used by the school but were not actually in service during the time of the census).

This results in a database containing all contracts for all staff working in all schools. This dataset is used to calculate the number of teachers and other school support staff working in each school for the latest year.

The contract file is then aggregated to a teacher level file (a small percentage of teachers have more than one open contract on census day e.g. where they have two distinct roles within a school or work in more than one school) which is then used to update the linked teacher dataset. The linking process mainly uses the unique Teacher Reference Number (that each teacher has) although it is enhanced with other data collected in the census e.g. teacher name, NINO and date of birth. The linked teacher dataset is the main source of data used for publishing statistics on teacher numbers, teacher characteristics as well as entrants to teaching, teachers leaving state funded schools and teacher retention.

The linking of teacher data across years allows for the better identification of poor quality or inconsistent school data. The linked dataset has helped with the identification and removal of duplicate teacher contracts - where they were provided by both a school and a local authority. It has also supported the identification of individual teachers working in multiple schools.

To support the process of linking teacher data across years it is matched to other administrative data held by the Department. This is to help overcome occasional gaps in the data, for example, where schools have not supplied the TRN for a teacher. The teacher data from the School Workforce Census is matched to the Database of Teacher Records which is data collected as part of the administration of the Teachers' Pension Scheme. This dataset should have an accurate TRN for all teachers and is used to fill gaps in the School Workforce Census.

A second match is made to the Database of Qualified Teachers which contains details of the year that teachers finished their teacher training and gained Qualified Teacher Status (QTS). Where teacher records without QTS have been supplied in error then this field can be completed. In addition, the School Workforce Census does not collect the year of qualifying for a teacher, this information is added to the linked teacher dataset so that Newly Qualified Teachers can be identified – which is important for the analysis of teacher flows.

Stage 5: The publication “School Workforce in England” is the first part of the dissemination process. The release of the publication signals the availability of the data for use by the Department (e.g. Teacher Supply Modelling) and to the general public (e.g. in reply to Freedom of Information (Fol) requests.) and to independent analysts and researchers – who can request specific information.

The second main output produced from the latest data is a large set of school level data which is released as part of the Department’s commitment to release the underlying data used to create all national statistics. The Department releases school level school workforce statistics showing teacher and support staff numbers, staff characteristics, teacher pay and sickness absence and the number of vacant posts. The school data also includes school type and phase and various geographical data e.g. LA, ward and constituency.

## 4. Production of the statistical publication

The data collected in the latest census is used to update the time series data in the publication and to create the latest snapshot data. The publication uses both linked teacher data as well as single year teacher and support staff data. Although no further data is expected to be received from schools and local authorities, improvements to linked data mean that revisions may be made to data previously published.

### Updates to previous years data

The use of a dataset containing linked teacher data (outlined on page 9) means that data for previous years may be revised. The linking of teacher data may identify further duplicates or otherwise improve data quality by better quality of, and increased rates of matching across years. This can lead to small changes to data previously published.

In the 2017 publication, data for 2016 has been revised in Tables 1 and 2a. The changes are small but have been included to better illustrate the year on year changes which occur. The overall full time equivalent number of teachers for 2016 and the changes are shown in the table below:

	<b>Number for 2016 as published in June 2017</b>	<b>Revised figure for 2016 published in June 2018</b>
<b>Full time equivalent number of teachers (thousands):</b>		
State funded nursery and primary schools	222.36	222.37

	<b>Number for 2016 as published in June 2017</b>	<b>Revised figure for 2016 published in June 2018</b>
State funded secondary schools	208.21	208.22
State funded special schools	22.34	22.34
Centrally employed teachers	4.33	4.33
All state funded schools	457.24	457.26

Updates to the linked teacher dataset have also been used to revise previously published information on entrants and leavers teaching in state funded schools and on the retention of teachers (Tables 7a, 7b and 8). Updates to the Database of Teacher Records enable better matching to be made and improve the quality of data on new entrants and returners to teaching and provides updates on the number of retirements and deaths in service.

## Size of the schools' workforce

In the publication, Tables 1-3 focus on the size of the workforce in schools; the number of teachers, teaching assistants, school support staff and other staff e.g. short-term 'occasional' teachers.

For teachers, the counts in the publication show the number who were in service in a state funded school on census day and who had a contract lasting (or will last) longer than 28 days. Teachers in schools on census day with a contract lasting less than 28 days are recorded as 'occasional' teachers.

Full-time and part-time school staff are defined by the proportion of the full-time hours they are employed to work. The preferred measure for the total number of teachers in schools is the full-time equivalent (FTE) number of teachers. For example, one full-time teacher and one part-time teacher (that works 50% of a standard year) would be classed as 1.5 FTEs.

The information contained in these tables, for 2010 onwards, is derived in the following way:

- Teacher data are derived from the linked teacher dataset which covers teachers in service between 2010 and 2017.
- All support staff data are derived from the dataset for the individual year (support staff data are not linked across years).

Schools and local authorities provide data on each individual in scope of the census. In the vast majority of cases, those in service on census day have one contract and work in one

school. As part of the teacher linking process, those teachers with more than one open contract on census day (e.g. working part-time in two schools) have their information combined into one record. Combining teacher data in this way simplifies the linking of data across years, which helps identify whether teachers are still in service.

The data for teaching assistants and school support staff are not linked across years and therefore the published figures show the total number of people in these groups with open contracts on census day across all schools.

The total number of teachers, teaching assistants and other school support staff are calculated from the data provided to the Department by schools and local authorities. However, in each year there are a small number of schools and local authorities that do not provide a usable census return. To ensure the total number of staff reported in schools is not unduly affected by these missing schools estimates of their impact are made.

For example, in 2017, there were 63 schools that did not supply usable data giving a 99.8% return rate. For these schools it is estimated they employed 909 full-time equivalent teachers. To produce this estimate a scaling factor is derived. The scaling factor takes into account the total number of schools per phase, the average number of staff (by type) per phase and the number of missing schools by school phase. The scaling factor is then used to gross up the totals based on received data to produce national estimates.

The overall staff numbers presented in the underlying data file differ from the figures presented in the national tables because they have not been adjusted to account for schools that did not make a return or to account for multiple contracts found for the same post or where teachers are in service with more than one employer.

## **Characteristics of the school workforce**

Tables 3 to 6 provide deployment and characteristics data for school staff e.g. full/part-time status, age, gender and ethnicity information for teachers (by grade) and support staff (by role) by school phase. Again, the teacher data is derived from the linked teacher dataset and the support staff data is derived from the single year dataset.

Tables 5 and 6 provide statistics based on the headcount of staff; rather than the FTE. For Table 5 where teachers have more than one post in a school, they are counted once under their highest graded post. The post of head teacher is ranked highest and classroom teacher lowest. If the teacher has more than one post at the same grade then only one is counted. There is no natural hierarchy of posts for school support staff and therefore where staff have more than one post they are counted once under each post. Around 10 per cent of support staff have more than one role. These are the first tables where estimates for missing schools are not included. As the overall percentage of staff missing is very small, the missing characteristics data should not affect the distributions presented in these and later tables.

The headcount figures provided in Tables 5 and 6 should not be used as a measure of the overall size of the school workforce, the full-time equivalent figures provided in Tables 1 and 2 should be used instead.

The staff breakdown by type of post, including the grade of teacher, is taken from the information in the post description provided in the contract and not from the additional role information which provides greater detail. The further information available in the role has not been used to decide the post held except for teaching assistants where they were recorded as support staff in the 'Post description' field in error. The further breakdown of the role for teaching assistants and support staff provided in Table 2 is provided by the first role descriptor supplied for the contract.

## Teacher flow data

The teacher flow data (new entrants, retention data, and leavers) published in Table 7a and Table 7b has been produced from the linked teacher dataset (which has brought together the teacher data present in each of the completed censuses) to produce a longitudinal teacher dataset. The longitudinal nature of the teacher data makes it possible to track teachers over time. It helps to identify teachers entering and leaving the profession and those remaining in post.

The statistics published show the time series for the number of qualified entrants to, and the number of qualified leavers from, teaching in state-funded schools in each year.

The total number of qualified teacher entrants includes the following groups which are separately identified:

- Newly qualified teachers (NQTs) in their first post, these are NQTs who enter state funded schools after successfully completing ITT in England.
- Qualified teachers who have previously worked in the state-funded sector and are returning to work after a break of more than one year e.g. maternity leave, career breaks.
- Qualified teachers working in a state-funded school for the first time who have previously worked elsewhere; this may include employment in the independent or further education sector, or employment elsewhere in the UK or overseas. This includes two groups, deferred NQTs and those new to the publically funded sector. Deferred NQTs are those who start their first teaching post in the state funded sector one year after qualification. Those new to the publically funded sector are those who start teaching in the state funded sector two or more years after qualifying.

The total number of qualified teachers leaving the profession in a year includes the following groups which are separately identified:

- Qualified teachers retiring; including teachers taking early retirement or who are retiring through ill-health.

- Qualified teachers leaving the profession – “Out of service”. This group will include those leaving the profession entirely but could also include those moving to other UK education sectors and those leaving on career breaks e.g. maternity leave or secondments outside of the school sector. Some of these teachers may re-join a state funded school in England at a later date.
- Teachers who die whilst in service.

The teacher flow statistics are calculated by comparing individual level teacher data for two consecutive years and checking whether the teacher is still in service. There are three possible outcomes:

- Teachers present in both years are those who have remained in-service (this will include those teachers who have moved between state-funded schools).
- Teachers present in the first year but not the second year are teachers who are no longer working in state-funded schools.
- Teachers present in the second year but who were not present in the first year are teachers who have started working in state-funded schools (which includes new starters and returners).

The teacher entrants rate is then calculated by dividing the number of entrants by the stock of teachers in the year when they are in service. Similarly, the teacher leavers rate (often known as the teacher wastage rate) is calculated by dividing the number of leavers by the stock of teachers in the last year they were in service.

## Entrants and leavers data

Information is given on the numbers of qualified entrants to teaching in state funded schools in England and the number of qualified leavers. Entrants are defined as teachers who are not in service at the start of the year but who were in service at the end of the year. A teacher, employed as a unqualified teacher who is on a route to qualified teacher status is defined as an entrant when they achieve qualified teacher status. A leaver is defined as those in service at the start of the year who were not in service at the end of the year. The figures for entrants and leavers exclude transfers to or from part-time service and also exclude movements between schools.

The published figures are based on full time equivalent teachers (FTE). Where a teacher changes from full time to part time tenure, they will not appear in the entrants or leavers figures. However the contribution the teacher makes to the FTE number of teachers will change between years, for example a teacher who works full time will contribute 1 to the FTE teacher figures. If the teacher moves to part time working of 50% the contribution they make to FTE teacher figure will change to 0.5 in the following year. A teacher who leaves a full time post will contribute 1.0 to the FTE leavers figures, if they then return on

a part time basis (working 2 days per week) they could contribute 0.4 to the FTE returners figure.

Due to these factors, the FTE stock of teachers in 2016 plus the FTE entrants for 2017 minus the FTE leavers for 2017 will not equal the FTE stock of teachers in 2017. It is also possible for similar entrants and leavers figures to sit alongside reducing staff numbers.

Figures for entrants and leavers are also based on estimates. Teachers in schools with a high turnover, this may be due to opening/closing, academy conversion or data error, are excluded as the identification of such teachers as entrants to, or leavers from, state funded schools may be erroneous. Figures are then grossed and weighted to produce national figures.

## Teacher retention data

The teacher retention matrix is published in Table 8. This shows the percentage of qualified teachers that enter service in the year after qualifying and that remain in service in each year afterwards. This information is produced from a combined version of the linked teacher dataset and information held in the Database of Teacher Records, (DTR), data available as part of the administration of the Teachers' Pension Scheme.

The table gives the position for each teacher in this group in each year after they first entered. A proportion will re-enter service or leave each year. They are included in the calculation irrespective of this movement if they are in service in the year in question. Some teachers may have been in a state funded school particularly in the earlier years of the series which is based on the DTR. The DTR is known to exclude some teachers each year. No estimates have been included to account for this and the table only includes teachers where a definite record of their being in service is present.

## Teachers' average salaries

The statistics on teachers' salaries have been derived from the single year teacher contracts dataset. Linked data has not been used as this aggregates the information for teachers with multiple contracts to one record of a main contract based on their highest grade. This aggregation would affect the accuracy of the figures published.

For information on school teachers' pay and conditions (STPCD) please refer to the statutory guidance available at [gov.uk](http://gov.uk).

Tables 9a to 9d provide details on the average salaries of teachers. Table 9e shows a time series of average salaries. Figures for 2010 to 2016 in table 9e may vary from those previously published due to changes in coverage. We now include teachers without qualified teacher status and part-time teachers in average salary calculations, previously published data for years prior to, and including, 2015 included only qualified full time teachers. There have also been updates to the quality assurance of the original data which

allowed both part time and unqualified teachers salaries to be included in average salary calculations.

Some teachers pay details are treated as mis-reported in the tables. This is where the salary is below the base salary for the grade in the STPCD for the grade (or slightly lower in the case of academies and free schools) or where it is above an upper limit of £80,000 for classroom grade teachers, £120,000 for deputy and assistant head teachers and £250,000 for head an executive head teachers. In addition a small number of part-time teachers have full-time equivalent, (FTE), salaries reported for them rather than the required actual salaries. Part-time salaries from schools where this is found to have occurred are also treated as mis-reported. The overall number of teachers treated as misreported was 12,263, (2.4%) in 2017 down from 22,345 in 2016 (4.4%).

Additional allowances have been included in the gross salary and noted once for each contract for each type of allowance. Where two or more allowances of the same type are noted then the higher amount is taken as the allowance in payment on the census date and included in the gross salary. The only exception is unspecified allowances where the sum of all these is included as representing the amount included in the salary over the course of a year as these are likely to be one-off rather than continuous monthly payments.

When making comparisons of teacher salaries by school phase or type there will be several factors that affect pay to consider. For example, the published data do not take into account factors such as: size of school, location of the school (London has higher pay scales) and the teachers' experience and the size of school. In addition, in previous years the location of the growing number of academy schools affected the distribution of average pay statistics. Many of the first group of academy schools were in London and the south east where the pay bands are higher and this was inflating the average pay statistics - making comparisons difficult. A change to a larger more geographically spread group of academies and lower numbers of local authority schools will continue to affect this comparison,

It is possible that not all schools provided the most up to date pay data that took account of any pay awards due at the start of the latest academic year. This timetable is very close to the School Workforce Census collection period and not every school manages to update their management information systems before providing a census return.

## **Teachers' qualifications and curriculum taught**

Table 10 provides information on teachers' highest level of post A level qualification. Qualifications information is received for almost all teachers (98 per cent in 2017). The percentage of teachers holding a particular level of qualification was derived using a baseline of the total teachers for whom qualifications information was provided. Where a teacher was reported as holding more than one post A level qualification, the qualification level was determined by the highest level, from degree or higher to other qualification at

National Qualifications Framework (NQF) level 4 and non-UK qualifications for which an equivalent NQF level was not provided.

Curriculum information was requested from all secondary, middle deemed secondary and all-through schools including relevant academy schools, with timetabling software that interfaces with their Management Information System. This does mean that the number of schools that provide data can change from year to year. The published tables show the unweighted base that the figures are derived from.

Table 11 is based on the sample of teachers in secondary schools where curriculum data was provided. The data have been weighted and grossed so that all totals presented in the table provide a representative, national picture.

The following table shows how the Table 11 sample has varied over time between 2011 and 2017.

<b>Year</b>	<b>The sample size used to construct the headcount of teachers teaching each curriculum subject and the number of hours taught in that subject.</b>
2017	166,513 secondary school teachers - 76% of all secondary school teachers
2016	166,936 secondary school teachers – 76% of all secondary school teachers.
2015	172,495 secondary school teachers – 78% of all secondary school teachers.
2014	176,343 secondary school teachers – 77% of all secondary school teachers.
2013	175,720 secondary school teachers – 77% of all secondary school teachers.
2012	174,837 secondary school teachers – 75% of all secondary school teachers.
2011	178,884 secondary school teachers – 79% of all secondary school teachers.

Tables 12 and 13 provide information on the percentage of teachers, and of hours taught by teachers, who hold relevant post A level qualifications by the subject taught. The tables record the highest qualification gained in each subject taught, rather than each qualification. A teacher's qualification was deemed as 'relevant' to the subject taught if the subject of their qualification, reported using the Joint Academic Coding System (JACS), appeared in the list of JACS codes in the Department's subject mapping. The full mapping used is available on the same web page as this statistical publication.

The subject of a qualification was not received for all the qualifications data submitted and in a small number of other cases the information was incomplete or incorrect. From 2016, all qualifications obtained by teachers have been used, with data collected in previous years being used to fill in any gaps in the current year's collection. The Database of Qualified Teachers is also used to complete any gaps in teacher qualifications.

In previous years the overall sample size for analysis of the combined qualifications and curriculum data for teachers is lower in Tables 12 and 13 than in Table 11. However the use of all qualifications data has improved the numbers of teachers for whom qualification

data is available. The data are weighted and grossed so that all totals presented in the tables provide a representative, national picture.

In Tables 12 and 13 confidence intervals have been calculated around the percentages to show the statistical accuracy of the data, and give a range within which we can be reasonably sure (95 per cent certain) that the true value actually lies.

A change was made, after the November 2011 collection, to the methodology that creates the percentage of qualifications by subject in Tables 12 and 13. This change applies to tables using the November 2012 data and for future tables. Where a teacher is recorded as having a PGCE they must also have a first degree recorded as well to be included in the table as their record of qualifications is not complete without both records. This change might slightly raise the percentage of teachers with a degree in the subject.

Investigations have revealed that there is some bias in the sample of the schools providing data with some regions providing a higher percentage of their schools to the sample than others. These differences may be caused by the different characteristics of schools that can provide information compared with those that cannot.

## **Teacher vacancies and temporarily filled posts**

Tables 14 and 15 show the total number of vacancies and temporarily filled posts reported by schools. Schools that did not make a return for the vacancy module are judged to have no vacancies. No estimates were made for schools that did not make a census return for November 2017. The small number of these means this will not have a significant impact.

A teacher vacancy refers to a full-time or part-time appointment of at least one term's duration that, on the census date, had been advertised but not filled. Vacancies include those filled on a temporary basis unless filled by someone with a fixed term contract of one term or more.

A temporarily filled post is one where a permanent vacancy is available but it is being filled by a teacher with a contract of at least a term but less than one year's duration. This is irrespective of whether the post has been advertised.

The teacher vacancy rate is the number of vacancies expressed as a percentage of qualified teachers in post e.g. full (or head count number of part-time) regular teachers in (or on secondment from) the relevant phase.

To calculate the secondary school vacancy rates by subject, the percentage of the secondary school curriculum that each subject taught contributes is calculated from the information provided in Table 12. The total number of full-time qualified classroom teachers

in service is multiplied by this percentage to find the total number of teachers in post teaching each subject.

## **Teacher sickness absence**

Teacher sickness absence information was received for around 98 per cent of local authority maintained schools. A local authority was deemed to have made a full return where 90 per cent of schools or more had supplied sickness absence information because small schools may not have had any sickness absence to report. 10 local authorities had less than the required 90 per cent return rate and in these cases estimates based on the national rate were added (to the statistics in Table 16) to account for the schools with missing information. Missing sickness absence data for teachers in schools that did not have a usable return was estimated as the average sickness absence days lost per teacher for schools that made a return.

25 per cent of academy schools did not have a complete teacher sickness absence return because they were not open as an academy school for the full academic year. Teacher sickness absence statistics are based on the absences taken by teachers in the 12 months up to the census date. It did not prove possible to accurately estimate the teacher sickness absences missing for these schools. An estimate based on the average sickness days taken for all schools where a absence return was made including local authority schools where information for an academy school was not available.

Sickness absence is produced from the total days absent, including half days, for each teacher during the academic year previous to the School Workforce Census collection date. All teachers who are in regular service at any time during the year are included in the calculations. Only those absence periods that ended during the academic year are counted so the total may include absence days from the previous academic year but will not include those at the end of the year if the period of absence is ongoing. Absence days are limited to 195 days for each teacher as this is the maximum number of working days in a single academic year. Non-working days are not included in the figures. Days absence that can be recorded for a part-time teacher are limited to those that they are contracted to teach.

## **Teacher disability**

Schools are asked to provide information on the number of teachers that record themselves as disabled. However, information on disability was not obtained by schools for 51% of teachers in the November 2017 census. The information provided suggests 0.5 per cent of teachers are disabled, however, this may not truly reflect the real position given the large amount of missing data.

## Pupil teacher and pupil adult ratios

The pupil teacher ratio (PTR) and the pupil adult ratio (PAR) are calculated using the November teacher and staffing data from the School Workforce Census and the pupil data collected in the following January School Census. Only those schools that provided both pupil and workforce information are included in the figures. The pupil numbers used in the calculation of the PTR statistics include dual registered pupils.

The overall PTR is based on the total FTE number of pupils on roll in all local authority maintained nursery, and all primary and secondary schools and the FTE of all teachers in these schools (including: occasional teachers; those on employment based routes to f; others without QTS, those on paid absence and any replacements). Special schools and Pupil Referral Units are excluded. Prior to 2010, the PTRs are based on the teacher numbers from the Form 618g survey and the pupil numbers from the school census – both of which were collected in January. The overall PAR also includes support staff excluding administrative, clerical and auxiliary staff.

## Definitions and general notes

The tables in this publication generally show school staff in five groups, teachers, teaching assistants, school support staff, school auxiliary staff and local authority centrally employed staff. The definitions used with the SWF data published in this publication are described here:

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Notes for teachers and teaching statistics

- a) Statistics for teachers include all full and part-time, qualified and unqualified, classroom teachers and school leadership group teachers (Head teachers, Deputy and Assistant Head teachers) unless specified within the tables.
- b) The number and characteristics of Leading Practitioners have been incorporated into the statistics on classroom teachers.
- c) Advisory Teachers have been included in teacher totals for 2010 to 2012 to be consistent with 2013 onwards.
- d) Teachers in occasional service are those with a contract of less than one month, 28 days for SWF, and are employed on census day.
- e) Teachers provided by teacher employment agencies are included in the main count or as in occasional service depending on the length of their contract.

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Notes on school support staff

- a) Statistics for teaching assistants include higher level teaching assistants (HLTA), special needs and minority ethnic pupils support staff and other staff with pupil support roles.
- b) Statistics for school support staff refer to non-classroom based school staff such as school secretaries and other clerical staff, bursars, technicians and childcare staff (e.g. a school nurse).
- c) Statistics for auxiliary staff (roles which were not collected by the Department prior to November 2010) include catering and school maintenance staff.
- d) Third party support staff are not directly employed by the school and are in service on the census date.
- e) Centrally employed staff are those employed by the local authority and

	include the following types of employee: peripatetic teachers; home tutors; and teachers who are employed by education authorities to provide education in institutions other than schools (e.g. hospitals, home tuition, assessment centres and pupil referral units).
Notes for teacher sickness absence data	a) Sickness absence periods, and days taken, include all periods of sickness absence leave taken in the academic year (e.g. 1 September 2014 to 31 August 2015). They include any that were ongoing on the 1 September and exclude any that were ongoing after the 31 August.
Notes on schools	a) Middle schools are classed as deemed, i.e. as either primary or secondary and City Technology Colleges and free schools are included with academy schools.

In addition, when reviewing the tables, please note the following:

We preserve confidentiality.	The Code of Practice for Official Statistics requires we take reasonable steps to ensure that our published or disseminated statistics protect confidentiality.
We round the numbers.	We suppress cell counts and totals below 50. Because of this rounding, totals in text and in tables may not always equal the sum of their component parts. Similarly, differences quoted in text may not always be the same as differences shown in tables. This suppression is consistent with the Departmental statistical policy.
We have adopted the following symbols to help with identification.	Symbols are used in the tables as follows: . not applicable .. not available - nil or negligible

## How the Department uses the School Workforce Census

The school workforce census data are used in many ways within the Department for Education and its agencies. The main uses are as follows:

Production of statistical briefing and analysis on various topics such as...	a) The deployment and qualifications of teachers in schools. b) Analysis of the percentages of lessons taught by teachers with relevant qualifications. c) Analysis of teaching vacancies by subject and region. d) Assessment of the number of teachers without qualified teacher status.
Teacher demand modelling to estimate changes due to various policies or demographic changes.	a) Demographic pressures and churn in the workforce. b) Impact of policy development on the workforce e.g. curriculum, qualifications etc. c) Informs the annual target setting for initial teacher training places via the Teacher Supply Model; helps to ensure a sufficient supply of teachers to schools. d) Modelling the number of potential school leadership teachers; to help ensure there are enough school leaders in the system.
Analysis of Teacher Pay Costs	a) Provides evidence to support the independent pay review body recommendations. b) Assess impact of proposals for pay and estimate future costs.

Transparency through publication	<ul style="list-style-type: none"> <li>a) Through the publication of the annual Statistical First Releases and school level data and through the Performance Tables.</li> <li>b) The data is used to reply to a substantial volume of official correspondence, including Parliamentary Questions and Freedom of Information requests.</li> </ul>
School Workforce Census data is sometimes shared with external researchers.... ...under strict controls. Some examples have been ...	<ul style="list-style-type: none"> <li>a) Research into the new institutions that are admitting pupils at age 14, including, but not limited to University Technical Colleges and Studio Schools etc., profiling them in terms location, who works in them and which pupils attend them.</li> <li>b) The costs and benefits of different teacher training routes in England.</li> <li>c) Modelling teacher supply and retention over time.</li> <li>d) Research into differentials in levels of appointment and salary level by demographic sub-groups of the teacher population.</li> <li>e) Better understanding of the impact of specialist teachers on the uptake of subjects and achievement in subjects.</li> </ul>

## 5. Further information

Further information on the school workforce census is made available via the publication and during year. The Department for Education is only responsible for schools in England.

School, local authority and regional figures.	<p>School level school workforce data is available within the additional tables published alongside this statistical release. The school data contains a range of information for each school following the same themes as set out in this document. It also includes both local authority and regional level summaries.</p> <p>The total number of teachers in schools will not sum to the LA, region or national total. This is because the LA and region totals include those employed directly by LAs and the national totals include estimates for missing schools.</p>
Want these figures, related to Performance Tables?	<p>8 school level school workforce indicators are included as part of each year's School Performance Tables. The indicators include FTE and headcount statistics for the number of teachers, teaching assistants and school support staff, the average salary of teachers and the pupil teacher ratio.</p> <p>School level school workforce data from November 2016 was included in the latest set of tables which were published at the end of 2016. For the latest School Performance Tables visit <a href="#">here</a>.</p>
Want previously published figures?	<p>The publications relating to the years 2010 to 2016 collections can be found on <a href="http://gov.uk">gov.uk</a> and information published prior to 2010 can be found in the <a href="#">National Archives</a>.</p>

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Want data for Wales, Scotland or Northern Ireland?

The School Workforce Census only collects information from schools in England. Education in Wales, Scotland and Northern Ireland is a devolved matter for the Welsh, Scottish and Northern Irish Governments. For information for Wales, Scotland and Northern Ireland, contact the departments below or access their statistics at the following links:

Wales: [school.stats@wales.gsi.gov.uk](mailto:school.stats@wales.gsi.gov.uk) or  
<http://wales.gov.uk/statistics-and-research/schools-census/?skip=1&lang=en>

Scotland: [school.stats@scotland.gsi.gov.uk](mailto:school.stats@scotland.gsi.gov.uk) or  
<http://www.gov.scot/Topics/Statistics/Browse/School-Education>

Northern Ireland: [statistics@deni.gov.uk](mailto:statistics@deni.gov.uk) or  
<http://www.deni.gov.uk/index/facts-and-figures-new/education-statistics.htm>

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For related publications see:

Statistics on teacher training and the annual survey of newly qualified teachers can be found on [gov.uk](http://gov.uk).

Further analysis of previous School Workforce Census data can be found [here](#).

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Department  
for Education

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