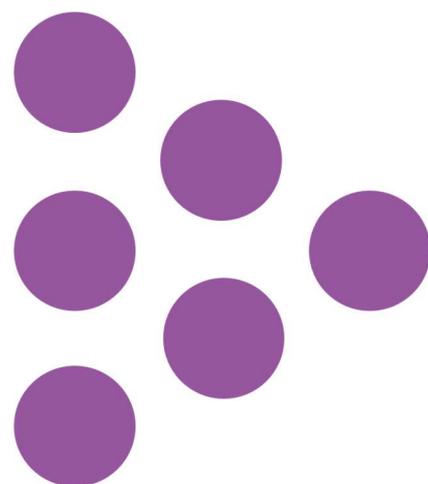


Technical Report

The School Teacher Labour Market in England Annual Report 2026

Methodology Appendix

National Foundation for Educational Research (NFER)



The School Teacher Labour Market in England Annual Report 2026

Methodology Appendix

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1. Introduction

This methodology appendix explains the data we used and the analysis we undertook to produce our findings in “The School Teacher Labour Market in England: Annual Report 2026”.

Section 2 lists the data sources we used in the analysis, as well as how we defined teachers in state-funded schools in England (henceforth ‘teachers’) in national surveys. The remaining sections then each cover methodological detail relevant to the analysis in the main report.

Section 3 outlines how we used data from the Department for Education (DfE), including the School Workforce Census, the Initial Teacher Training (ITT) census, and ITT application reports to review teacher numbers, recruitment and retention. This includes an outline of how we forecast ITT recruitment for the 2026/27 training year. It also outlines how we looked at teacher pay.

Section 4 shows how we used the Labour Force Survey to measure teachers’ working hours and perceptions of their working hours. This section explains key variable and group definitions, provides sample sizes and outlines our methodology for defining a group of similar graduates to compare teachers to.

Section 5 outlines how we used the Annual Population Survey to measure teachers’ subjective wellbeing.

Section 6 details the data collected through the NFER Teacher Voice omnibus survey and how it was used to collect senior leaders’ views on the ease of recruiting teachers.

This work was undertaken in the Office for National Statistics Secure Research Service using data from ONS and other owners and does not imply the endorsement of the ONS or other data owners.

2. Data sources and the definition of teachers

2.1. Data sources

The following data sources were used to inform the analysis in this research report:

- The School Workforce Census (SWC). More information [here](#).
- The ITT Census. More information [here](#).
- ITT application reports: monthly statistics. More information [here](#).
- ONS population projections. More information [here](#).
- Teacher Pay and Conditions salary bands. We source these [here](#) and [here](#).
- Annual Survey of Hours and Earnings (ASHE). Available from Office for National Statistics (ONS). More information [here](#).
- The Labour Force Survey (LFS). Available from UK Data Service. More information [here](#).
- The Annual Population Survey (APS). More information [here](#).

2.2. Definition of teachers

The definition of teachers in DfE data is set by DfE. More information can be found in the methodology of DfE's statistics release.

ASHE, LFS and APS are all national surveys that include workers in a wide range of occupations and industries. We therefore use the information in these surveys to identify teachers for the purposes of our analysis. We define teachers using codes that classify a worker's occupation (SOC codes) and codes that classify a worker's industry (SIC2007). We use SOC2000, SOC2010 and SOC2020 depending on which is available in each dataset. We also use a public sector marker to ensure we only capture teachers working in state-funded schools. The full definition is listed in Table 1.

Table 1 Occupation, industry and sector definition of teachers

SOC2020 Code	SOC2020 Group
2313	Secondary education teaching professionals
2314	Primary education teaching professionals
2315	Nursery education teaching professionals
2316	Special and additional needs education teaching professionals
2321	Head teachers and principals
SOC2010 Code	SOC2010 Group
2314	Secondary education teaching professionals
2315	Primary and nursery education teaching professionals
2316	Special needs education teaching professionals
2317	Senior professionals of educational establishments
SOC2010 Code	SOC2010 Group
2314	Secondary education teaching professionals
2315	Primary and nursery education teaching professionals
2316	Special needs education teaching professionals
AND	
SIC2007 Code	SIC2007 Group
8520	Primary education
8531	General secondary education
AND working in the public sector	

3. DfE and other government data: analysis of teacher numbers, recruitment and retention.

3.1. Overview

We use the SWC statistics to look at the size of the teaching workforce by provider type, as well as retention of teachers and teacher vacancies. The statistics also contain data about the extent of subject specialist teaching, which we compare to ITT performance.

We use ITT census data to review ITT performance up to and including 2026/27.

3.2. ITT 2026/27 Forecast

Our forecast of ITT recruitment in 2026/27 was based on monthly ITT applications data, made up to February 2025. The data is collected by the DfE Apply platform through which all applications for postgraduate ITT in England have been made since 2022/23 (except for applications to Teach First and those that are made directly to providers).

We forecast end-of-cycle recruitment based on placed applicants in primary and secondary subjects. We used placed applicants rather than total applicants as there is more confidence that placed applicants are likely to be reflective of the actual number of trainees that enrol in an ITT course.

For primary and all secondary subjects, we made the forecast based on how many placed applicants there were in February 2025 and how this compared to end-of-cycle recruitment in the ITT Census for 2025/26. We then analysed how the number of placed applicants in February 2026 compared to the previous year and what this implies about the end of the current cycle, assuming recruitment trends are similar to the previous year.

We then compared these forecasts to DfE's recruitment targets for the 2025/26 cycle (because targets for 2026/27 were not yet published at the time of analysis). We divided the total forecast recruitment in primary and each secondary subject by its recruitment target to determine what proportion of the target is forecast to be met by recruitment this year.

We estimated uncertainty in the forecast by comparing how forecasts compared to actual recruitment in previous years. We used the under- and over-predictions from previous years' forecasts to generate an estimate of the confidence interval in the current year's forecast. Overall, the forecast tends to perform well: ITT forecasts for previous cycles were within the margin of error for almost all subjects.

3.3. Analysis of teacher pay

To analyse the growth of teacher pay since 2010, we look at how pay at two pay point have developed over time:

1. We look at starting salaries, by looking at the first point on the main pay scale, M1
2. To look at pay for experienced teachers, we look at the top of the upper pay scale, U3.

We do not include any additional payments, such as higher pay scale points for teachers in London or for additional responsibilities.

We convert these values into real terms using the CPIH index. We also look at how UK earnings have developed over this time and how they are forecast to grow. For all of this, we use [OBR's economic and fiscal outlook for March 2026](#). We use average weekly earnings for earnings. We convert the quarterly data into academic years, using each October to the following September as the closest equivalent to an academic year.

4. LFS: analysis of teachers' perceptions of their working hours, weekly pay and attitudes to work compared to those of similar graduates

Our analysis of teachers' working hours and perceptions of their working hours primarily uses data from the LFS. The LFS data enables us to measure how working hours and working hours perceptions have changed over time. It also enables us to compare how working hours and working hours perceptions compare to those in other occupations.

The analysis involved several key steps, including identifying teachers and a suitable comparison group in the data, ensuring comparability in the two groups, and defining the key indicators for reporting.

4.1. Identifying teachers and a suitable comparison group

Teachers

We define these using SOC codes and SIC2007 codes, as defined in Section 2.

Similar graduates

For our comparison group, we included all other workers in the LFS in England who are not teachers and who had a graduate degree. We compare teachers to graduates (rather than all workers) for consistency with our previous reports and because almost all teachers are graduates (i.e. they are recorded as having a level of qualifications equivalent to a Bachelors degree, or higher), so it is a better comparison. We also limit our comparison to full-time workers.

We reweight this group so that it better resembles teachers in terms of key characteristics: age, gender, and region. We do this to improve comparability in these specific characteristics with the teachers group. This ensures that the distribution of these characteristics is the same among the teachers and the comparison group. We use a technique called entropy balancing to reweight the other graduates group within each survey wave and derive a 'similar graduates' group.¹ The original ONS weights are used a starting point for these adjustments.

It is important to note that this re-weighting approach does not remove all the underlying differences in characteristics and motivations between teachers and similar graduates. However, it minimises the risk that any observed differences in working conditions are driven by differences in the distribution of these key characteristics. Nonetheless, no comparison of different occupations should be interpreted as the effect of entering that occupation, although working conditions, and employees' perceptions of them, can be influenced by entering that occupation rather than another.

4.2. Variables used in the analysis

The variables in the LFS survey which we reported on are as follows:

Working hours in the reference week for full-time workers

¹ Hainmueller, J., & Xu, Y. (2013). ebalance: A Stata Package for Entropy Balancing. *Journal of Statistical Software*, 54(7), 1–18. <https://doi.org/10.18637/jss.v054.i07>

Average (mean) response to a derived variable which calculated total hours worked across all jobs in the latest week.

We looked at the average hours for workers for full-time workers only. We also restricted analysis to those who worked a full-time schedule, identifying individuals who had worked at least five days during the reference week using responses to the question ‘In the week ending Sunday the ..., on which days were you scheduled to work?’. We also restricted this analysis to those who were not off work on those days despite being scheduled to work, using responses to the question ‘In that week, did you have any days off work because you were sick or injured?’.

Proportion wanting to work fewer hours

Average (mean) of a measure that is derived from a combination of responses and routed questions regarding whether someone is seeking to work fewer hours. This variable is created based on whether respondent is looking for a different or additional paid job, and whether they would like to work fewer hours than in their current job. See LFS user guide for further details.

Proportion wanting to work fewer hours even with less pay

Same as above except we also look at information about whether they want to work fewer hours than in their current job even with less pay.

Proportion who usually work evenings.

Average (mean) response to a question about when people usually work.

4.3. The analytical approach to the LFS

Obtaining an average

The LFS is a quarterly data collection with a longitudinal design. This means that respondents are sampled for one quarter and can then feature in up to four further quarters. For this project, we are primarily concerned with annualised estimates of the variables of interest. To obtain these estimates from quarterly data, we followed the suggested approach by ONS. For an approximation of an academic year, we look at four successive quarterly waves, starting with those in October to December, and finishing with those in July to September. We then:

1. Calculate the mean of the variable of interest (see above) for teachers and similar graduates in each quarter, using the weightings obtained from entropy balancing for the latter group. We also calculate the standard error of that estimate.
2. Obtain a value for the academic year by calculating an ‘average of averages’ using the averages obtained from the four quarterly waves for that academic year. (Specifically, we sum the quarterly averages and divide by four).

Because respondents will feature in successive waves, estimates from each wave will be correlated. We specifically adjust our estimate of the standard errors for this using a variance formula. The variance formula for the annual estimate described above equals:

$$\text{Var}\left(\frac{\hat{\theta}_4 + \hat{\theta}_1 + \hat{\theta}_2 + \hat{\theta}_3}{4}\right) = \frac{1}{16} \left(\sum_{j=1}^4 \text{Var}(\hat{\theta}_j) \right) + 2 \sum_{j < k, j, k = 4} \rho_{jk} \sqrt{\text{Var}(\hat{\theta}_j) \text{Var}(\hat{\theta}_k)}$$

where $\hat{\theta}_j; j = 1, \dots, 4$ are the quarter-specific estimates (averages) for a specific academic-year, $\text{Var}(\hat{\theta}_j); j = 1, \dots, 4$ is the variance of each estimate and ρ_{jk} is the correlation coefficient between the estimate in the quarter j and k for a specific academic year.

This latter term means that, for example, the correlation between quarters 1 and 2, ρ_{12} , differs between the 2015/16 and 2016/17 academic years. We therefore simplify this formula by following Holmes and Skinner's² observations: for a given variable, we use only one representative correlation coefficient for any pair of quarters a given number of periods apart. Hence, regardless of the academic year, we use one correlation coefficient for estimates separated one period (i.e. $\rho_{43}, \rho_{12}, \rho_{23}$ are the same across academic years), another for estimates separated two periods (i.e. ρ_{42}, ρ_{13} are the same across academic years) and another for those three periods apart (i.e. ρ_{41} are the same across academic years).

Estimation of these three coefficients is based on the autocorrelations of the quarterly estimates. In other words, the correlation coefficient for estimates separated by one period is given by the first autocorrelation coefficient across the estimates, and so on.

4.4. Sample sizes

The sample sizes in the LFS analysis are shown in **Table 2**. Sample sizes for each individual measure differ depending on the extent of missing data for each measure. The table is illustrative as it summarises the sample sizes from only one measure: **average working hour worked in a full working week**.

The sample sizes of both teachers and similar graduates have generally been falling slightly over time, which is due to falling response rates to the LFS across the whole population, although there has been a partial recovery in the later years.

Where we compare our key measures over time and between teachers and similar graduates, we test whether any differences were statistically significant by conducting a t-test that the difference was statistically significantly different from zero (at the five per cent level).

² Holmes, DJ and Skinner, CJ (2000) Variance estimation for Labour Force estimates of Level and change. *GSS Methodology Series*, No 21.

<https://webarchive.nationalarchives.gov.uk/ukgwa/20160105160709/https://www.ons.gov.uk/ons/guide-method/method-quality/specific/gss-methodology-series/gss-methodology-series--21--variation-estimation-for-labour-force-survey-estimates-of-level-and-change.pdf>. Last retrieved: January 2026

Table 2 - Sample sizes for LFS analysis

Year	Number of teachers	Number of similar graduates
2010/11	2,182	21,311
2011/12	2,233	23,449
2012/13	2,037	23,777
2013/14	2,158	25,033
2014/15	2,007	24,575
2015/16	1,866	24,336
2016/17	1,737	24,247
2017/18	1,693	24,926
2018/19	1,649	24,025
2019/20	1,480	21,679
2020/21	1,825	26,948
2021/22	1,516	22,649
2022/23	884	16,238
2023/24	953	17,238
2024/25	1,323	26,106

Source: NFER analysis of Labour Force Survey data for 2010/11 to 2024/25.

5. APS – Analysis of teachers’ wellbeing

5.1. Overview of the approach

The APS is comprised of aggregated data from four quarters of LFS data plus a boost sample. As the APS includes additional measures that are not available in the LFS, such as wellbeing and workplace perceptions, we also analyse data from the APS to look at how teachers compare to similar graduates.

We take the same approach to this analysis as described for LFS above, with the following exceptions:

- Instead of pooling quarterly data into academic years, we simply use the APS in calendar years. This means each wave of data only contains one observation from each individual and our variance estimates do not need adjusting as in the LFS.
- We only had APS data to the end of 2024, rather than the end of the 2024/25 academic year. In addition, much of the data we use is only available from 2020.

5.2. Variables used in the analysis

The variables in the APS survey that we reported on are as follows:

Subjective wellbeing (0-10 scale)

Average (mean) of a 10-point scale variable that reports workers’ response to the following questions:

- Life satisfaction: ‘Overall, how satisfied are you with your life nowadays where 0 is ‘not at all satisfied’ and 10 is ‘completely satisfied’?’
- Feelings things done in life are worthwhile: ‘Overall, to what extent do you feel that the things you do in your life are worthwhile where 0 is ‘not at all worthwhile’ and 10 is ‘completely worthwhile’?’
- Happiness: ‘Overall, how happy did you feel yesterday where 0 is ‘not at all happy’ and 10 is ‘completely happy’?’
- Anxiety: ‘On a scale where 0 is ‘not at all anxious’ and 10 is ‘completely anxious’, overall, how anxious did you feel yesterday?’

You can find out more about these questions [here](#).

5.3. Sample sizes

The sample sizes in the APS analysis are shown in **Table 3**. Sample sizes for each individual measure differ depending on the extent of missing data for each measure. The table is illustrative as it summarises the sample sizes from only one measure: **Anxiety**. Sample sizes in the APS appear smaller than the LFS data because each APS wave strictly contains one response per person, whereas in the LFS data the same person could be featured up to four times – see LFS section for more details.

Table 3: Sample sizes for APS analysis

Year	Number of teachers	Number of similar graduates
2016	1,679	18,533
2017	1,609	18,957
2018	1,508	18,682
2019	1,468	19,044
2020	1,252	16,304
2021	917	16,134
2022	790	13,722
2023	555	10,521
2024	701	12,579

Source: NFER analysis of Annual Population Survey data for 2016 to 2024.

6. NFER survey – senior leaders’ perceptions of the ease or difficulty of recruiting teachers and support staff

In November 2025, NFER surveyed teachers across schools in England. The survey was sent to the NFER Teacher Voice panel as well as an additional sample of high SEND schools for another project. The questions for this project were limited to those who said they are senior leaders, who are most likely to make recruitment decisions and/or have awareness of recruitment conditions.

For this analysis, senior leaders were asked “How would you describe your overall experience of recruiting each of these groups of staff over the last 12 months?” The three groups they were asked about were:

1. Teachers
2. Teaching assistants
3. Other school support staff (excluding Teaching assistants)

They could select one of the following seven options:

1. Very easy
2. Easy
3. Neither easy nor difficult
4. Difficult
5. Very Difficult
6. Don't know
7. Not applicable – we have not attempted to recruit staff of this type in the past year

We received 405 responses in total from senior leaders. 269 of these were from primary schools and 136 were from secondary.

Before analysis was done, the responses are weighted to be nationally representative of mainstream schools in England. Both primary and secondary samples presented good levels of representation across key school level factors including school type, performance and local authority type. However, the primary school and combined samples were not nationally representative by free school meals eligibility. To address this, weights were calculated using free school meals eligibility data on the primary school, secondary school and combined samples and then applied to create a more representative sample of all schools.

As outlined above, part of the survey’s sample was targeted at those working at high SEND schools. Theoretically, the distribution of the responses in the sub-population of these schools may be different to the wider population of all primary and secondary schools. To explore this, we compared how our results would change if we only used schools from the Teacher Voice panel, which is not affected in this way. We found that doing so did not make a substantial difference to the findings.

We report the percentage of weighted responses that said teacher recruitment was either ‘Difficult’ or ‘Very Difficult’. ‘Don’t know’ and ‘Not applicable’ responses were omitted from the analysis.

The 2023 results reported are from [a previous set of NFER reports](#).

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